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The MARITIME FARMER

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Vol. 17. ST. JOHN, N. B., OCTOBER 17, 1911 No. 1

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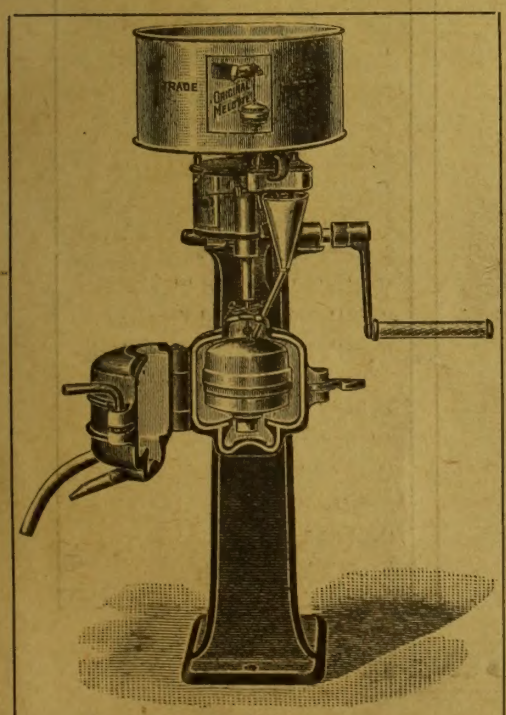

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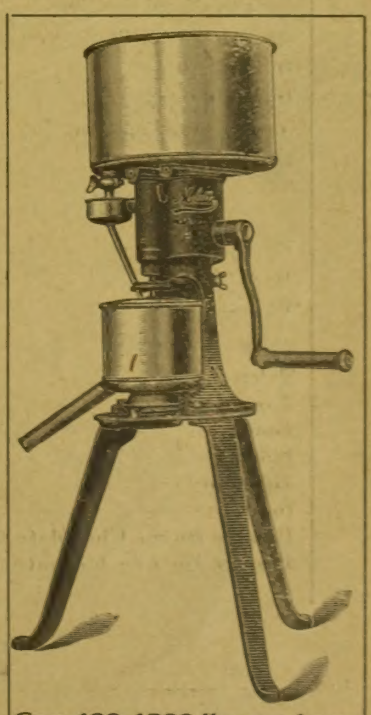

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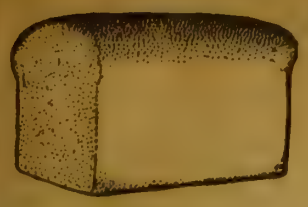

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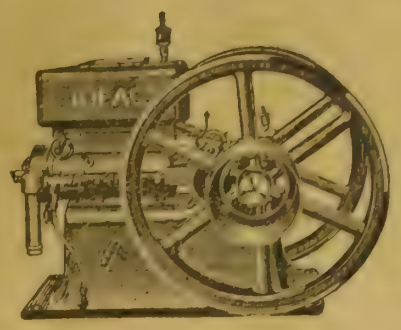

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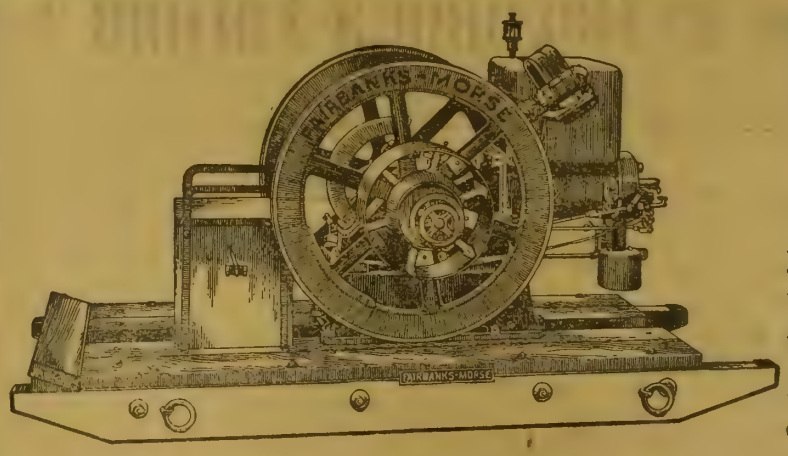

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Volume 17. ST. JOHN, NEW BRUNSWICK, OCTOBER 17, 1911. Number 1.

The Prince Edward Island Exhibition.

THE Provincial Exhibition of 1911 was ushered in unfavorably by the weather man, but in spite of this and continued wet the exhibits in many classes told an elegant story of proress.

The exhibition substantially illustrated the activities and thought of the Island farmers and they were not behind other seasons, although the dryness of the past summers accounted for a little slackness in the quality of exhibits.

THE OPENING EXERCISES.

The Fair was opened by His Honor Lieut.-Governor Rogers, the President, Justice Fitzgerald, making a number of optimistic remarks, and referring to the fox raising industry that was assuming such large proportions in the province.

Following His Honor, Professor Gussow, Dr. Andrew McPhail, Andrew Elliott and P. Farrell spoke on the educational features of the exhibition.

AGRICULTURAL HALL.

The greatest exhibit of field roots the Island Fair has seen for some time was displayed this year, with the quality fully up to the standard. Several superb collections of vegetables that were a credit to their respective exhibitors adorned one side of the building. Grains made a good showing, and we noted eleven bags of timothy that were a silent sign that the importation of timothy seed would cease in a not very distant future. The present price of this seed is making this crop a very profitable one.

FRUIT EXHIBIT.

The entries in fruit were particularly heavy and as the quality was so very even, and plates so numerous, the Judge, Mr. R. W. Starr, had a busy time.

DAIRY AND POULTRY.

The dairy products were here in full force. The large numbers of entries were made, especially in the farm dairy class, brought out no doubt by the large and special prizes given. The poultry building was well filled with a very creditable display of the standard varieties.

Artis-Jake.

Champion Holstein Bull at the 1911 Halifax Exhibition, Bred, owned and exhibited by Logan Bros., Amherst, N. S.

ART GALLERY.

The methods of arrangement, and display in the Art gallery were a decided improvement on former years. The West Kent Training School Exhibit deserves great praise, as also does the efforts of the Hillsboro Consolidated school. There was nothing remarkable about the Art exhibit, but in many of them there was taste and the promise of future excellence.

EDUCATIONAL AND EXPERIMENTAL WORK.

The exhibit of the new Island Experimental farm attracted a great deal of attention as it was the first exhibit of any consequence shown since its establishment. The Director, Mr. J. A. Clarke, pointed out that the exhibits were not abnormal, but average products of the field. The plates containing the entire product of each hill of potatoes were especially interesting, as also were separate pannels containing heads and straw of different varieties of grain true to the name. The bunches of well matured grapes grown on the farm were a revelation to many visitors who were continually dropping in for information.

Dr. Andrew McPhail's interesting and scientific exhibit had many admirers. The products of his farm at Orwell showed skill and success. His potatoes named and shown on plates with the sets from which they were grown, together with samples of soil are worthy of special mention. Dr. McPhail is specializing on potatoes and he is putting every effort into methods of eradicating scab, and his experiments with these methods, and the effects of different soils, mussel mud, ashes, lime, etc., on the potatoes are of great value. Another interesting part of Dr. McPhail's exhibit was samples of tobacco cured and in the leaf.

The main educational feature of the exhibition was :

THE JUDGING CONTESTS.

which were not only a source of keen interest to the boys and young men who took part in the scoring, but from the remarks gathered from outside the ring it was one of the greatest means of keeping the boys on their Island farms. Mr. Andrew Elliott conducted the contest and the results show that the boys were fitting themselves to become good stockmen and farmers, and they can be looked to with certainty to improve the live stock of the Island, and not be content "to let well enough alone."

Following is the result of the competitions :

BEEF CATTLE. JUDGE'S SCORES 81.

1 and 2, George A. Godfrey, W. E. Jones, score 79.
3, F. W. McRea, 78 3-4.
4, W. Gibson, 77.
5, Leo Praught, 76 1-2.
6, M. McRea, 75 3-4.
7, D. Praught, 66.

DAIRY CATTLE.—JUDGES SCORE 80

1, F. McRea, 78.
2, Earl Ames, 77 1-4.
3, Wm. E. Jones, 75 3-4.
4. Geo. A. Godfrey, 84 1-2.
5. Dan. Praught, 65.

THE JUDGES.

Horses, P. Farrell, Woodstock, Ont.; Beef Cattle and Sheep, J. T. Gibson, Denfield, Ont.; Dairy Cattle and Swine, Andrew Elliott, Galt, Ont.; Agricultural Products, S. J. Moore, Truro, N. S.; Fruit, R. W. Starr, Wolfville, N. S.; Dairy, Harvey Mitchell, Fredericton, N. B.; Poultry, Seth Jones, Sussex, N.B.

HORSES.

As usual the Island's finest and best were out in numbers. The parade was a splendid spectacle, where the simple prize of a ribbon was felt to be worth more than gold. It was the moving picture show of the year, and those partaking in it may well be proud of their stock and the declarations of superiority given by just judges.

The carriage horses were a grand lot showing plenty of combined action and energy.

The roadster stallion class brought out some grand entries, John McPhee with "Darkwood" by "Parkside" having one of the most perfect pictures of horseflesh on the grounds, being a shade light the first place had to fall to W. S. McKee with "Birchwood" by "Oakley Baron." In this section David White showed a horse 31 years old that had plenty of quality despite his age. Two nice horses in the two year old roadster class had their own way. Jos. Fraser's "Prairie Jack" by "King Cole" and Byrne Bros.' "Nntwood" by "Comodore" Draft horses brought a large crowd to the ringside. Two-year-old Clyde Stallions brought out eight entries full of form and with plenty of bone and quality. Lea & Clarke's "Labori Again" took first. J. Morris' "Castor", second and W. W. Crosby's "Keppies Prince", third.

Clyde Stallions one-year-old, were represented by five entries, but,

were not as even a lot as the splendid two-year-old class although future development will do a great deal. Dan Stewart's "Lord Dalmeny" took first, with John Tweedie's "Aggressor" a close second.

"Atlas" by "Baron's Pride" owned by Geo. Duckendorff was the Champion Clyde Stallion, a horse well put together, and possessing great quality.

The E. R. Heartz 2 year-old Mare showed great fitting up, as also did Wm. Godfrey's whose nice colt came a close second.

Draft Mares with Foal at foot brought out ten Foals with their dams, the judge remarking on the grand quality and display of these coming horses.

One of the features of the horse show was the walking contest. The ring was apparently filled with walking horses attached to their truck wagons. After much walking, some trotting and more fun. The prizes went toJohn Newson, Chas. Bryenton, and E. G. Love in the order named.

CATTLE.

Holstein, Ayrshire and Guernsey Cattle came out in fine form. Jerseys were a disappointment. Roper Bros. with a large and good exhibit won almost everything in sight with their Guernseys.

The Holstein classes were well filled. In the Aged class, five Bulls lined up, first place going to a low set dairy type of animal belonging to John Tweedy.

In two-year-olds Lea & Clark whose stock was in splendid shape after the Fall Fairs, took first with an animal of great merit. Competition in the younger classes was keen, Lea & Clark winning the greater percentage of prizes.

The silver cup for the best Cow, of any breed or age, brought out two worthy contestants: The four-year-old Holstein of Lea & Clark which had just freshened and the prize-winning world's record Ayrshire Cow "Milkmaid" belonging to McRae Bros. After much waiting the cup was captured by the latter.

Beef Cattle showed the effect of the dry season as well as showing depreciation in the quality evinced in former years. Apparently the Island is more suitable for successful dairying.

SHEEP AND SWINE.

The Swine was an exceedingly creditable exhibit, the Berks and Yorks being a splendid lot, with some very good individuals in Chester Whites and Tamworths.

The principal exhibitors in Sheep were Messrs. Boswell, Nunn and Tweedy. Most of the stock was brought out in number one condition, with here and there an animal that would have looked better if it had been fed more generously and the fleece put in better shape.

Suffolk Sheep.

The Suffolk sheep, of which there are only a small number of flocks in Canada, belongs to the Down breeds inhabiting in their early days the southern counties of England. Although larger, more rangey and darker in points than the Southdown, the blood of this latter breed entered into the foundation of the Suffolk. The only other breed that entered into the combination was the Norfolk, which appears to have passed out of the list of modern breeds of sheep. The old Norfolks are described as upstanding, robust, active and prolific, bearing horns in both sexes, jet black fleeces of fine, soft wool that would weigh at shearing time about three pounds. Their home was the chalky Downs in the counties of Suffolk, Norfolk, Cambridge and Essex. The Southdown inhabiting adjacent counties, as already described, is a thicker, lower-set sheep, having strong powers of prepotency. Rams of this latter sort were crossed upon ewes of the old Norfolk to form the newer breed of Suffolk.

To the establishment of the Suffolk much credit is given to Mr. George Dabito, of Lydgate, who is said to have been an enthusiastic advocate of the Southdown and Norfolk combination. While the name Suffolk was not generally adopted until 1859, when classes were created for this breed by the Suffolk Agricultural Society, flocks are said to date back in purity of blood to 1810.

In recent years the Suffolks have held their own in British show rings in competition with other short-woolledbreeds. In 1883, 1884 and 1885, they defeated all others at the shows of the Royal Agricultural Society, and have since won valuable awards in the wether sections in open competition at the Smithfield Fat Stock Show. Appearing somewhat spare of body on account of bareness of head and legs and comparative shortness of wool, this breed does not appeal as favourably to one unaccustomed to them as most of the other Down sorts, but it is on the block, the true test of all meat animals, that they give a good account of themselves. Their flesh is seldom or never overfat, but fine in the grain and of strikingly fine flavour.

Island Prince of Hillside.

Champion Guernsey Bull at the Halifax, and Fredericton 1911 Exhibitions. Owned and exhibited by H. W. Corning, M. P. P., Cheggogin, N. S.

Being active and very hardy the Suffolk subsists well on either sparsely clothed hill sides or more luxuriant pasture. The strong infusion of Southdown blood, together with the care exercised in breeding during recent years, have given the Suffolk early maturing qualities. Flocks produce a high percentage of vigorous twins, which usually develop rapidly on account of the generous supplies of milk produced by their mothers.

The Suffolk Sheep Society of England was established in 1886. The first importation was made to Canada in 1888, and a few flocks have since been established in Ontario, Prince Edward Island and British Columbia. The first Suffolks taken to the United States were imported in 1888, but many have been imported since, and in 1892 the American Flock Registry Association was established.

Compared with other Down breeds the Suffolk more nearly resembles the Hampshire, and at some of the large shows even yet these two sorts are classed together. They are, however, somewhat less in size and weight, but are heavier than the Southdown or the Shropshire. Mature rams in good flesh should weigh from 240 pounds to 260 pounds, and ewes 190 pounds to 210 pounds. They are longer than the Shropshire in body and limb. The head is longer, narrower and bare of wool, although a small patch of short white wool on the forehead is not objectionable. The head and legs are glossy black. In wool production they shear a little more than the Southdown, of a quality about equal to the Hampshire or the Shropshire.

A Good Word for Mr. Glendenning.

Editor Maritime Farmer:—

Your issue of Sept. 26, contains a full account of the Fredericton and Chatham Shows, which do you credit; one likes to see agricultural papers giving such readable and interesting matter as the issue contains. Every farmer in the Maritime Provinces should be your subscriber. It is only by giving our loyal support to the home agricultural paper that we can hope to make it a complete success. Agriculture in these Provinces is quite a different proposition from what it was 25 years ago. Farm products have increased in value from 25 to 50 per cent, and our farm lands offer an inducement to the intelligent and industrious farmer, such as was not dreamed of by our forefathers.—My chief object in writing this letter, however, was to criticise your criticism of Mr. Glendenning's awards in the dairy classes, at Fredericton, which I think are unfounded, and made without due consideration —I attended the Halifax Show, and also the Fredericton Show, and I say without the slightest hesitation, that in the dairy classes I saw judged at these two Shows, the mistakes made at Fredericton, were much fewer than at Halifax. Let me particularize in one or two of the leading classes at Halifax in the aged Holstein Bull class, Logan Bros. were put first, and Harding Bros. second, at Fredericton this decision was reversed, and Harding Bros. was placed first, and Logan Bros. second. In the aged Ayrshire Bull class, the Bull which was grand Champion at Halifax and Chatham was placed third at Fredericton, and the Bulls which showed against him at these shows, were put first and second. Fault was found with Mr. Glendenning for these awards among others, and I think unjustly. There was no other place for Harding's Bull except at the top of the list, in the opinion of good judges present; and in the case of the aged Ayrshire Bull class, Mr. Glendenning gave very good reasons for making his award.

Of course your readers may say I am not qualified to pass an opinion on the way in which judgment was given. In my own defence and without being immodest I may say that I have had 40 years experience in raising and handling pure-bred dairy cattle of different breeds and have also had the honor of acting as sole judge of dairy cattle at more than one of our Nova Scotia district Shows and knowing what a difficult place the judge occupies I am not willing to see a stranger sat upon in this way by disgruntled Exhibitors, who cannot see past their own cattle, without saying a word in his defence.—C. P. Blanchard, Truro, N. S.

Editor's Note:—We are always pleased to get communications for publication from Mr. Blanchard. We know he has had a long experience in the handling of pure-bred stock and the fact that his services have been frequently sought to place the awards at some of our progressive local shows is an ample indication that he has taken advantage of the various opportunities for studying live stock characteristics that have presented themselves during the past forty years.

In regard to Mr. Glendenning's judging at Fredericton, we still hold and have no hesitation in saying that Mr. Glendenning did his honest best without fear or favor but we do affirm that in our opinion and in the opinion of the greater percentage of the Stock Breeders who exhibited and who know what they talk about that his judgment did not give satisfaction, and that in not a few cases the winners of the red ribbons did not expect them and were surprised when they found that the animals they held were placed at the top of the list.

We always express our own opinions of a show and do not make a practice of stooping to the position of a tool for any exhibitor whether disgruntled or elated.

As a visitor to our Fairs we know our breeders will welcome Mr. Glendenning whenever he chances to come this way but we do not think they will ever again ask him to place the ribbons.

How I Would Farm.

A Has-Been tells in a recent issue of the Maine Farmer what he would do if he was a young man as follows:—

"Having nearly reached the threescore and ten limit, I feel that my legs and back would not allow me to do as I would like to do. I have seen the introduction of the mowing machine into Cumberland county, and many other labor-saving machines and implements worthy of note. I have been surprised many times in canvassing some of our most popular townsmen and farmers for the use of these machines to hear them say that they knew but little of them, only as they have seen them on exhibition and at work in the field as they have ridden by.

I have seen the time that I felt like crying aloud in the ears of our young farmers that there is a better way to do farm work than wholly by hand labor.

Geo. M. Clark did a good work in his paper on "Intensive Farming." "Eternal vigilance is the price of success," in farming or any other business.

"Take one of our old worn-out farms. It may have been the abode of thrift, but the suceeding generations could not be interested to keep up the fertility and repairs needed, so it has passed from one to another. They have gotten what they could scrape off from it, to put into money. There stands the old farm like a beggar, saying by its looks, "I will aid you if you will deal right by me." The first thing needed is to practice some common sense in how, when and where we put in our efforts called farming.

Practice the study of nature. The soil should be broken in the fall, just after the drouth; harrow with a wheel harrow so as to free the soil from weed seed, and let the frost work it over. If the summer-made manure is to be drawn out

before spring, do it with a spreader and harrow it well.

My experience is that oats sap the land more than yellow corn or wheat. Some of the best catches of grass seed of late years is where corn was planted and a horse weeder was used and the grass seed was sown among the corn and worked in with the weeder.

"This weeder is a good implement if it is used before planting to smooth the land for the planter. Then use the weeder every week until the little weeds are killed. For potatoes use land the same in the fall. In the spring furrow out the rows quite deep, use fertilizer and the weeder. Use the cultivator and hiller, then use the weeder to work the dirt among the plants. It is much easier to have a good horse help than it is to do it alone.

"Don't dig potatoes until after dog days have passed, to have them keep well in the cellar for winter. As soon as the corn has turned ripe, gather off the ears and husk, and sort and store in a good airy bin at the side of the granary. The corn fodder should be cut up and put into a silo.

"In these days of "high cost of living", and "back to the farm," the farmers ought to be willing to cooperate and buy some of these labor-saving implements, or hire them of those who are public-spirited enough to be owners. Try it once and see them do the work. In this manner the fields can be gone over as often as the pile of manure will go. Then it is up to us to have a good-sized pile of manure.

"Farming has declined since ox and steer teams became unpopular.

"The manure question is the main one for every day discussion. Does it pay in the end to use much commercial fertilizer? Does it hold up the land year after year? In these days of manure spreaders, it seems more like common sense to make an effort to use up the by-products on the farm before sending out money for what can be produced on the farm, and put the surplus money into the bank. We read that there is as much nitrogen in muck as there is in hen manure. If so, go for the muck swamp. Years ago there was a lot worked up in the compost heaps, all by hand. Now put the muck over the barn cellar bottom, then put on some hogs' and drop down manure from cattle and horses. It will be much better than to be used alone.

"Raise every good calf; don't try to raise a little runt no matter what is the breed. Keep them growing, and have the heifers come in when two years old. If they do well, keep them another year; if not, turn them for beef as soon as fat. Cows sell best at five and six years old. It is up to the farmers to manufacture the kind of stock the market demands to supply the public's wants. Our mills do not come to the farmers and ask what kind of cloth do you want us to make for you; they prefer to tell you what you need to buy, no matter if it is more than one-half shoddy, or shoes made of pasteboard.

"If one has a liking for farm life and being among the various animals, he will find pleasure at times almost equal to a circus, and can be the ring master at home without an admittance fee.

"Experience has taught me that our time should be well divided to give us success, and not get played out often. Regularity is a good motto. On a farm there are many things to be looked after; see that all are in their places.

"Another thing that only a few realize—to be a good farmer, one must possess more practical knowledge than any other vocation or profession; and then may be called a "hayseeder." This is like the slave owners of the South calling the Northern laborers "mudsills." Rest is very essential as well as labor. The active farmer has no need of a "gymnasium" to get up muscle. Industry wins.—A Has-Been.

Tidings from The Far West.

Editor Maritime Farmer:—

I write this letter to give you some information re British Columbia live stock and exhibition conditions.

I have been one week judging at Vancouver and one week at Victoria and still have several other shows to attend, among them being the Provincial at New Westminster.

They claim to have the best horses on the continent at the Victoria and Vancouver shows. The prosperous people of British Columbia are proud of their horses. They take good care of them and they are willing to go any distance and pay well for high class animals, the only kind they want. Some of the horses shown were secured at Toronto, New York, in Scotland, England, and Ireland, while others were bred in British Columbia.

In one section, a British Columbia production won over the imported horses. Successful show Drafters are valued here at from ten to twelve hundred dollars, and show saddle or carriage animals soar as high as five or six thousand dollars. There were many beautiful heavy animals, mostly Clydesdales, at Vancouver, while there were only two Percerous and two Shires. There were two Suffolk Punch horses at Victoria, all others were Clydes. At both shows there were many splendid Standard bred Hackneys, thoroughbreds and several breeds of Ponies. In the thorough bred class, none equalled some of your New Brunswick animals such as Waterlight or that mare of Mr. Taylor's at Rothesay.

One of the exhibitors was particularly nice, probably because his wife is a New Brunswick lady and his voice indicates he had a Scotch origin. He is canny as well as entertaining. At a banquet held after the show he was undoubtedly the hit in replying to the good losers but he was not often a loser and when he was it was to his friend another delightful exhibitor whose wife and daughter are good losers also.

One very valuable feature in this show was a Groom's contest, some of whom showed their animals in such a manner as to present all their good qualities while others showed the same animals in such a way as to depreciate them thirty percent. Although they were endeavouring to show to the best possible advantage. Many of the contestants were experienced men from the show rings of Scotland, England, Ontario and the United States.

In the Dairy Cattle ring were several animals from Nova Scotia and good ones they were, but a Sussex Dairy Cattle show would be a surprise here in point of quality of the several breeds and grades as well as the numbers.

The British Columbia shows are still young in comparison to some of the Eastern shows and the ambition of the British Columbia exhibitors is such that if the Maritime Provinces will produce of its best, they can attract the purchasers from here. Only high class goods will attract. Beef breeds were not strong. Some fine Sheep and Hogs were exhibited as were Poultry, Dogs and Cats. Kittens offered for sale at twenty dollars each and Dogs valued at six hundred dollars. Two of the Dairy herds were in charge of Maritime men and a Maritime man won in the judging Horses and Dairy Cattle and in the Milking contest. I have met many people from the Maritime Provinces, not one a disgrace to his Province. They are all proud of their old homes and admit they possessed many advantages they did not realize until they left them.—J. Standish, N. S.

Dolly of Willow.

Champion Guernsey Female at the Halifax Exhibition. Owned and exhibited by Roper Bros., Charlottetown, P. E. I.

Relation of Country Church to Property of the Farm.

If we were going into an old settled country to buy a farm, the first thing we would do, after looking over the farm itself and making an estimate of the character of the soil and buildings and neighborhood would be to inquire into the condition of the country church. We would first visit the church and ascertain its physical condition, and note particularly whether there were sheds near it to protect the horses from the summer storms and winter blizzards. We would inquire into its membership, find out whether it was increasing or decreasing, what salary the minister was paid, whether it was paid promptly, whether there was a parsonage or not, and if so, in what kind of repair.

The reader may ask: What has this to do with the farm? Much in every way. If there is a thriving church, kept in good condition, with shelter for the horses, a live pastor, a large Sabbath school and increasing in attendance, we would conclude that this was a safe place in which to rear a family, that the influences which would there come to the children in the most plastic period of their lives would be such as would tend to make them strong, clean men and women.

On the other hand, if the church building was dilapidated, if there were no horse sheds, if the membership was decreasing, if the pastor was paid a salary which necessitated his making sacrifices which no man in a good farm community should be required to make. We would conclude that it was a poor place in which to rear a family.

We would inquire particularly about the pastor, whether he was a man who dealt mostly with things of the other world and his mission to prepare folks for it, or took a lively interest in everything that concerns humanity in his neighborhood. If we found a man who visits every family in the community, regardless of church relations, and knowing every farmer at a distance by the horse he drives; if he took an interest in all the affairs of the farming community, and made himself generally useful to his neighbors, then we would feel that it was a good neighborhood in which to rear children. If we found that in addition to the above he knew something about farming, knew enough at least to ask questions about it, and kept some small live stock—a cow, chickens, or a pig or two—in fine condition, we would want to have a stake in that neighborhood.

As a matter of fact, the condition of the country church in a neighborhood is a very fair indication of the character of the people of the community. If they insist on giving their pastor only seven or eight hundred a year, with the idea of piecing it out with a sack of corn or jag of hay, or an occasional pat of butter, we would make up our minds that those farmers were rather a small-souled lot. If they paid him a salary on which he could live comfortably, rear and educate his children properly, then we would conclude that we had struck a lot of broad-minded, large-hearted, wide-awake farmers, who thought in dollars instead of nickels, in hundred dollar bills instead of tens; in other words, thought on the same scale in dealing with the educational and spiritual side of their lives that they did when dealing with the material and business side. We would feel that this would be a good community in which to own a farm. The country church is an indicator of the character of the community, and the spirit of the preacher has something to do with the spirit of the people among whom he lives and to whom he ministers.—Wallaces' Farmer.

Stock Notes.

J. Frank Roach, Sussex, N. B., shipped a choice two-year-old Guernsey Bull to W. W. Johnson for the North Sydney Agricultural Society. Mr. Roach has quite recently had his stock tested by Jas. H. Frink, Dominion Veterinary. They all passed the test and showed no sign of disease in any form.

Prof. Chas. Oviatt, of Laramie, Wyoming, State University, purchased several head of Guernsey Cattle from the Sunnyside Stock Farm, J. Frank Roach, Proprietor, and some from Glenview Stock Farm, Walter McMonagle & Son Proprietors Sussex, N. B. The professor will take away, in all, about two carloads. These cattle are for breeding purposes on the State University farm. Prof. Oviatt is also taking some cattle from Maine. This is the second shipment of Guernseys Mr. Roach has made to that University, while Mr. McMonagle sold them Jerseys before.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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OCTOBER 17th, 1911,

DATES OF ISSUE.

October ..... 17—31
November ..... 14—28

Breeding to Purebred Sires.

The farmer or dairyman who begins now to breed his cows to a good purebred male, and saves and breeds all the heifers, will soon be in a position to sell heifers and young cows at handsome figures, and buyers will come to his door eager to take them at high figures. As an instance of what may be accomplished in this way, we would refer our readers to the advertisement of Messrs Lea & Clark of Victoria, P. E. I., whose advertisement appears on the breeders pages of this issue. These young men, a few years ago, decided that they would grade up their herds by the use of pure bred Holstein Friesian bulls. They have zealously followed this decision and have gone one better by adding an occasional purebred cow or heifer to their herds. In this way they have worked up two magnificant pure bred herds, the grades growing fewer in numbers while their pure breds are increasing. This has all been accomplished in the course of a few years.

In their present advertisement these progressive dairymen are offering ten, good, young grade Holstein cows, fresh or forward in calf, tried and tested and guaranteed as described. These cows tested not less than 3.8 per cent. butter fat during this present year and some have tested over 4 per cent. They are all included in the herds that averaged 8000 lbs. milk and nearly 340 pounds butter at the factory last year. Messrs Lea & Clark know the production of their individual cows, they use brains in their business and their example in building up profitable dairy herds may well be emulated by more of our Maritime Province young men. These gentlemen find the East and profitable farming good enough for them and so will you if you follow in their progressive footsteps.

Any reader of the MARITIME FARMER who is in need of pure bred live stock of the profitable kind will do well to drop postal cards to the breeders who are advertising in this paper, asking for particulars and prices. Young men who are thinking of starting, as well as established breeders, can do us a kindness and also benefit themselves by writing to our advertisers and saying they saw announcement in THE MARITIME FARMER.

What all Farm Homes Need.

The following article on "What all Farm Homes Need," from the pen of Professor L. H. Bailey, appeared in a recent issue of The New England Homestead. It contains such excellent ideas that we pass it along to our readers :—

"The farm home establishment is becoming more and more complex. One thing after another is being added to it. The farmstead comprises not only the ordinary barns and the residence, but new kinds of poultry houses, windmills, dairy rooms, gasoline engines, sewing machines, rural delivery boxes, water works, lawns and flower gardens, ice houses, and many other extensions and attachments are being gradually incorporated into the scheme. All these conditions tend to make the home more effective, to broaden the operations of the farm people and to relate the establishments of the larger affairs of the neighborhood and the world. Many other things will be added to the farm home, because this home must concentrate into itself all the essential enterprise making for a better country life. Into the growing conception of the farmstead I desire to project another unit. On every farm there should be a piece of land definitely set aside for the children and the young folks, to be used in the developing of the intelectual interest in the farm and in country life. It is the responsibility of every parent to train the children. This responsibility cannot be delegated wholly to the school or to any other agency. If the farm family must take a real part in the educational development of its children, it must then have some kind of an establishment for the purpose. This establishment should be incorporated into the school system of the district.

On every farm there should be a school garden or child garden, in which the children may make their tests, grow their plants, and work out the school problems. It is impracticable in most cases to have school gardens or test plots on the rural school grounds. Such gardens should be at the home, and the children should be encouraged to take the school thought home with them and to plant it in the garden. A list of these home gardens should be in the schoolhouse. The teacher should ask for reports from the children. She should set problems to be worked out in the gardens, and the areas should in all ways be regarded as the connecting physical link between the home and the school.

"This child lot might be a half acre, or an acre, near the house and the barns, permanently set aside, for the purpose and be made just as much a part of the farm establishment as a milk house, a carriage shed, a clothes yard, a chicken yard or any other side lot of the farm. In this test area many kinds of demonstrations could be made. Here new varieties of fruits, vegetables and flowers could be tried, fertilizer tests could be made, different ways of planting, different methods of tilling and of handling crops could be undertaken, the attractive wild plants of the farm could here be collected, bird houses could be erected. This area could become in time one of the most attractive places on the farm, particularly if it were inclosed with a hedge or a wall of attractive native or other bushes, and if it were to lead down to a brook, or to contain a spring, or to have a little pond.

"The farmer has other responsibilities to education than merely to pay his taxes for formal school facilities. He cannot by any means escape his responsibility in the development of a better country life. He must express this responsibility largely in the better education and training of his children. Merely to be a successful farmer is not a sufficient object in life. A man cannot wash his hands of his obligation to society by making even an ideal school in his community; he must himself actively help in the education of the new generation. This is his responsibility to society. If he is to help he must have a means or an establishment for the work.

New Brunswick Apple Show.

The second annual provincial apple show which will be held in St. Andrew's Rink, St. John, will be formerly opened by Premier Hazen, Hon. Dr. Landry and others, at 8 p.m. Monday, October 30th, and will run for the following three days. The apple crop is exceptionally good this year in the province and a marked improvement in quality over last year's exhibits is assured. Upwards of $800.00 is being offered in prizes. Several new features will also be introduced, the aim of the management being to place before the public of St. John and the fruit growers of New Brunswick a display of apples, hitherto unsurpassed in Canada. Leading authorities on apple culture from Ontario and Nova Scotia have been engaged to judge the exhibits and deliver addresses. Return tickets from any point on the Canadian Pacific and Intercolonial Railways will be issued on Standard Certificate plans, for single fare. The Fruit Growers' Association will meet in Convention on the same dates. For complete list containing particulars and program, write to A. G. Turney, Fredericton, N. B.

Up to Date Farmer.

When a farmer breeds indifferent cattle, horses or sheep, he receives less for his labor and feed than he should receive, adds less to the wealth of his state than the up-to-date farmer, and is at a disadvantage when he undertakes to secure for himself and family the things which help to make life worth living. We do not mean to say that the individual farmer owes more to the community or to the state than the laborer, the lawyer, the doctor, the educator, the preacher or the business man; but we do expect more from them as a whole, because there are more of them than all these others combined.

Prize Winners at the Charlottetown Exhibition.

THOROUGHBRED HORSES.

Mare, 3 years old—1, H. H. Horne; 2, John Stewart, Marshfield; 3, J.Mc Millan, Covehead.

CARRIAGE HORSES.

Stallion, 4 years old—1, David Reid & Son, Victoria Cross; 2, John Mc Phee, Lower Freetown.

Stallion, 3 years old—1, Nelson Mc Coubery, Rustico; 2, J. J. McLeod, Bonshaw; 3, D. W. White, York Road.

Stallion, 2 years old—1, Wm. Bateman; 2, Leslie Bryenton, Trilby.

Filly, 3 years old—1, H. E. Crosby, Bonshaw; 2, Wallace Wood, Alexandria; 3, Robt. E. Longworth, Royalty.

Filly, 2 years old—1, Edwin Carew, Bungay; 2, Dan McDonald, Clyde River; 3, Edgar R. Heartz, Marshfield.

Filly, 1 year old—1, Ira Carr, Cove Head; 2, Henry Wood, Mt. Herbert; 3, W. W. Owen, Southport.

Foal of 1911—1, Heber Crosby, Marshfield; 2, John A Cummings, Wiltshire East; 3, Albert C. Foster, Dunstaffnage.

Mare with foal at foot—1, John A. Cummings; 2, Almon Boswell, Pownal; 3, Daniel Howard, Milton.

Carriage mare or gelding, 15½ hands or over, to be shown in carriage—1, G. D. Wright; 2, John Ford, Ebenezer; 3, Wm. Bateman.

Carriage mare or gelding under 15½ hands, to be shown in carriage—1, Misses L. and H. Stallo, Dalvay; 2, Henry Wood; 3, Gordon Hughes.

Champion Mare, any age—H. E. Crosby.

SADDLE HORSES.

Gent's; shown under saddle—1, E J. Vessey, Covehead; 2, Misses L. & H. Stallo; 3, D. McDonald.

Ladies'; not less than 15 hands, shown under saddle—1, Misses L. & H. Stallo; 2, Miss P. McLaughlan; 3, A. H. Boswall.

HACKNEY HORSES.

Stallion, 3 years old—1, John B. Roper.

Filly, 2 years old—1, Almon Boswall.

ROADSTERS.

Stallion, 4 years old—1, W. L. Mc Kie; 2, John McPhee; 3, Daniel N. Taylor, Nine Mile Creek.

Stallion, 3 years old—1, Joseph Fraser, Avondale; 2, Byrne Bros.

Filly, 3 years old—1, Vernon Mc Millan; 2, Frederick Mc Donald, York; 3, George Dockendorff.

Brood Mare with Foal at side—1, Byrne Bros.; 2, Wm. L. Essery, Union Road.

CLYDE HORSES.

Stallion, 4 years old—1, Geo. Dockendorff; 2, St. Peter's Clyde Horse Co.

Stallion, 3 years old—1, Wallace Stead, Highfield.

Stallion, 2 years old—1, Lea & Clark, Victoria; 2, John P. Morris, 3, W. W. Crosby, Cornwall.

Stallion, 1 year old—1, Daniel Stewart, Southport; 2, John Tweedy; 3, Dr. A. A. Leckie.

Filly, 3 years old—1, Daniel N. Taylor; 2, A. H. Boswall; 3, Thos. P. Cass.

Filly, 2 years old—1, Edgar Heartz; 2, Wm. F. Godfrey, Marshfield.

Filly, 1 year old—1, W. W. Crosby; 2, John P. Morris; 3, Thos. P. Cass.

Foal of 1911—1, Hector McNeil, New Dominion; 2, John P. Morris; 3, Leslie Bryenton, Trilby.

Mare, with Foal at foot—1, Wm. Godfrey; 2, Chas. E. McKenzie, North Milton; 3, Hector McNeil.

Champion Stallion, any age—1, Geo. Dockendorff.

Champion Mare, any age—Edgar Heartz.

DRAFT HORSES.

Filly, 3 years old—1, Leslie McEwen.

Filly, 2 years old—1, Frederick Long; 2, Heber Crosby; 3, Edwin Carew, Bungay.

Filly, 1 year old—1, Jas. Livingston, Clyde River; 2, Jas. G. Hughes, Cove Head; 3, Wm. L. Essery, Union Road.

Foal of 1911—1, John Newson; 2, Chas. Bryenton; 3, Oliver Saunders.

Mare with Foal at foot—1, John Newson; 2, Oliver Saunders; 3, Chas. Bryenton.

Pair of Draft Horses, not less than 1400 lbs. each—1, Roper Bros; 2, J. J. McLeod, Bonshaw.

Draft Mare or Gelding not less than 1400 lbs.—1, Major S. Milligan, Tyne Valley; 2, Wm. Bateman; 3, A. A. Mc Beath.

GENERAL PURPOSE HORSES.

Mare, 3 years old and upwards—1, Geo. Dockendorff; 2, J. W. Wedlock, Brackley Pt.; 3, D. W. White, York Pt.

Mare, 2 years o,d—1, Stanley Prowse; 2, Wallace McLure; 3, Robt. Longworth.

Brood Mare with Foal at foot—1, Wm. L. Essery; 2, John Stewart, Marshfield; 3, John A. Cummings.

SPECIALS.

Given by Mr. John B. Roper, Charlottetown Royalty, For the best Colt or Filly, 1 year old, sired by Imported Hackney Stallion "Fashioner"—1, A. A. McBeath.

For the best Foal of 1911 sired by the same Stallion—1, Heber Crosby; 2, Albert C. Foster; 3, Almon Boswell.

Given by Bank of Commerce, Silver Medal for best Clyde or Shire Stallion—1, Geo. Dockendorff

CATTLE.

SHORTHORNS.

Bull, 3 years old—1, Samuel C. Lane, Mt. Mellick.

Bull, 2 years old—1, Thos. P. Cass; 2, H. F. Sanderson.

Bull, 1 year old—1, Albert Boswall, Pownal.

Bull Calf, under 1 year old—1, Thos. P. Cass; 2, H. F. Sanderson.

Bull Calf, under 6 months old—1, Thos. P. Cass.

Cow in milk or calf, 3 years old and upwards—1, H. F. Sanderson.

Cow in milk or calf, 2 years old—1, Thos. P. Cass.

Heifer, 1 year old—1,Thos. P. Cass.

Heifer Calf, under 1 year—1, Thos. P. Cass.

Heifer Calf, under 6 months—1 & 2 Thos. P. Cass.

Champion Bull—1, Thos. P. Cass.

Champion Female—1, Thos. P. Cass.

Breeders' Young Herd—1, Thos. P. Cass.

HEREFORDS.

Prizes went to Louis Hayden, Cherry Valley.

SHORTHORN, HEREFORD, POLLED ANGUS OR GALLOWAY GRADES.

Cow, 4 years old, in milk or calf—1, Thos. P. Cass; 2, Robt. E. Longworth; 3, A. H. Boswall.

Cow, 3 years old—1, Robt. E. Longworth.

Heifer, 2 years old—1, Vernon Mc Millan.

Heifer, 1 year old—1, Jos. Praught, 2, Robt. E. Longworth; 3, Thos. P. Cass.

Heifer Calf, under 1 year—1, A. H. Boswall; 2, Jos. Praught.

Heifer Calf, under 6 months—1, Jos. Praught.

STEERS.

Best single Steer, 2 years old—1, John Stewart; 2, Robt E. Longworth.

Best pair of Steers, 1 year old—1, A. H. Boswall.

Best single Steer, 1 year old—1, Jos. Praught; 2, A. H. Boswall.

DAIRY CATTLE.

AYRSHIRES.

Bull, 3 years old and upwards—1, R. W. Bulpitt, Cardigan; 2, Ambrose T. Rodd, Winsloe.

Bull, 2 years old—1, Simmons Bros.; 2, Bert R. Brown, Little York; 3, John Stewart.

Bull, 1 year old—1, Robert Stewart Winsloe; 2, Chas. H. Robertson, Marshfield.

Bull Calf, under 1 year old—1, Mc Rae & Son; 2, Theo. Ross.

Cow, in milk or calf, 3 years old—1 & 3 McRae & Son; 2, Simmons Bros.

Cow, in milk or calf, 2 years old—1, McRae & Son; 2 & 3, Simmons Bros.

Heifer, 1 year old—1, Simmons Bros.

Heifer Calf, under 1 year and over 6 months—1 & 2, McRae & Son.

Aged Herd—1, Simmons Bros.

Champion Bull—1, R. W. Bulpitt.

Champion Female—1, McRae & Son.

JERSEYS.

Bull, 3 years old—1, Jas. Essery, Union Road.

Bull, 2 years old—1, Wallace Stead, Highfield.

Bull Calf, under 6 months and over 3 months—1, Stephen Holroyd, Winsloe; 2, Spurgeon Warren, N. River.

Cow, in milk or calf, 3 years old and upwards—1, Spurgeon Warren; 2, Hamilton Horne; 3, Wallace Stead.

Cow, 2 years old— 1 & 2, Wallace Stead.

Heifer, 1 year old—1 & 2, Wallace Stead.

Heifer Calf, under 1 year and over 6 months—1, Spurgeon Warren; 2, Wallace Stead.

Heifer Calf, under 6 months—1, Wallace Stead.

Aged Herd and Champion Bull—Wallace Stead.

GUERNSEYS.

Bull, 3 years old—1, Roper Bros; 2, Jas. M. Roper.

Bull, 2 years old—1, Roper Bros.

Bull, 1 year old—1, Jas. M. Roper; 2, Roper Bros.; 3, Almon Wood.

Bull Calf, under 1 year old—1, Roper Bros.; 2, Jas. M. Roper.

Bull Calf, under 6 months—1, Jas. M. Roper; 2, Roper Bros.

Cow, in milk or calf, 3 years old and upwards—1 & 2, Roper Bros; 3, Jas. M. Roper.

Cow, 2 years old—1 & 2, Roper Bros.; 3, Jas. M. Roper.

Heifer, 1 year old—1 & 2, Roper Bros.; 3, Jas. M. Roper.

Heifer Calf, under 1 year old—1, Roper Bros.; 2, Jas. M. Roper.

Heifer Calf, under 6 months—1, Jas. Roper; 2, Roper Bros.

Aged Herd—1, Roper Bros.

Breeders' Young Herd—Roper Bros.

HOLSTEIN-FREISIANS.

Bull, 3 years old and upwards—1, John Tweedy; 2, Lea & Clark; 3, Roy Jones.

Bull, 2 years old—1, Lea & Clark; 2, Layton Jones, Pownal; 3, W. J. Bryenton, Trilby.

Bull, 1 year old—1, Lea & Clark.

Bull Calf, under 1 year old and over 6 months—1, A. H. Boswall; 2, Roy Jones.

Bull Calf, under 6 months and over 3 months—1, Lea & Clark; 2, A. H. Boswall.

Cow, in milk or calf, 3 years old and upwards—1, 2, & 3, Lea & Clark.

Cow, 2 years old—1 & 2, Lea & Clark; 3, Edgar Heartz.

Heifer, 1 year old—1, Edgar Heartz 2 & 3, Lea & Clark.

Heifer Calf, under 1 year—1 & 2, Lea & Clark.

Heifer Calf, under 6 months—1, Lea & Clarke.

Aged Herd—1 Lea & Clarke.

Breeders' Young Herd—1, Lea & Clark.

Bull and 3 of his get—1, Lea & Clark.

Cow and 2 of her offspring—1 Lea & Clark.

Champion Bull—1, John Tweedy.

Champion Female—1, Lea & Clark.

SPECIAL PRIZES.

Given by the Holstein-Freisian Association.

Bull and 3 of his get—1, Lea & Clarke.

Cow, any age, and two of her offspring—1, Lea & Clarke.

Champion Bull, any age—1, John Tweedy.

Champion Female, any age—1, Lea & Clarke

For the best pure-bred Milch Cow, of any breed entered at the Exhibition, a Bronze Medal.

Canadian Bank of Commerce Cattle Special—1, McRae & Son.

AYRSHIRE GRADES.

Cow, 4 years old and upwards in milk or calf—1, Simmons Bros.; 2, Chas. H. Robertson; 3, Robt. Stewart.

Cow, in milk or calf, 3 years old—1, McRae & Son.

Heifer, 2 years old—1, Simmons Bros.; 2, McRae & Son; 3, Hector Mc Rae.

Heifer, 1 year old—1, Harry Good, Winsloe; 2, McRae & Son.

Heifer Calf, under 1 year—1, McRae & Son; 2, Robt. E. Longworth.

Heifer Calf, under 6 months—1, Hector McRae; 2, Robt. Stewart.

JERSEY OR GUERNSEY GRADES.

Cow, 4 years old and upwards, in milk or calf—1, Roper Bros; 2, Simmons Bros.; 3, Arthur Roper.

Cow, in milk or calf, 3 years old—1, Roper Bros.; 2, Robt. Stewart; 3, Simmons Bros.

Heifer, 2 years old—1, Frederick Long; 2, Robt. Stewart; 3 , Robt. Stewart.

Heifer, 1 year old—1 & 2, Robt. Stewart; 3, Roper Bros.

Heifer Calf, under 1 year old—1, Mc Rae & Son; 2, Roper Bros.

Heifer Calf, under 6 months—1 Roper Bros; 2, Arthur Roper.

HOLSTEIN GRADES.

Cow, 4 years old and upwards, in milk or calf—1, W. J. Gibson; 2, Hector McRae; 3, Edgar Heartz; 4, Lea & Clarke.

Cow, in milk or calf, 3 years old—1, Lea & Clarke.

Heifer, 2 years old—1, Lea & Clarke; 2 & 3, Edgar Heartz.

Heifer, 1 year old—1, Lea & Clarke; 2, Lea & Clarke 3, Henry Jones, Hazelbrook.

Heifer Calf, under 1 year old—1, Lea & Clarke; 2 W. J. Gibson.

Heifer Calf, under 6 months—1, Henry Jones.

SHEEP.

Ram, 2 shears and over—1, S. C. Lane; 2, Albert Boswall; 3, S. L. Boswell.

Ram, shearling—1, Albert Boswell; 2, S. L. Boswell.

Ram Lamb—1, Albert Boswell; 2, S. C. Lane; 3, S. L. Boswell.

Ewe, 2 shears—1, Albert Boswell; 2, S. L. Boswell; 3, Albert Boswell.

Ewe, shearling—1, Albert Boswell; 2, S. L. Boswell; 3, S. C. Lane.

ERe Lamb—1, Albert Boswell; 2, S. L. Boswell; S. C. Lane.

Flock of Leicesters, consisting of ram and 4 females—1, Albert Boswell 2, S. L. Boswell; 3, S. C. Lane.

COTSWOLDS.

Ram, 2 shears and over—1,John Tweedy.

Ram, shearling—1, John Tweedy.

Ram Lamb—1, John Tweedy; 2, Austin Judson, Pownal.

Ewe, 2 shears and over—1, John Tweedy 2, John Tweedy; 3, Austin Judson.

Ewe, shearling—1, John Tweedy; 2, John Tweedy; 3, Austin Judson.

Ewe Lamb—1, Austin Judson; 2, John Tweedy.

Flock of Cotswolds—1, John Tweed Flock of Cotswolds—1, John Tweedy.

LINCOLNS.

Ram, 2 shears and over—1, Albert Boswell, Jr.; 2, E. B. Boswell; 3, Ernest Lund, Mt. Herbert.

Ram, shearling—1, F. B. Boswell; 8, Ernest Lund; 3, Albert Boswell, Jr.

Ram Lamb—1, Albert Boswell, Jr.; 2, Ernest Lund; 3, Ef B. Boswell.

Ewe, 2 shears and over—1, Albert Boswell, Jr.; 2, E. B. Boswell; 3, Ernest Lund.

Ewe, shearling—1, Albert Boswell, Jr.; 2, Ernest Lund; 3, E. B. Boswell

(Continued on page 26).

HORTICULTURE.

Pointers on the Cultivation of Raspberries, Blackberries and Currants.

A sandy soil or clay loam of moderate fertility and well provided with humus is good for cane fruits. It must not be wet, but should be resistent to drouth. The amount and kind of fertilizers needed differ with the soil. On good soil raspberries and blackberries need little barnyard manure, and what is used should be applied in Autumn or Winter, that it may not cause a late, sappy growth, Whether potash and phosphoric acid may be needed depends upon the soil, and no general rule is safe. The intelligent use of such fertilizers frequently pays well, but it is easy to waste money upon them. Gooseberries and currants are heavy feeders, and need an abundance of barnyard manure. The preparation of the soil for the cane fruits should be deep and thorough, and fresh sod should be avoided.

Our hot, dry Summers are hard on the cane fruits, and a north slope not steep enough to wash has a decided advantage. Evaporation is greatly increased by the wind, and a windbreak on the west side, from which our prevailing winds come, is very helpful, but its roots will rob the plantation if planted too near.

It is a common practice to plant raspberries and blackberries rather closely in rows wide apart. This renders horse cultivation easy between the rows, but impossible across them making much more hand labor necessary if the cultivation is properly done. The red raspberries and blackberries soon become veritable hedge-rows, the plants being too crowded to give the best yields and quality of fruit, and making even hand cultivation difficult. The practice of setting the plants at distances that will permit horse cultivation in both directions and treating all suckers not in the hills as weeds improves the quality of the fruit, and greatly reduces the labor of cultivation, without greatly diminishing the yield.

A convenient way to set out the plantation is to mark off the ground at proper distances in both directions, and to furrow out the rows one way, setting the plants where the marks cross the furrows. The roots of the plants should be dipped into mud a short time before setting, or kept wet by carrying the plants in a vessel of water. The roots should be spread out in all directions, and moist soil should be thoroughly worked among them and packed around them. The remainder of the furrows may be filled by subsequent cultivation. If the ground should be hard or the subsoil near the surface, the plants should not be set very deeply, but in a loose, mellow soil they should be rather deeply planted. This is especially true in the West, where severe drouths occur, As a rule, they should be set an inch or two deeper than they stood in the nursery rows.

Thorough cultivation should continue until Midsummer, or until after the fruit has ripened, if that should be later. In sections of abundant rainfall cultivation continued too late is likely to cause a late, sappy growth of wood that will Winterkill, but in regions subject to Winter drouth cultivation should continue until cold weather to retain the moisture. In small patches mulching with straw is sometimes practiced, instead of cultivation, with good results. This practice causes the roots to grow very near the surface, and one cannot change from mulching to cultivation without destroying many of the roots.

The bearing canes of raspberry and blackberry bushes should be cut out and burned soon after the fruit is gathered. A pair of long-handled pruners, or a hooked blade attached to a handle 3 or 4 feet long, is a good tool for this purpose.

In setting out red raspberries one may use plants a year old, or growing plants a few inches high may be moved in late spring or early Summer with a ball of earth on the roots. Pinching back the young canes, unless they are very small, causes the growth of late, weak branches, likely to Winterkill. It is better not to prune the canes until the following Spring, when they should be cut back to 3 feet high. They will then throw out vigorous side shoots, on which the fruit will be borne. They are usually planted 3 x 6 feet apart, but 4 x 5 feet, with cross-cultivation, is better. Loudon and Cuthbert are good varieties. The plantation will begin to decline after these crops have been gathered, and should be plowed under.

Currants need a stronger, cooler soil than raspberries or blackberries. The fruit is borne most abundantly on spurs and branches from the two-year-old wood. A good way to prune the bushes is to allow a few strong shoots at proper distances to grow up each year, removing all other sprouts and cutting out all three-year-old branches each Autumn or Winter, never allowing any branches to become more than three years old. Red Dutch, Victoria and White Grapes are reliable old varieties.—John L. Doan.

Best Orchard Cover Crop.

In a small way I have had remarkable success with winter vetch as a cover crop. I sowed 16 acres last fall on land not inoculated and it took hold gloriously. I think it is the finest cover crop I ever had. Have sown from August 5 to as late as September. Last year I sowed some with rye, but the vetch grew so fast the rye had no chance. The inoculation of the vetch with bacteria was very helpful, I think, although the land had grown cowpeas before.

A friend wanted to inoculate his vetch, but the material did not come as soon as his seed did, so he sowed the seed vetch and then in a day or two he sprinkled the inoculating bacteria across one section of the field. The difference in growth was very marked. Where the bacteria was applied the vetch was a thick mat, 6 to 8 inches high in October, while in other places it was just above the ground and growing only a little.

I believe the ideal cover crop is hairy vetch. The ideal crop, though sometimes, like some other ideal things, is the most difficult to get. The hairy vetch forms a very close, green cover and mat on the surface of the ground. It germinates readily and vegetates early and late, that is grows early in the spring and late in the autumn, is hardy, and is an annual. That sounds easy, but the seed is hard to get and it is expensive. While it will cost a good deal, I think it is worth while to attempt to grow one's own seed. I think every fruit grower ought to grow his hairy vetch seed. It costs about $5 a bushel.—Prof. John Craig, New York Agricultural College.

Growing Cabbage.

The Massachusetts Board of Agriculture publishes, in its crop report for June, an article on "Cab-

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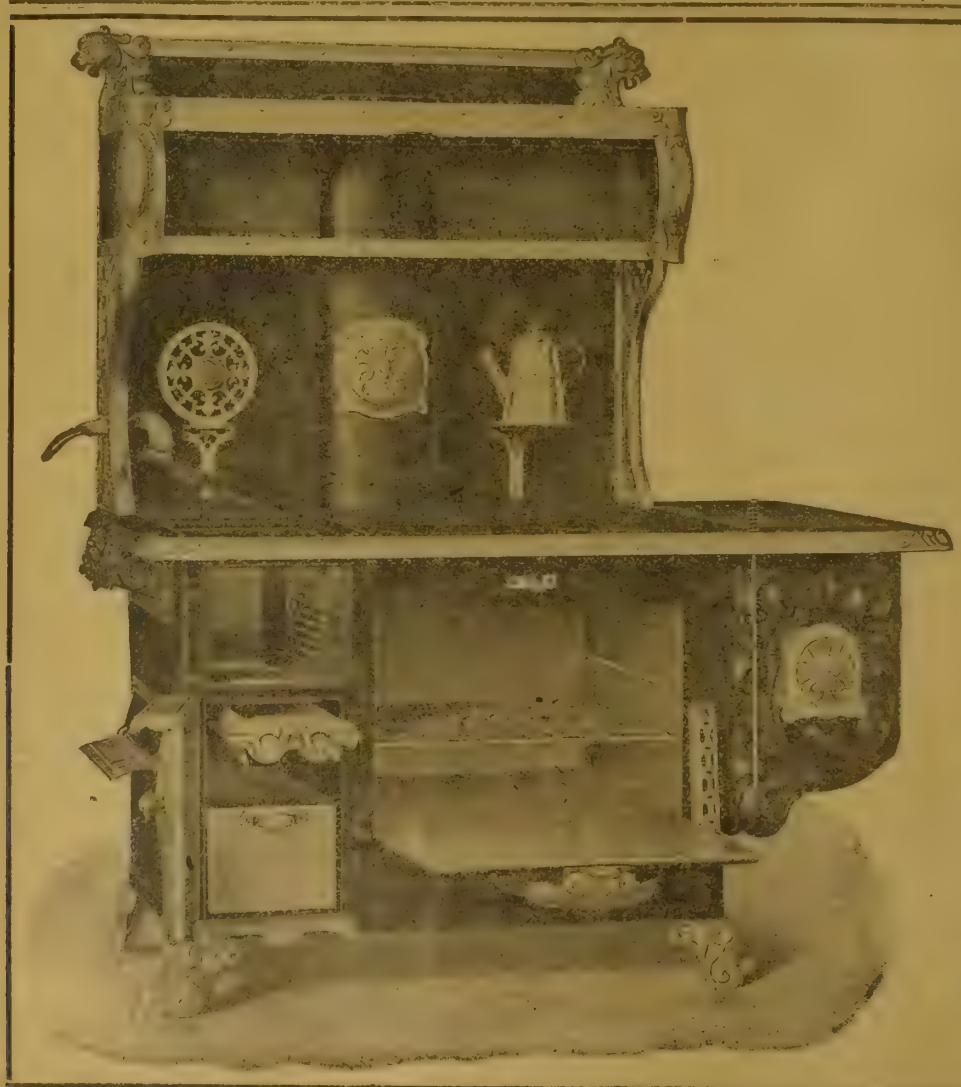
If you suffer from bleeding, itching blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.



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bage and Cauliflower As Market-Garden and Farm Crops."

The bulletin treats cabbage as a market-garden crop and as a farm crop. Under the former head the questions of soil, young plants in the market-garden, setting plants in the field, cultivation, harvesting and varieties are thoroughly treated. Under the head of cabbage as a farm crop, soil, the preparation of the land, starting the seedlings, setting the plants in the field, harvesting, varieties and storage are taken up and discussed. The question of storage is a very important one and is given careful attention. Insect enemies and diseases are also discussed, cabbage worms, cabbage root maggots, and the cabbage aphis among the former, while clubroot is the only disease of importance. This it is hard to control, the only method being to follow the list of 'don't" which are given in this article.

Cauliflower is discussed briefly, it being pointed out that practically everything previously said in relation to cabbage is equally applicable to cauliflower. The bleaching of the heads and storing for winter use, in celery pits, are described. The bulletin concludes with the following statement: "There is no mystery about the growing of cauliflower, if treated exactly like cabbage, except for the protection of the leaves, as above indicated, it can be grown in any garden, and forms so attractive and tempting a table vegetable that it should be among those grown by every person having a garden for the furnishing of his own table."

DAIRYING.

Ancestral Influence.

"The question has arisen as to which animals in the pedigree of a dairy sire should receive the most careful consideration. We came to the conclusion that there were five that should be especially studied. I name them in the order of the relative weight we thought they should have: First the dam, second the sire, third the dam of the sire, fourth the maternal grandam, fifth the paternal grandsire."

So far as mere transmission of milking quality is concerned, there is no evidence that either the sire or the dam is prepotent over the other. Speaking in a general way, all evidence goes to show that in animal breeding the sire and dam have equal powers of transmission, providing they are equally well bred. The idea that the sire is prepotent over the dam because he is a male has no foundation in fact, and the idea that the dam is prepotent because she carries the young is equally unsupported by evidence.

Speaking more in detail, however, the most careful statistical studies show that in certain characters and to a slight degree the one parent may be prepotent over the other. For example, the English father is prepotent over the mother in respect to stature in both sexes, though slightly more so with the son than with the daughter. Conversely, as to coat color, both in thoroughbred horses and in Basset hounds, the reverse is true, and the dam is slightly prepotent over the sire.

If accurate study were possible as to this particular character we should not be surprised if one parent or the other might prove slightly prepotent but which one there would be no means of predicting, nor have we any reason to suppose that the difference of this kind would be more than slight. So far as pure transmission goes therefore, I should say there is no present reason for placing either parent over the other in influence upon the offspring, except as one is known to be the better bred.

When however, we get to the means of estimating prepotency the advantage is clearly on the dam's side. She can be put to the direct test, whereas the best that can be done with the sire is the indirect test through his get. The performance record of the dam shows exactly what her contribution will be to the probable performance of the offspring. The best that could be done on the sire's side would be to compare the average of his get with such a record, after making due allowance for the quality of the dams on which he was bred, all of which is an exceedingly difficult thing to do. From the pure standpoint of judging, therefore, there is a good basis for giving more careful consideration to one parent than to the other. For simple ease of work, I should give the preference to the dam, unless the sire were old enough to have produced a long line of performance, in which case I should transfer the first attention to him, or rather to his female get. In most practical breeding problems, however, where the sire is better bred that the dam, I should give the leading place to the dam of the sire until such time as his get should have become numerous enough to judge of his real breeding powers, after which I should again transfer the first place to him.

All of this is intended to mean first of all that the chief consideration should go with the best line of breeding, and so far as sex is concerned, it goes at first to the dam because she can be tested at a younger age, but finally rests with the sire because his get is more numerous and will ultimately offer a better index to his breeding powers than can ever be obtained from the female.

I should criticize the conclusion of your inquirer in limiting the chief consideration to the number five. To my mind, on general principles, it should either stop at four or be extended to eight, unless there is a notable difference in the quality of the bloodlines.

It is impossible to discuss questions of this kind and rate animals in this way except very roughly, and any rating that might be established for one particular pedigree would certainly be modified and rearranged for another.—Breeders' Gazette.

How Long Should a Cow be Kept?

When we consider how very difficult it is to build up a good milking strain and how certain is the fact that large numbers of animals in this country give yields that are not profitable, the question of how long a cow should be kept will be recognised as one to which it is impossible to give a definite answer in terms of years. It must depend almost entirely on the animal herself. Most breeders who have an animal that gives a large supply will keep on breeding from her as long as the return is profitable, and on the whole there can be no better guide than this when we are dealing with cows that are really above the average. But when it comes to actual practice, in regard to the dairy herd generally, something more definite is required. There is a more or less general belief that the milk of the cow deteriorates as she gets older; there can be no question that she requires more food in proportion to her size than she did in her prime, and, of course, there is a continued depreciation in her value for food, for the older she gets the less the sum that will be received from the butcher for her. The ordinary practice on many farms is, therefore, to consider that the animal is best disposed of for beef when she has produced five or six calves. Exceptions are, of course, numerous, and cows of ten or twelve years old, or even older, are sometimes seen in the herds of dairymen who are keen enough business men to be able to justify their practice by the results. Inquiries that have been made from time to time seem to show that the view that there is any rapid deterioration after the cow has reached her prime—say at six years old—is not warranted, nor has it been proved that the milk itself is poorer in quality. The rule to keep a cow as long as her yield is profitable is, therefore, one that can be commended as satisfactory. Particularly should it be followed in the case of an animal of superior quality for there is another point to be considered. While there is never any absolute certainty that a good milker will produce good milkers—there is no certainty about anything in breeding—it is recognised that the milking habit is transmitted, and that a good milker is more likely than a bad one to produce heifers that will take high rank in the milking herd. Now, we believe there is no reason for fearing that the calves produced by a cow late in life are less likely than those born earlier to inherit the good qualities of their dam. There may, perhaps, be a falling off in vigour in the produce of animals in old age, but even this is doubtful, and when the custom is followed of using a young male to compensate for the greater age of the cow, this consideration is not likely to be of much importance. Those who are engaged in the building up of good milking herds would, therefore, be justified in breeding from their best cows as long as possible, and even in straining a point in their favour on the question of immediate profitable return.

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MILKING.

Comparatively few milkers realise the importance of their business. Kindness, neatness, and regularity must be observed, and all the milk must be secured. The cow must be kindly treated at all times; when she is well treated, allowed plenty of palatable food and pure water, and made comfortable generally, she does her best, and sometimes it seems as though she would not if she could. Cows should have no fear of the person caring for them. If you find your cows are afraid of a man after he has been about them a sufficient time for them to become acquainted with him, you may be sure there is something wrong, and that a change of some kind is necessary, and if no other change remedies the matter a change of the man does. This point should be absolutely insisted upon: the cow must be kept clean. When it is necessary to wash the udder and teats before milking, do so. This requires but little time, and is very necessary if we are to have clean milk. The filthiness connected with much of the milking is disgusting to a person who sees the work, and many times it is to the person consuming the milk miles away from where it is produced. Some years ago, Dr. Backhaus, in a report on the milk supply of Berlin, made the statement that the people of that city consumed with their daily milk 300lb. of cow dung. I wonder if we are doing any better class of milk. Promiscuous milking should not be allowed, each milker should have his regular cows to milk, and the cows will do much better for it. There is a great difference in milkers; some do not try to do good work, and others cannot when they do try. There should be regularity in the time of

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Different people have asked me how I saved my children's lives that time, and I always say it was Dr. Fowler's Extract of Wild Strawberry. I am, now, never without it in the house."

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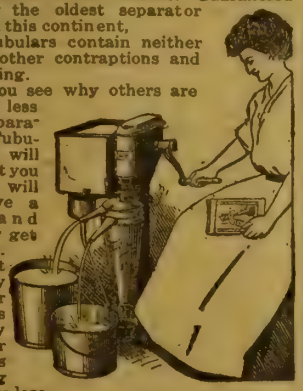

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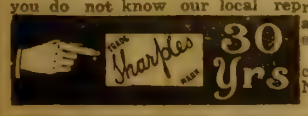

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milking. The cows know the time of day, and become uneasy if not milked at the usual time. If a cow kicks, be patient with her; she is hurt, or frightened, or has been abused, in ninety-nine cases out of a hundred. Almost invariably a cause can be found for a cow's kicking when being milked. If, however, a cause cannot be found and removed, it is best to dispose of the cow, as we cannot afford to have a confirmed kicker in the herd; it has a bad influence. When milking, make a business of it, and allow no other business to interfere with it; talking shonld not be allowed. Always milk with dry hands; milking with wet hands is a filthy habit.

A Few Points About Dairy Utensils.

Cleanliness is the first essential point in successful dairying. Troubles in the dairy often arise through the milk being unclean, but in a great many instances it is due solely to the utensils being unclean or unsuitable for the purpose for which they are employed. Unclean dairy utensils are among the greatest sources of contamination of milk by the undesirable species of bacteria. In some cases this source of contamination is due to carelessness in cleaning the utensils, while in others the utensils are of such a nature that thorough cleansing is almost an impossibility. In purchasing dairy appliances and utensils it is essential to get those which have a smooth, hard, nonporous surface, and whose corners are made so that they may easily be cleaned with a brush or cloth. All unnecessary angles should be avoided in order to facilate the cleaning. It is not wise to use utensils made of wood for the purpose of holding milk, as it is likely to get in the pores of the wood, and it is then a difficult matter to cleanse the vessel as it should be done. Glazed earthenware and glass vessels are sometimes used for holding milk and cream. These vessels are easily cleaned, but seldom used on account of the ease with which they break, and their great weight as compared with metal utensils. Tinned metal complies with nearly all the requirements, and is the cheapest, besides being the most practical at the present time. It will be found the cheapest in the end to purchase only utensils of the best quality. These should be made of the best metal, and heavily and smoothly tinned in order to avoid bare iron spots after the vessel has been in use for a short time. As soon as the iron becomes exposed it rusts, forming a honeycombed surface, wherein stale milk lodges and bacteria breed. Zinc or galvanised iron vessels should on no account be used for carrying milk or ripening cream in, as a kind of metallic flavour is often imparted to the cream. Another important point is to be sure that all seams and crevices are filled in with salder, and made entirely smooth. Seamless utensils are generally considered the best, as there is then no chance of open joints harbouring germs. Milk filters should be free from crevices wherein germs may reside and multiply, and a fresh filtering medium should be used each time milk is strained.

The Dry Cow.

The dry cow is usually the one that receives the least attention on the farm. She is, as a rule, getting the refuse of the herd. In the winter she is kept on dry corn stalks or similar feed without grain at all. It is absolutely essential to feed liberally the dry cow, for two reasons. First it must not be forgotten that the dry cow needs feed not only for herself, but also for the foetus. She needs bone building material, to build up the frame work of the future animal. If this dry cow is to be fed during the late fall when pasture is not available, good clover hay or lucerne, if on hand, some silage and a mixture of two parts bran and one of oil meal, about two or three pounds per day, will make an ideal ration for her. Clover and lucerne contain large parts of lime which make bone. The grain feed will keep her digestive system in good condition, which is essential at that period. It will pay to get the cow in good flesh, if she is a dairy cow, and she will return to milk pail every bit of fat she stored up on her loin and rump and round during this dry period. Dry cows cared for in this manner will seldom, if ever, be bothered with retention of afterbirth, will give birth to a vigorous calf in good shape to do a year's work at the milk pail.—Hard's Dairyman.

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When Campbellton, N. B., was destroyed by fire on July 11th and 12th, 1910, the only business building left standing in the town was roofed with RUBEROID. An all-night shower of sparks and burning brands failed to ignite the Ruberoid.

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Dealers Everywhere

Profits From the Individuals.

To put a dairy on a paying basis the individual cows must be profit makers. There is no room for guess work or supposition here. Just as soon as a man depends upon estimates or possibilities he will fail to realize the greatest return from his herd. The success of the whole dairy depends upon the profit rendered by each cow and not upon the profit of the herd as a whole. This is the difference between dairying to-day and dairying 30 years ago. It is the difference between systematic and unsystematic dairying. There are two things necessary in the building ap of a really efficient dairy herd. First, breeding and conformation; second, actual profit producing capacity. Of the two, the latter is of greater importance. There is just one way of determining individual profit and that is through the use of the scales and the Babcock test. These two institutions then become the key that unlocks the door of greater possibilities. They are the standards by which dairy cows must be measured and graded. Those that do not measure up to this standard are unnecessary weights that hold down the productive capacity of the balance of the herd eating a hole into the profits that naturally belong to the dairy man. The unfortunate thing about the dairy industry is that it has been conducted as a side line for so long that farmers do not appreciate the necessity of handling cows that are really adapted to the dairy work. They keep an animal merely because she is attractive in appearance or because they have become attached to her or her family by virtue of the fact that she has been in the herd for many years. In order that a herd may be profitable each individual in that herd must be a profit producer.

LIVE STOCK.

Black Teeth in Pigs.

D. M., Pictou Co., N. S.: Will you please explain in your next issue the cause of black teeth in young, or any age, of pigs? We have eighteen from four sows. They all run together. The age of the little ones is 2 weeks. All the upper teeth are black and some of the lower ones are turning. I am advised to pull the teeth, but they are brittle and break instead of coming out. They run in an alfalfa field and most of them seem healthy, but some have scabby ears, tail and back. What should be done?

Ans.—The cause is not known, and a black tooth does not hurt the pig any more than a white one. The little tusks are sharp as needles, and if they project somewhat they are apt to be the cause of small cuts, and these afford a place for the germs of canker sore mouth to lodge. For this reason it is good practice to cut them off, white or black, with a pair of small pincers. For the scab use a solution of some of the coal tar dips, according to directions. Repeat in a week.

High Temper in Bulls.

High temper is an indication of the prepotent power in breeding. Some of the best sires in the world have been sacrificed right in their prime because they grew ugly, when it would have been well worth while to have borne with them much longer for the sake of the cows they could produce. Such bulls need hard work every day, on the tread power or in harness, to keep down their superabundant energy. Nothing tames high tempered men, horses and bulls, like plenty of hard work.

But we must never forget that the bull is the fountain head. This is just as true in poor qualities as in good. "The other day," says Hoard's Dairyman, "a farmer in this vicinity spoke to us about the bad mistake he made at the start in buying a poor registered bull because he could get him cheap. He said it would have been money in his pocket, if he had paid $500 for a bull that was worth it rather than to have used the bull he did."

Fattening Steers of Different Ages.

James W. Wilson of the South Dakota experiment station has recently compiled data resulting from an experiment to ascertain the gain possible on steers of the same quality, under the same conditions with the same kind of a grain ration, but of different ages.

In recent years expert judges of live stock at some of our principal expositions have given prominent places to the young and immature over the old and more mature animals, indicating that the demand in the market has changed from what it was several years ago.

History shows that early maturity was a desirable character in the origination and improvement of all our principal breeds of beef cattle. This character should not be lost sight of by the breeder of pure-bred live stock. The butchers also have been favoring the well-fatted calf and yearling, until to-day the prices paid for these classes are not much lower than that paid for the older animals that yield larger cuts. In recent years the improved methods of cooking are undoubtedly partially responsible for the increased demand for smaller cuts. It remains to be seen whether the finishing and marketing of our cattle at the younger ages will be come the practice on the high-priced land, where the grains and cattle will be raised in the future.

As an economical utilizer of rough-age, the growing steer has a place wherever the intensive system of farming is practiced.

The following conclusions have been reached in this experiment:

Hogs made more gains following three-year-old steers than when following yearling steers.

The younger the steer the fewer the pounds of feed for a pound of gain.

The loss in shipping per head was greater when the cattle were fed sheaf oats enroute than when they were fed prairie hay.

The largest gain for feed consumed was made during the first thirty days when the steers were put on full feed.

A longer feeding period was required to get yearling steers in good marketable condition than was required for the two-year-old or the three-year-old steers.

More grain was required for a pound of gain during cold than moderate weather, indicating that a large per cent of the feed was required for maintaining body heat.

Deducting the gain made by steer No. 1, in the two-year-old lot of the first experiment, as it was much below the average for the two-year-old steers, only six pounds more gain was made by the three-year-olds than pounds more was made by the two-pounds more was made by the two-year-olds than the yearlings per head showing that practically equal gains can be made by steers of different ages under the same conditions.

When mixed with oil-meal, one-tenth by weight, the three-year-old steers consumed an average of forty-five bushels, the two-year-olds an average of forty bushels and the yearlings an average of thirty-four bushels of corn per head during the feeding period of 127 days.

With the three-year-old and the two-year-old lots a pound of pork was made for every five pounds of beef produced, while with the yearling lots one pound of pork was made for every nine pounds of beef. The production of pork being an important item in steer feeding operations, and as experiments show that it is not profitable to grind corn for steers (unless to increase the palatability), the combined gain of both cattle and hogs should be considered by the prospective feeder.

Falling of the Calf-Bed.

When the accident occurs, the first step should always be to send for the nearest qualified veterinary surgeon, and the next to set about protecting the exposed organ from injury. The best thing is to get a large sized sheet, double it to increase its strength—as the probability is that the "missus" will only part with her house linen with great reluctance, and then with the oldest and rottenest thing she can find—and then pass in under the organ. If the cow is recumbent, and remains quiet, it will only be necessary, while waiting, to cover the exposed organ, but if she remains standing, gets up and down, or knocks about in a manner calculated to cause injury to it, she should be tied up, and one or two men on either side should hold the ends of the sheet, so as to take the weight of the uterus off the cow, while another pinches her across the loins when she strains. If the coming of the veterinary surgeon is likely to be delayed, or other circumstances necessitate an attempt to return it without professional aid, the course of action needs to be quickly decided upon, since the longer the organ remains exposed the more it becomes swollen from the infiltration of serum and the engorgement of its blood-vessels. Supposing the accident to have happened when no one was present, which is very often the case, and especially if the cow was recumbent at the time, the uterus will be covered with dirt and pieces of straw or other bedding material, and in any case will be plastered with dung, which is generally pretty freely passed during the straining. The first step, then, is to wash it carefully with tepid water, to which, if available (as it should be on every stock farm), a little pure carbolic acid or other antiseptic—Condy's, Jeyes' or similar fluid—has been added, until every particle of foreign matter is removed, for to put it back in a dirty state would be to court failure or a fatal termination. If the "cleanse" or any part of it is still adherent, it must be removed, as the efforts presently to expel what has now become a foreign body would tend towards a relapse, by causing continued straining. The maternal and foetal cotyledons must be gently separated by a peeling process with the fingers, so as to avoid causing bleeding. If there is any haemorrhage, or the organ is greatly swollen owing to strangulation or long exposure, cold water should be freely poured over it which will tend to reduce its size. During this cleaning up the organ will, of course, have been as much as possible supported, and this support must be continued during the process of returning it.

THE METHOD OF RETURNING.

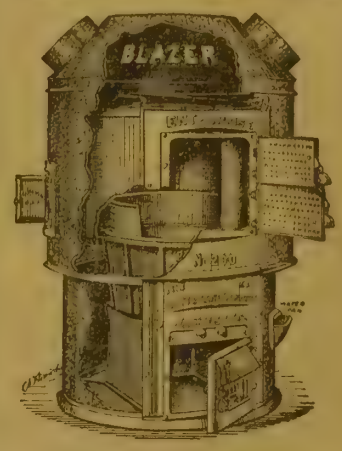
How to go about this depends on whether or not the cow is on her legs, or whether she can be got to stand up. If so, her fore part should be stood in a hole dug in the floor under her forefeet, or, if this is not practicable, the hind parts should be raised by banking up under the hind legs with litter, preferably something of a more solid character than new straw. If down, and lying with the head highest, as very commonly happens, the hind parts should be raised and banked up. Some recommend turning the cow on her back and raising her by ropes attached to the hind legs, the free end being thrown over a beam, or attached to pulley blocks. Unless the return cannot be managed in any other way, this plan should be avoided, as being calculated, if the animal struggles, to dam-

When you have a bad cold you want the best medicine obtainable so as to cure it with as little delay as possible. Here is a druggist's opinion: "I have sold Chamberlain's Cough Remedy for fifteen years," says Enos Lollar of Saratoga, Ind., "and consider it the best on the market." Sold by all dealers.

Your dear old tea-cup is to carry a keener delight, a new tea joy to your lips! For into tea flavor—the very essence of tea joy—an even richer fullness, a more zestful vigor has been blended. The result is King Cole Tea With your very first sip you marvel that such flavor-improvement could be possible! It tastes so unusually good. And it never varies, year in, year out.

YOU'LL LIKE THE FLAVOR.

A Few Furnace Facts For The Farmer About the Enterprise Blazer Hot Air Furnace



1. It burns hard coal, soft coal or WOOD.
2. It is the only furnace with the Fisher Patent Fire Pot.
3. It is made in four sizes and adapted for use in low cellars.
4. It is easily managed and absolutely free from gas.
5. It gives more heat with less fuel and care than any furnace made.
6. It is giving satisfaction in hundreds of private dwellings, stores, halls and churches throughout Canada.

Write for circular giving FURTHER FACTS about it; also booklet of reliable references. (We intended to publish some western references in this space, but have so many good ones it is hard to choose, so have put a few of them in pamphlet form. Drop us a card if you would like a copy.)

The Enterprise Foundry Co., - Sackville, N. B.

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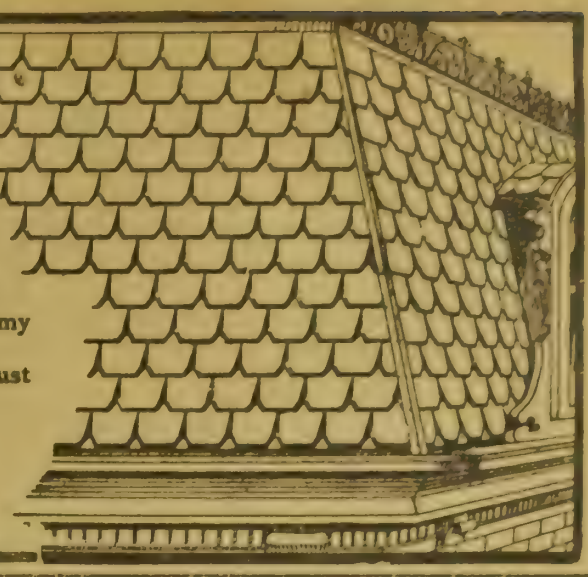
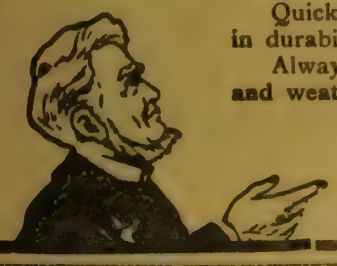


Known as "best for barns" for the past twenty-five years. Now known also as the best roofing for any building, any where.



Quickest to lay—economy in labor; longest to stay—economy in durability.

Always proof in all climates against fire, lightning, rust and weather.

Give us the measurement of any roof you wish to cover. We will send complete estimate of cost.

The METALLIC ROOFING CO., Limited

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'BANNER'

Cold Blast Lanterns

Solid Brass Burner.
Cannot Corrode!

Send Coupon in Lantern for Calendar

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HAMILTON, ONT.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

age the protruded uterus. Having the hind parts highest is a great advantage, since it tends to minimise the expulsive efforts of the cow, and favours the return. It compels the cow to work uphill, and enables the operator to work down. After cleaning thoroughly, and having all in readiness for putting back, pour over it a plentiful supply of carbolised oil, if it be at hand, or grease freely with pure lard or olive oil. Two persons are required in addition to those supporting the corners of the sheet, and these must work in unison. The proper method of manipulating the organ can hardly be satisfactorily described on paper, but no violence must be used, and while the cow strives against the operator more should be done than to endeavour by steady pressure to retain any advantage secured. The difficulty in doing even this much will scarcely be realised by those who have never experienced it. As already pointed out, the effect of the "bearing down pains," or expulsive efforts, can be greatly minimised by having a man to press with the fingers along the spine. In the intervals between the throes as much progress must be made as possible.

In the attempt to return, Steel says:—"The fist must be closed and applied to the fundus of the organ, which must be pressed inward at the intervals between the throes, and prevented from return during their efforts, which must be prevented as much as possible by distraction of the patient's attention and pressure on the loins. While pressure is brought to bear on the fundus an endeavour must be made to return gradually the neck, for a combination of the two methods is decidedly the most satisfactory." By far the best results are obtained, and the cow is saved a great deal of pain, if she can be put under chloroform. Assuming a successful return of the organ, the fist must be passed in with it, and kept there some time in order to guard against a fresh expulsion. A long pear-shaped pessary of hard wood, previously sterilised, is useful for this purpose, and it has the advantage of being longer than the arm and securing a return to its proper position, since before being put back it was, of course, literally inside out. If chloroform has not been used—and it will very rarely be at the command of the farmer called upon to deal with such a case in an emergency—it will be useful to give a full dose of laudanum, but if the cow is in a state of collapse from combined debility, pain suffered, or blood lost, a stimulant may be desirable, and this may take the form of a dose of brandy, whisky, or spirits of sal volatile, if easily obtainable or on hand.

We have next to consider the means at our disposal for preventing a relapse.—Pateley Bridge in Farm and Home.

WEAR TAYLOR'S

Anti-Rheumatic

Shoe For Men and Women

And get Rid of Your Rheumatism.

MADE BY

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Your address on a postal will bring information about gasoline engines that will save you time and money.

Our FREE booklet No. 57 is full of facts you ought to know before buying a gasoline engine. Write for it TO-DAY.

Simplest to Operate **Cheapest to Run**

Tne smooth-running, steady-going, power-producing STICKNEY is best of all engines for farm work. Ask for price of size you need.

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THE HORSE.

Horse Catching Hold of the Bit.

There are few things more annoying when riding or driving than to have a horse which is constantly catching hold of one of the cheek-ends of the bit with its lower lip and jaw. It is objectionable, not alone on the score that it causes annoyance, but even more so because it interferes with the proper action of the bit. Occurring alike in harness and saddle horses, it is most frequently met with in the latter, the curb of a riding bridle specially lending itself to it, and partly because the more or less severs effect of the curb-bit on the mouth is an incentive to a horse to practice it. Severe biting is unquestionably a leading cause of this annoying habit, owing to the discomfort, if not actual pain, that is inflicted on the mouth. Hanging on to the reins with unduly heavy hands on the part of the rider or driver is, for similar reasons, also a cause, but in many instances the habit is formed without any apparent reason, and, probably, in a spirit of mere mischief. It often occurs in young horses which have just been broken in, and more generally than not is due to the fact that, not yet being properly accustomed to the bit, they fiddle about with it with the tongue, lips, and jaw in a vain endeavour to get rid of it. Some horses soon become great adepts at this trick, and contrive to draw the lower cheek-end right into their mouth and to fix it firmly between the teeth, so that the action of the bit is wholly impeded. It needs a sharp jerk, or more than one, with the rein to free the bit in this case. In extreme cases this getting the cheek-end into the mouth may be a preliminary to an attempt to bolt—bolters frequently bite themselves fast on the bit—but in any case no proper control can be exercised with the bit while it is thus held in the grip of the teeth. More often, when the bad habit is acquired, the horse contents itself with merely catching hold of the cheek-end and letting it go again. If this is less serious than when the cheek-end is firmly lodged in the mouth, it is certainly no less annoying.

THE REMEDY FOR BIT-BITING.

The most obvious plan is to use a snaffle in place of the curb pattern bit; that is a very effectual stop. The ring-snaffle ordinarily used for riding, and the double-ringed driving-snaffle have no cheeks to get hold of, nor is it, as a rule, possible for a horse to catch hold of the cheek-ends of a riding snaffle provided with cheeks—a pattern much used nowadays. It may not, however, be convenient to use a snaffle, for the horse may not be controllable with this kind of bit, and in that case some other remedy must be sought for. If the trouble is caused by severe bitting, or heavy hands on the part of the rider or driver, a cure may be effected by the use of a mild-acting curb-bit. One should select one with very short lower cheek-ends and thick mouthpiece, with but the shallowest of ports in the case of horses used for riding. A "Ward Union" pattern bit, for instance, would do admirably, and the action of such a bit may be rendered all the milder if the bit is hung quite low in the mouth and the curb-chain adjusted very loosely. The use of a chin-strap, buckled as short as possible, will sometimes help. It was partly for this that chin-straps—nowadays so rarely used—were originally designed for use with curb-bits. In many cases they are of but little or no efficiency, but, as keeping the lower cheek-ends somewhat more out of the reach of the animal's lips, young horses may usefully wear a chin-strap on the bit until they have become thoroughly

PROCLAMATION

To The Electors of Canada

"OPEN YOUR EYES" and do not be deceived by the misleading reports published in some of the papers of the Canadian Press claiming that in event of a Canadian navy being established you would be compelled to fight in defence of England should she become envolved in war with a foreign power. These reports are false and were circulated by unscrupulous Politicians to further their own ends in various ways.

"USE YOUR BRAINS" "VOTE AND PRAY" as your heart dictates and refuse to become the tool of any politician "Navy or no Navy" The truth of the matter is this, you will never be compelled to take up arms to aid in the defence of the "Mother Country" should she be threatened by another power, but should the Empire become envolved in a foreign war and need aid "Canadians" would be first to offer their services to the "Mother Land" and fight to the death in her defence as they have done in days gone by.

"LAURIER AND BORDEN"

They may differ regarding the policy to be carried out in building a "Canadian Navy" and the creating of a "Canadian Army" but the "ELECTORS OF CANADA" may rest assured that the only war in which they will be called to take part, will be war against the diseases of the horse. Every man should enlist and fight for this noble animal. The only ammunition you will need with which to fight the diseases of the horse are

Dr. J. Woodbury's Horse Liniment

Which cures Coughs, Colds, Distemper, Strangles, Colic, Strains, Sprains, Contracted Feet, etc.

Dr. J. Woodbury's Condition Powders

which will purify the blood, remove worms, prevent yellow water and put hair in a glossy condition.

"IMPORTANT" "SPECIAL NOTICE"

BEWARE OF IMITATIONS ask for and insist on having the genuine DR. J. WOODBURY'S HORSE LINIMENT AND DR. J. WOODBURY'S CONDITION POWDERS, which have stood the test for one-half century and will do all we claim if directions are followed. If your dealer is out of stock, they will be forwarded on receipt of twenty-five cents per package, charges paid, by the sole owners and manufacturers FRASIER, THORNTON & CO., COOKSHIRE, QUEBEC, CANADA.

The Genuine Dr. J. Woodbury's Horse Liniment is put up in bottles with yellow wrappers with cut of Horse and contains four ounces of quality.

The Genuine Dr. Woodbury's Condition Powders are put up in an attractive red and yellow Lithographed tin box, perfectly air tight and contains one pound of quality

"Do Not Forget the Name"

Dr. J. Woodbury's Horse Liniment and

Dr. J. Woodbury's Condition Powders.

They stand for quality in Horse Medicines. You insure the lives of your horses by using the above preparations which are used and recommended by all the leading Horse owners and dealers from Halifax to Vancouver.

"Be Sure and Not Forget the Name"

Dr. J. Woodbury's Condition Powders

Dr. J. Woodbury's Horse Liniment.

Haul Bigger Loads Without Tiring Horses

The money you spend for a T-K Handy Farm Wagon is just as safe as if you spent it for a government bond. You are sure of the returns, for this wagon will carry greater loads without tiring the horses and is so easy to load and unload that only one man is necessary to do the work.

T-K Wide Tire, Steel Wheels and Handy Farm Wagons

Fit all your farm wagons with these wide-tire steel wheels. You can haul heavier loads in deep mud or on the rockiest road without accident or delays. Besides they lessen the wear and tear on all farm wagons usually due to wooden wheels.

Write for catalogue telling how T-K wagons and wheels save and make money for you.

Tudhope-Knox Co., Limited, Orillia, Ontario

MAXWELL'S HIGH SPEED CHAMPION

The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

DAVID MAXWELL & SONS, ST. MARY'S, Ont.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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Produce Commission Merchants
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Personal attention given to sales of Butter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 1905.

J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is that not better than to pay a five dollar doctor's bill? For sale by all dealers.

Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

Before After will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle delivered. Describe your case for special instructions and Book 8 F free.

ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Manufactured only by

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used to the curb. In the case of harness horses, the so-called elbow pattern, or "Wimbush" driving-bit, may be resorted to, it having been specially designed to meet the case. In it the lower cheek-ends do not form a straight continuation of the upper portion of the cheeks, as in the ordinary driving-bit, but are bent backwards at a right angle—forming a sort of elbow joint just below the mouthpiece, which places them to some extent out of reach of the horse's under lip and lower jaw, although in some cases horses which have the habit of bit-biting badly soon manage to practice it even when driven in this kind of bit. Some breakers break in young horses to harness in elbowpattern bits, only substituting the "Liverpool" bit, as commonly used, when they have completed their education.

Handling Vicious Horses.

A balky horse can be cured, when under the saddle by a very simple method. Turn him around and around in his tracks a few times and then suddenly straighten his head and he will willingly, and even gladly, go forward. This was the method of the celebrated John S. Rarey and has never been known to fail.

The "jibbler" differs from the balker inasmuch as his so called vice is caused by congestion of the brain. The horse thus affected is liable to bolt or run away after one of these attacks and is a dangerous animal.

Rearing, although commonly termed a vice, is often caused by too severe a curb. Sometimes the rearing horse loses his balance and falls backward. It is needless to say that the rider is lucky if he or she escapes without serious, if not fatal injury. When the horse rears, loosen the reins and speak to him in a soothing tone but if he persists give him a sharp blow between the ears with the butt of the whip. This will bring him down on all fours with amazing quickness.

Kicking is certainly a vice. Sometimes, however, it is caused by fear, in which case much can be accomplished by gentle management. Exactly the opposite treatment of the rearing animal should be applied to the kicker. Hold his head up with might and main, for the horse cannot throw out both hind legs at once when his head is elevated. Kicking straps are what the name implies. A strap fastened to the shafts over the horse's croup prevents kicking, but this is only serviceable when driven in single harness. Shying is a dangerous fault It cannot properly be termed a vice, as it is generally the result of defective vision. Gentle treatment, soothing words and patient persistence in accustoming the animal to the dreaded object will often effect a cure. To lash a horse because he shies or is frightened only aggravates the evil. He will associate the punishment with the frightful object and will fear it more and more each time he encounters it.—From Country Life in America.

Examination of the Horse in Action.

If the examination of the animal while standing has indicated that he is sound, or is serviceably sound, it is then important to see the horse in motion. First, in a walk, then in a trot, and finally in all the gaits. In walking or trotting, he should be led by the halter. Attention should be given to the attendant that he gives the animal's head no support. No whip, shouting or other means of frightening the animal should be used. This examination should take place in the open yard or upon the hard road. If the horse shows some slight degree of lameness when starting, which disappears upon warming up, ringbone may be suspected. If he starts off without lameness but shows some slight degree of lameness after exercise, a splint may be suspected. If the animal seems stiff, but without any definite form of lameness when starting, and then improves, side bones may be suspected. In navicular diseases the lameness is very irregular; the horse may start out all right become lame for a few steps, and then the lameness disappear. In the early stages the most important sign is the tendency to point the toe and flex the knee and fetlock when standing in the stable or at rest. Attention should be paid to the manner in which the animal picks up the feet, whether both hind feet be picked up alike, and whether they be picked up unnecessarily quick or high. Backing the animal will usually bring out this point more clearly than the straight ahead exercise. In mild cases of string halt or spring-halt, this action is only observed upon the start or backing. The feet should be picked up to show how the animal will stand while being shod.

The horse should next be placed in harness, and attention should be given to his behavior while the harness is being fitted. Observe whether he kicks, strikes or bites when the girth is tightened. He should be driven in

(Continued on page 28).

Gombault's Caustic Balsam

The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
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BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
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REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard
VETERINARY REMEDY
Always Reliable.
Sure in Results.

None genuine without the signature of
The Lawrence-Williams Co.
Sole Importers & Proprietors for the U.S. & CANADAS. CLEVELAND

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULT'S CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.
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TEMPERANCE STREET, TORONTO

Affiliated with the University of Toronto, and under the control of the Department of Agriculture of Ontario. Infirmary for sick animals at the College.

N. B.—Calendar on Application.

COLLEGE RE-OPENS OCTOBER 2nd, 1911

E. A. A. GRANGE, V. S., M. S., PRINCIPAL.

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Quick relief for hurts, aches and pains. Every household should keep on hand the old, reliable

JOHNSON'S ANODYNE LINIMENT

For over 100 years it has had no equal. Use inwardly for Colds, Bowel Disorders, Cholera Morbus, etc.

25c and 50c Bottles

L. S. JOHNSON & CO.
Boston, Mass.

Parsons Pills Tone the System and Regulate the Bowels

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Frankness Between Friends.

Says Henry Smith to me one day:
"I got a few short words to say,
The which, I want it undestood,
I'm tellin' you for your own good.
An' so I'll say, most free anj frank
The way you act is something rank!
You drink too much, you smoke, you chew
You swear like common sailors do.
You gamble, too, an' lead a life
Most aggravatin' to your wife;
An' folks is sayin' all the time
The way you carry on's a crime!
I'm telling you for your own good."

Says I to Mr. Henry Smith:
"Since we are just like kin an' kith,
An' since you told me where I fail
An' why I oughta be in jail,
I'll speak a little word or two,
Explainin' what is wrong with you;
The hull of which, its understood,
I'm telling you for your own good.

"First, then," I says, "you're such a cheat,
You swindle every one you meet;
You cheat your anthems in the church
An' leave your neighbor in the lurch;
You seize an' grab by force and fraud
An' call it the 'will uv God.'
In short, to say it brief an' quit,
You're miser, crook and hyprocrite.
You'd rob a baby if you could—
I'm telling you for your own good."

But Henry Smith was very queer;
He hit me just behind the ear.
"Of course," he says, "its understood
I'm sluggin' you for your own good."

Five coppers come up in their cart
An' pried us old-time friends apart;
They took their sticks uv loaded wood
An' clubbed us hard for our own good.

In court the Judge says: "Gentlemen
Don't try to be so frank again;
Be chary of the words you speak,
Lest you be swatted on the cheek.
I fine you ten—its understood
I'm doing it for your own good."

The moral is' don't be too frank;
It gets you nuthin' at the bank.
Just keep your thoughts beneath your hood—
I'm telling you for your own good.—
Berton Brayley.

Love's Barrier.

(Continued from last issue)

A HOUSE OF DEFENCE.

The first thing Helen noticed was the appalling ugliness of the frock Jane wore, the second the beauty and the appeal of her eyes.

Jane on her part saw a lissome figure, exquisitely gowned in something very simple and becoming, a pale clear-cut face, a little proud, and deep fine eyes, looking out from under the brim of a drooping hat. There was no smile on either side. But Jane, after the one glance, took both Helen's hands, drew her close and kissed her. There was motherhood in the act, and Helen gave a little sob, cast a queer quick look of triumph at Secretan, and darted up the stairs. Jane smiled a little tremulously as she turned to greet her brother.

"How very beautiful she is, Claude and how glad I am to see you both!"

"But she's crying, Jane, she's disappointed—something's wrong!" cried Secretan. "I must go to her."

But Jane kept him back.

"Leave her, Claude. I know just how she feels. Leave her, I'll go up presently. What kind of a journey had you? You look well yourself. Isn't this a great day for Midcar?"

"It's a great day for me anyhow," answered Claude, as, oddly dominated by his sister, he moved across the hall to hang up his coat and hat.

"The journey? Oh, all right. We met Mr. Hayes at the junction and travelled with him."

"That would be quite pleasant," observed Jane cheerfully. You introduced Helen, of course?"

"Yes, and they seemed to get on all right. Don't you think I'd better go up?"

"No, dear," said Jane quite firmly. "Come into the study. There are piles of letters. I'll go up presently and see whether Helen has everything she wants. I'm so glad the day was fine, and Claude, there will be dinner presently. Audrey and I thought it out, and we concluded that it would be better to have a little cosy dinner ready. I dare say it is what Helen has been used to."

"Thank you for that. You were quite right, so much depends on first impressions. But Audrey isn't here, is she?"

"No, the carriage fetched her at six. What a dear she is! We've had two splendid days together. I don't think Mrs. Hayes quite liked it, though she sent the flowers from High Ridges to-day. Everybody has been most kind."

Secretan relieved, oddly happy, yet embarrassed, proceeded to the study, and Jane, after another glance at the dining-room table, and a word to Hannah, waiting in a state of trembling excitement in the kitchen climbed the stairs.

She gave a little tap at the door, and having no answer, opened it and walked in. She was not at all surprised to behold her new relative in a heap in the big old easy chair, which had had a new chintz cover in honour of the occasion. She stepped forward quickly, knelt down and drew Helen's hands back from her face. She was not crying, but her face was perfectly white.

"It's going to be all right, dear," she said cheerfully. "You are tired, and it is all so strange! Come, sit up, and let me have a better look at you."

How surprised would Secretan have been could he have heard these words and seen the tender half-whimsical smile on his sister's face! By some strange witchery unknown to him, Jane pushed herself at once into the innermost shrine of Helen's cold quiet heart. She sat up, laughed a little hardly, and laid her two hands on Jane's shoulders.

"Jane Secretan, you are a perfect dear! You are one of the good ones. You ought to hate me. Why don't you?"

"Well, there are two or three reasons—first, I love my brother; second, I don't believe in the celibacy of the clergy; and thirdly, I'm a Christian woman, to whom the vice of hate is forbidden."

"Oh, I hate people frankly, quite a lot of them," said Helen, smiling too. Her relief was so great that she could have cried. She knew that she had been counting on Jane, and that if she had disappointed her, the consequences would have been disastrous.

"You are frightfully good, I know, but not hatefully good. I shall be able to love you, and to say whatever I like to you. I'm so glad; you can't think how glad I am! It's going to save me, Jane!"

"Save you from what?" asked Jane, beginning to take out the buttons of Helen's coat.

"Oh, from all sorts of things. You see, this is rather an awful thing I have done. And unless I'm going to be the square peg in the round hole altogether, you've got to pilot me, be my sheet-anchor, in fact—do you hear?"

"Claude is going to be that, dear," answered Jane a little formally, kneeling to get out the last button from the long wrap.

"Get up, Jane Secretan, and let me kneel down to you. It would be more fitting. Now look at me! I'm not a nice woman; I make no pretensions to goodness, and I've married your brother from a purely selfish motive. I wanted to get away from the life I had been living, which had become intolerable. I don't suppose Claude has told you these things, but I want you to know because, you see, I shall want a lot of bolstering. You must be behind, and beside, and round about me all the time."

"Yes, dear, but now I have seen you I don't believe a single thing you are saying," said Jane with a kind of quiet joyousness. "I don't care anything about the motive of your marriage. We are going to put that behind us, anyway, for ever. It's forward that we are going now, do you hear? Oh, such hair! I wonder more and more that Claude dared. Why, there isn't anything like you in Midcar, nor in the whole of the West Riding, I do believe."

Helen jumped up and looked round the room, seeing it for the first time. Jane had done her best with it, but the bare floor covered with oilcloth, with one rug before the dressing-table and one in front of the bed, had a garish unfinished look. The furniture was a light-coloured wood, bearing the stamp of the cheap emporiums of the Tottenham Court Road; the three foot wardrobe, with the small pane of glass in the centre, stood nakedly against a wall-paper of large design with green and yellow sunflowers climbing on brown sticks. The dressing-table was covered with china ornaments, and a hair-tidy, with an enormous yellow ribbon bow, hung by the side of the swing glass. The only cheerful thing was the fire crackling in the cheap gate of common design, set upon pink and white tiles. All was painfully, scrupulously clean, everything that would starch was starched and frilled and tied with ribbons; but there was not a homely note. Helen inwardly shuddered. Outwardly she screwed a smile and remarked that it was an airy bedroom.

"I cleared out the dressing-room," said Jane, opening a door near the window. "I had been using it as a sort of linen cupboard, but I felt sure you would need a place to keep your frocks in. This is the only wardrobe we have in the house. Claude's things are in it now, but of course, you will arrange it to please yourself."

Helen stepped to the open door and surveyed the small adjoining room furnished with a row of pegs against the wall, a cretonne curtain on a rod, and a narrow dressing-chest across the window. The floor was scrubbed white, and a square of Japanese matting lay like an island in the middle.

"I shall make this into a dressing-room for Claude," she said finally. I shall want my room to myself, and perhaps it will be possible to pick up a decent wardrobe somewhere. Don't let us talk about it now," she said, shutting the door with a rather quick gesture. "Now, what's all this nonsense about going to some farm or another to keep house for some impossible widower? I hope you have explained to him that you are not taking it on."

Jane sat down, watching while Helen pushed up her sleeves and prepared to plunge her hands in the cold water she had poured into the basin. Her every movement seemed to Jane personified grace; even Audrey, whom she greatly admired, and who had all the charm of exquisite youth, seemed gauche and unfinished by comparison.

"It is all settled, and Mr. Courtney is going to fetch me to-morrow afternoon in the wagonette. I thought if we had a little talk this evening, and to-morrow morning I could show you through the house, and where everything is, it would be quite all right."

"It isn't quite all right at all, it's all wrong," said Helen decidedly. I don't want you to go, Jane. Can't you understand that it means something to me, that it will be better for us all if you stop—in fact, that even I may need you desperately?"

Jane shook her head.

(Continued Next Issue).

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We guarantee you will cut the moling period in half if you give your hens

Pratts Poultry Regulator

They will be back at work again laying more eggs than ever. Pratts Poultry Regulator is a Conditioner, Regulator, Egg Producer and prevents disease by keeping the digestive organs working properly, regulating the bowels and purifying the blood.

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For Diarrrhoea, Dysentary, Cholera, Cholera Morbus and all pains and cramps, children or adults there is nothing just as good as

Gates' Certain Check.

Nerves Were A Wreck. Could Not Stand The Least Noise

Miss Florence H. Perry, Courtland, Ont., writes:—"I wish to write you a short letter telling you of the help I received from the use of your Milburn's Heart and Nerve Pills. A year ago my nerves were a real bad wreck and was so nervous I could not stand the least noise. My sister had taken your pills and advised me to give them a trial. I took three boxes and saw they were helping me so I kept on taking them until I had used five boxes, and I can say in true words that I am strictly cured."

To anyone troubled with their heart or nerves we would strongly advise them to take a course of our Heart and Nerve Pills as we feel confident that they will do them a world of good.

If your druggist or dealer does not keep them, we will mail them direct on receipt of price—50c. per box or 3 boxes for $1.25.

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A GR WING SCHOOL IS

FREDERICTON The Business COLLEGE:

W.J.OSBORNE PRINCIPAL.

Just twice as many students enrolled in September of this year as in the same month last year.
It will pay you to attend this successful school.

Send for catalogue now. Address

W. J. OSBORNE - Principal, Fredericton, N. B.

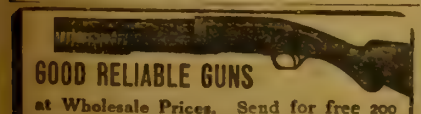
Last Year Was by Far the Best Year We Ever Had.
Last Month Was By Far the Best September We Ever Had.

Reasons: Up-to-date courses of training, superior equipment, elegant new premises, best of all, our strong staff of specially trained teachers.
Send for catalogue.

S. KERR *Principal.*

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont. will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.



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T. W. BOYD & SON, 27 Notre Dame St. West, MONTREAL.

Sick headache is caused by a disordered stomach. Take Chamberlain's Tablets and correct that and the headaches will disappear. For sale by all dealers.

Exercise and Recreation.

It is a curious fact that, though people are very much concerned and anxious about their health and their good looks, they seldom seem to know that to keep perfectly well they should thoroughly understand the proper way in which to take both exercise and recreation, instead of which they overdo both, with the consequence that they soon cease to enjoy either, and look old and worn while they should be still young and fair.

Exercise should, of course, be regularly taken, or the skin will look muddy and yellow, or become a ghastly and unattractive white, from being shut up in the house and excluded from fresh air and sunshine except at rare intervals.

But there is a certain amount of discretion to be used in taking this exercise, or evil and not good will follow. A walk is an excellent thing but if it is persisted in too long the over-fatigue that follows will entirely do away with all the good that would otherwise have been the result.

You should walk every day that the weather permits, and on which you feel well enough to do so. You should walk at a moderate pace, and never walk too fast or in a violent hurry. Go slowly up hills, and turn home long before you begin to feel at all weary. Remember that it is better to go out twice a day for short walks than once on too long a one.

Riding is one of the best styles of exercise known. But be sure that you start quite fresh, and do not ride too far, or too violently, unless you are in perfect condition. Your horse should never have a hard mouth or the strain on your arms will be very exhausting.

Bicycling is also a splendid form of exercise. But in this you must not try to do too much. It is foolish, and apt to bring permanent injury, to ride far until you have had experience and practice. Your saddle should be of a kind to suit you, and allow you to ride without fatigue or discomfort. If you ride on one that may hurt you, you will soon show the results of the fatigue and pain by looking ill and white.

The use of dumb-bells, gymnastics, and Swedish exercises are all splendid in weather that precludes our leaving the house, and bright eyes and fresh colour in the cheeks will be the happy result of such exercises.

As to amusements, do not carry them beyond the point when they cease to be a recreation. Some people rush from one amusement to another as if their life depended on it, making only a toil of what should be a pleasure.

Recreation, properly managed, is not only conducive to health, but to good looks and spirits. Dancing, for instance, is a splendid recreation, but where a delicate girl is allowed to dance all night in overheated rooms, consequently spending the best hours of the next day in a close bedroom, it ceases to do any good whatever, and she looks faded and dull long before she ought.

Kerosene oil applied to flannel is an excellent thing with which to rub old furniture or clean paint, particularly the dirty finger marks around door handles.

The carpet broom should be washed every week or so in hot soapsuds, shaken well, and hung in the sun to dry quickly. If treated in this way it will last longer than ordinarily, and will sweep the carpets cleaner.

"Late again, Simpkins! How's that!"

"Well, sir, I got up late and only left myself ten minutes to dress."

"But I can dress comfortably in that time."

"Yes, sir, but I wash."

Double the Egg Yield of Your Flock!

The poultryman who has been feeding grain and who starts feeding fresh cut green bone, can cut his feeding costs in two and double his egg yield—to say nothing of being able to raise better table fowl. The

PEERLESS GREEN BONE CUTTER

Send a Postal To-day for the Book

102

will enable you to feed at a cost of 1/16¢. per hen per day—to get more eggs—a greater percentage of fertile eggs—more sturdy new-hatched chicks—to push your pullets to earlier maturity—to have younger layers—to send your fryers and broilers sooner to market and get higher prices on a lessened feeding cost; in fact, to make more money in poultrying.

Send for our FREE book that tells all about green bone feeding, how to buy, cut and feed green bone RIGHT. The correct feeding of green bone is the foundation of poultry success—send a postal to-day for the book.

LEE MANFG. CO. LTD. 103 Pembroke Rd. PEMBROKE
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The Player Piano for Every One

Player-Piano Style 100

The Sherlock-Manning Player-Piano is the key which unlocks for you the treasury of all music. With it, you need no skill or training to render any musical composition perfectly. Two Sherlock-Manning features assure this.

One is an improvement which makes easy the CORRECT playing of any composition, just as a master-pianist would render it. The other is an attachment which allows the performer to accent any single note or group of notes, brings out the melody and subdues the accompaniment at will.

If you are at all interested in Player-Pianos, it will pay you to write for handsome art catalogue and free particulars, as well as the name of a dealer near home where you may test our claims regarding quality and value.

If you do not know the Sherlock-Manning dealer near you, write us and we will gladly introduce you to him or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.

SHERLOCK-MANNING PIANO and ORGAN CO.

(No Street Address Necessary) LONDON, CANADA

Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St. St. John, New Brunswick.

Dr Morse's Indian Root Pills positively cure Constipation and all kindred & resulting troubles. 25¢ a box. 16

Any little girl can do the churning with

MAXWELL'S

Favorite Churn.

It makes the smoothest, richest, most delicious butter you ever tasted.

The roller bearings—and hand and foot levers -make churning an easy task, even for a child.

All sizes from ½ to 30 gallons.

Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.

David Maxwell & Sons, St. Mary's, Ont.

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A Good Position !

From $50 to $100 Monthly

offering excellent chances for advancement, awaits every young person who completes a course at the

G. T. P. School of Telegraphy and Railroading

Over 100 New Stations will be opened on the Grand Trunk Pacific, within the next few months, so a position is assured every graduate. Up-to-date equipment. Individual Instruction. Residential School. Write for Circular, explaining Rates and Full Particulars. Address:—

W. T. LITTLE, Principal,

FREDERICTON N. B.

Kitchen Conveniences.

I think, myself, that in farm homes especially, the kitchen should be large and it should also be arranged so as to do away with a needless amount of walking. In dealing with kitchen conveniences I have tried to keep the expenditure for the various appliances which I intend to speak of within the price of an ordinary binder namely $140 or $150. There is hardly a farm—in fact I may say there is not a farm which does not consider the purchase of a binder an absolute necessity, and I think that the purchase of the conveniences which I have to suggest should be considered equally necessary.

WASHING DISHES.

Perhaps 95 per cent of women would say dishwashing is disliked more than any other work.

While south speaking to the women of Illinois I did not give the Canadian West away because there was no object in doing so, but c could not help thinking if they found washing and dish washing so extremely difficult and laborious where they had an abundant of soft water with which to do it, what must it mean to the women on our Canadian prairies where all the natural supply of water is hard, where it is too often limited in quantity, and where the smallness of the buildings preclude the catching of any large supply of rain water. Some sapient soul had remarked that dish washing was really quite pleasant work as long as you were careful to provide plenty of hot, soft water and clean towels. I can still hear the snort of indignation and disgust of that woman when she read this remark. She was having to do dish washing and washing alike with water from an alkali pond. Now the Sanitary Dish Hasher can be purchased for $20. It is very simple of construction and the dishes can all be washed without putting the hands into the water. It also does away, to a great extent, with the necessity of drying the dishes, thereby saving time and also saving in the washing of dish towels. I think I hear some of the women say "Oh, I could never give $20 for something to wash dishes with." I wonder how many of you are giving much more than that in your own health and strength for the doing of this work.

WASHING MACHINES.

Next to the washing of dishes the washing of clothes is the greatest bugbear on the farm. Many of you, I think, now have washing machines, but, so far as I know, very few if any, have washing machines which are attachable to the gasoline engine which are so common on all the larger farms. There is a comparatively new washing machine so constructed that it can be purchased without the electric motor, but with a special belt by which it can be attached to the power of the gasoline engine which is used for chopping feed and like operations on a farm. One feature af this washer is that wrings the clothes as well as washing them and the wringer can be turned in either way. This machine arranged to attach to a gasoline engine costs $32.50.

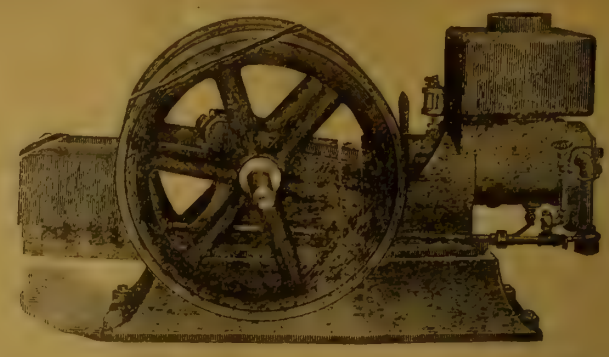
TO STERILIZE UTENSILS.

Put them in cold water and gradually bring them to boiling point, then boil fifteen minutes. Glass cans and tumblers can be sterilized in the same way. They should remain in the hot water till used.

Canning should be done when the air is free from dust. All towels used, as well as the hands and clothes of the worker, should be perfectly clean.

"Dearest, I'v dropped my diamond ring down the bath pipe. You mast send for a plumber."

"No—I'll buy you another ring; it will be cheaper."



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will develop more power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

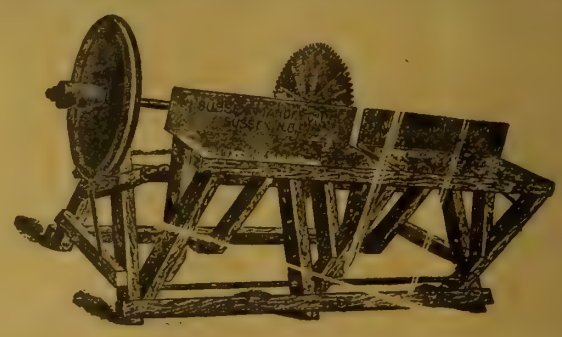
Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.



Sussex Wood Cutters

Made in Three Different Sizes:

Long Swing, Short Swing and Flat Rolling Table Machines

The frame is built of the best seasoned hardwood and braced with steel bars. The table is made of heavy steel plates. The arbor is of the best turned steel and runs in bearings of the best babbit. The balance wheel is a solid web and weighs 180 lbs. These are very important points to consider in selecting a wood cutter.

The distance between the balance wheel and saw in both the Long Swing and the Flat Rolling Table machines is 4 ft. 3 in. The distance between the balance wheel and saw of the Short Swing Table machine is 3 ft. 6 in.

The Machines are fitted with either 26, 28 or 30 in. saws. Each Wood cutter is tested before it leaves the factory.

Farmer's Star Feed Boilers in Three Sizes, No's. 30, 40 and 50.

Write for Cuts and Prices.

The Sussex Manufacturing Co. Ltd.

Sussex, New Brunswick.

Advertise in The Maritime Farmer for results.

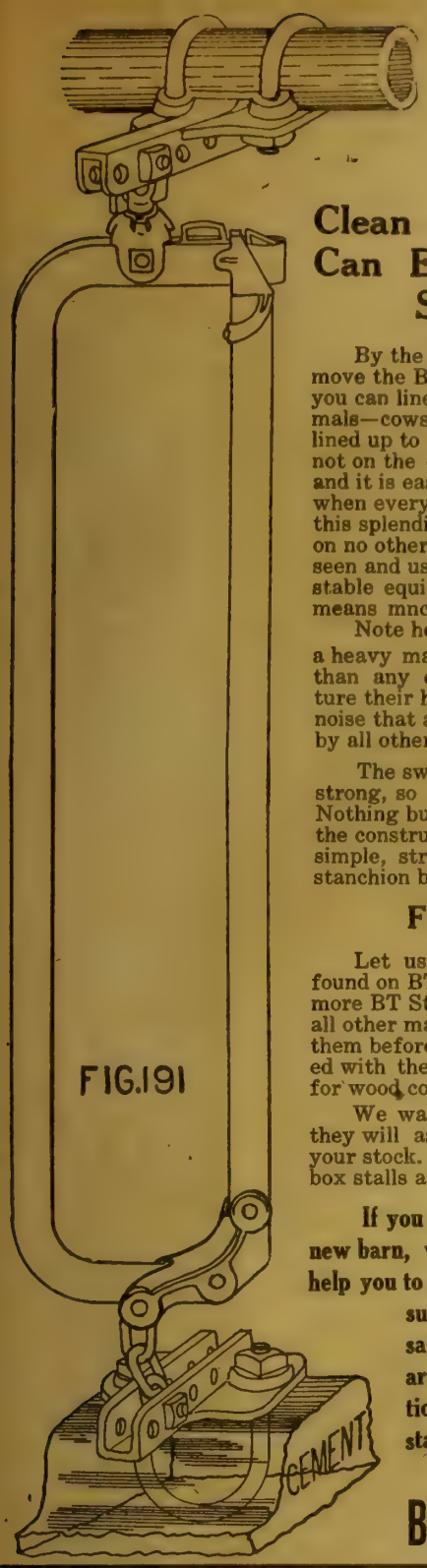


FIG.191

Your Smallest Calf, Your Largest Cow or Export Steer can be tied equally well with BT Stanchions

They are made in five different sizes, and any size can quickly be adjusted to suit a smaller animal. No other line is so complete or nearly so suitable for all sizes of stock.

Clean Cows and Clean Stables Can Easily Be Secured if BT Stanchions are Used.

By the Aligning Device shown in Fig. 191 you can move the BT. Stanchions backward or forward so that you can line up on the gutter different lengthed animals—cows vary in length. When cows are properly lined up to the gutter, all droppings will fall into it, not on the cattle stand. The cows will remain clean, and it is easy to clean out the stable and keep it clean when everything is confined to the gutter. We have this splendid advantage patented, so that it is found on no other make of stanchion. Dairymen who have seen and used it say that it is the best improvement in stable equipment made in many years. It certainly means mnch for better sanitary conditions.

Note how the BT Stanchion is suspended above by a heavy malleable swivel. A swivel is much stronger than any chain attachment. It allows the cows to ture their heads freely without the continual rattle and noise that accompanies the chain-hung stanchions used by all other firms.

The swivel connection we use is very heavy and strong, so that there is no danger of it wearing out. Nothing but the strongest and best material is used in the construction of BT Stanchions, which, with their simple, strong design makes them the most durable stanchion built.

Five Exclusive Features.

Let us tell you more of the exclusive features found on BT Stanchions. There must be reasons why more BT Stanchions are being sold in this country than all other makes combined, and we want you to know them before you buy, for we are sure you will be pleased with them. Our stanchions are especially suitable for wood construction, as well as for all steel stalls.

We want to show you our manger system—how they will assist you in the feeding and watering of your stock. We want to show you how our special box stalls and calf stanchions take care of the calves.

If you are thinking of overhauling or building a new barn, write us. The information we send will help you to get a good sanitary layout. You will be surprised how economically you can build a sanitary stable if BT fittings are used. We are glad to give, free of charge, any information you might wish as to best layout for your stables, or as to best system of ventilation.

Beatty Bros., Fergus, Ontario.

If your stable is equipped with our fittings, it will have the best possible appearance. All cumbersome woodwork is done away with, light and air have free movement through the stable, and with a good cement floor it is practically indispensable. BT Fitings will cut in two time necessary to keep your stable clean.

Fill out the coupon below and mail it to us today, before you forget about it.

Beatty Bros., Fergus, Ont.

51

Kindly send me (free) your booklet on Stable Construction and BT Stalls.

How many cows have you ?

.....

Are you going to remodel or build.

If so, when ?.....

Will you need a Litter Carrier ?

Name.....

Post Office.....

Province.....

The Outdoor Crank.

My neighbour sleeps outdoors, lies out there and snores; and then next day he goes his way, the dreariest of bores. He tells me tiresome tales of how he braved the gales; in peace he slept while torrents swept, and hail came down in pails. The frost was on his nose, and ice was on his toes; he slumbered on until the dawn, serene, though nearly froze. He has a deep disdain for people so insane that they will try to slumber dry, away from snow and rain. This land of ours is free, and men may faddists be; may join the owls and junior. "Better open your chamber Or they may burrow deep where hang on hooks in quiet nooks, or hang on hooks in quiet nooks, gr 'neath the stable creep. But when their sleep is o'er, and they have ceased to snore, they should be drowned if they go round tneir helpless friends to bore.

Hop and Potato Yeast.

One cake of yeast, dissolved in 2 pints of warm tea made from hops; boil 1 Irish potato; rub through a sieve and add to the yeast; work in sufficient corn meal to make a batter stiff as mush. Set to rise; after an hour, if any water rises to the top, stir in more meal. When well tisen, it will crack open on top; now stir in meal to make a stiff dough; make into a long roll, 3 inches in diameter; cut the cakes from the end, each one-half inch thick. Dry in the shade. When nearly dry, crumble, dry thoroughly and put away in a close jar, bottle or paper sack. Use 1 tablespoonful to 1 quart of flour.

If you have young children you have perhaps noticed that disorders of the stomach are their most common ailment. To correct this you will find Chamberlain's Stomach and Liver Tablets excellent. They are easy and pleasant to take, and mild and gentle in effect. For sale by all dealers.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know women's sufferings.
I have found the cure.

I will send, free of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my friend, [illegible] your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. Men cannot understand women's sufferings. Why? We women know from **experience**, we know what we suffer. I know that my home treatment is a certain cure for **Leucorrhœa** or Whitish discharge, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or **Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles** where caused by weakness peculiar to [illegible].

I want to send you a complete 10 days treatment **entirely free** to prove to you [illegible] that it will [illegible] nothing [illegible] the treatment a complete trial; and if you should wish to continue it will [illegible] cents a week, or less than two cents a day. It will not interfere with your [illegible]. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send treatment for your case, entirely free, in plain wrapper, by return mail. I will also send free of cost, my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanations and advice, telling why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to **think for herself.** Then when [illegible] you can decide for yourself. Thousands of women have [illegible] remedy. It cures **all, old or young. To Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness or Irregular Menstruation in Young Ladies. Plumpness and [illegible] Wherever you live, I can refer you to ladies in your own [illegible] who will tell any sufferer that this **Home Treatment** really cures all women's troubles, and makes them well, strong, plump and robust. **Just send me your address**, and the [illegible] treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

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I want to tell you all about my *Celebrated Steel Shoes*—why one pair will outwear six pairs of leather shoes—how a pair will give you more foot-comfort than you ever had in your life. How they will keep your feet powder-dry all the time. How light and comfortable they are the year around.

I have told half a million others these facts. They have bought steel shoes of me and saved millions of dollars among them. More than that—they can be on their feet all day—at any work, without foot fatigue. And they have gained health protection.

Steel Shoes

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The Steel Shoe Man.

prevent rheumatism, sciatica, lumbago, lame back and other troubles caused by wet feet. I want to show *you* the way to avoid these dangers and all such troubles as tender feet, corns, bunions, chilblains, and at the same time show you a saving of $20 a year in actual money on account of the extra wear you get from my shoes.

Will you write me a postal today and get full particulars? Let me send you this free book of mine by return mail.

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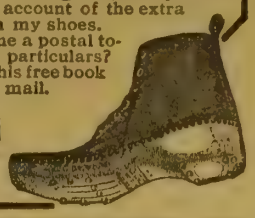

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Is interested and should know about the wonderful
MARVEL Whirling Spray
The new Vaginal Syringe. Best—Most convenient. It cleanses instantly. Ask your druggist for it.

If he cannot supply the MARVEL accept no other, but send stamp for illustrated book—sealed. It gives full particulars and directions invaluable to ladies.

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Minard's Liniment Co., Limited.

Gents,—A customer of ours cured a very bad case of distemper in a valuable horse by the use of MINARD'S LINIMENT.

Yours truly,
VILANDIE FRERES.

Raw Eggs as a Nerve Tonic.

Editor Maritime Farmer:—

"New York society women are at last beginning to learn the value of raw eggs as a nerve tonic," said a trained nurse the other day. "For the last few years I've been trying to get nervous patients to give this simple remedy a trial, but I really think its simplicity was against it. These fashionable women want something expensive, with a wonderful name, and prescribed by some noted specialist who charges a fabulous sum for each visit. When anything is simple, easy and cheap it doesn't stand any chance with them at all.

"A celebrated nerve specialist told me the other day that one could hardly overestimate the benefit from the almost wholesale eating of raw eggs in case of serious nervous exhaustion. Not a raw egg now and then—not a bit of it—but raw eggs tw at a time and at least four times a day! Ten eggs a day are often taken by a patient with most excellent results. This same specialist told me that he had seen the most ragged set of nerves he ever dealt with quieted in a week with this treatment combined with as much milk as the patient could take. An immense amount of pure and highly concentrated nourishment may be taken into the system in this way.—Farmer's Wife, Shubenacadie, N. S.

The Angel of Consolation.

There is a picture called "The Angel of Consolation." A woman sits on the low rocks, looking out upon the sea. Desolation is all about her—not a flower, not a tree on the shore; only sand, rocks and breaking waves. Down in the water her heart's treasures have gone. Her face is stony in its despairing grief. Almost touching her shoulder, hovering over her bowed form, is an angel, white-robed, softly striking the strings of a harp. Does the mourner know how near to her the angel is? Does she hear the celestial music? No; she is dumb unconsciousness, sad and lonely, while God's minister of comfort waits so close, and the notes of sweet music, fall unheeded on her ear.

Is not the picture true of many sorrowing ones? Is it not true, too, of many hungry lives, starving for other blessings? They do not take the gifts that the common days bring. Angels come to them unawares in homely or unattractive disguise, walk with them, and then only become known to them when their places are empty. We do not begin to recognize the worth of even our nearest human friends. With a wealth of precious love, and almost infinite helpfulness, they move beside us along the years; but their garb is plain, and we do not see the splendor that is in them. It would be well were we to pray to have our eyes opened that we might see the common angels God sends to bless our lives.—Catholic Columbian.

Happy Households.

The happiest households are those that do not let die out the sentiment connected with various anniversaries. Although gift giving or recognition of such events in a suitable way may be out of the question, owing to the straitened circumstances of those within the gates, there can yet be a little air of festivity when mother's or father's birthday comes round, or some wedding anniversary is to be celebrated. An extra dish, a little bunch of flowers, or some special music prepared for the occasion, will show the kindly spirit and the loving remembrance that count far more than the money value of any gift.

As the children grow up, if these festivals are encouraged, they will have much to look forward to, and much more to remember in the years to come, when they go out to do battle with the world, and find that sentiment is crushed under foot and affection is regarded only as a side issue.

Life is full of beauty if we only know how to gather it into our bins and storehouses. There need not be great wealth nor worldly honour, but a loyal clinging together of parents and children, marked by happenings that have a direct bearing on each one's individual history, will join the closer together and make home life the ideal thing that it ought to be.

Do not, we beseech you, plead that you are too busy or too seriously occupied with worldly affairs to waste time on such trivial matters as birthday parties and wedding celebrations Such use of time is not a waste, and will prove among the sweetest memories of childhood and old age long after the little chain has been broken, and one member after another gone to that long rest from which there is no awakening.

Ventilation.

Alexander Dumas, the great French novelist, had in his character much of the natural comicality of the negro race, from which he was in part sprung. His son, Alexander Dumas fils, was notably lacking in this quality, and the father was fond of making pleasant little jokes at his expense. Once when the father was vis-

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We have over 50,000 feet of slightly used piping just as good as new and first class for water, steam, heating greenhouses, construction, fencing, posts, etc., at 25 p. c. to 50 p. c. of less than regular value.

NOTE THESE PRICES

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Also other sizes up to 10 inches.

Send us a list of the lengths you need and we will give you a special low price on the lot, cut and threaded, ready to put together. We also have enormous quantities of

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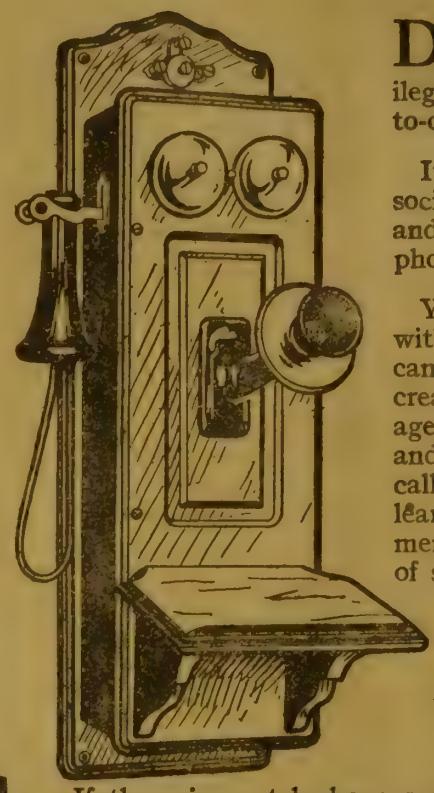

DO your neighbors and yourself enjoy the privileges and benefits of an up-to-date telephone system?

It's more enjoyable, more sociable, more business-like, and safer, living in a telephone-served locality.

You are always in touch with your neighbors. You can talk business with the creamery, the implement agents, the stores, the bank and your lawyer. You can call the railway station and learn if an expected shipment has arrived. In time of sickness you can summon the doctor immediately. You can call your neighbors to assist you in case of a fire, an accident, or an unwelcome visit by tramps

If there is no telephone system in your locality send for our famous book entitled

"Canada and The Telephone"

With this book, which shows by means of vivid pictures the necessity of rural telephones, you can quickly promote a local company, and enjoy the distinction of being known as the most progressive man in your locality.

Our Engineers will assist your company or any municipality requiring expert advice in planning construction or solving operation problems. This service is free.

No. 3 BULLETIN

Our new No. 3 Bulletin gives a complete description of our telephones, which are the highest-class on the market to-day. It also tells how rural telephone lines are built, how equipped and how maintained. Write for this bulletin.

SEND FOR FREE TRIAL OFFER

Inquire about our Free Trial Offer, whereby the quality of our telephones can be judged by your company without spending a dollar.

Canadian Independent Telephone Co., Limited

1820 DUNCAN STREET, TORONTO

12

iting the son, Alexander, junior, invited Alexander, senior, into his garden, which is said to have been somewhat larger than a good-sized pocket handkerchief. They sat under the one little tree in this garden, and fanned themselves. "I am suffocating," said Alexander, senior. "What shall I do, pere?" asked Alexander, junior. "Brtter open your chamber window and let a little air out into your garden!" said Alexander pere.

A Word to Girls.

Girls in the country sometimes grow tired of the quiet routine of farm work and for the excitements and attractions of city life. But life in the city is not the public holiday it seems to ?he girls on their occasional visits to town. Believe me when I tell you that working girls in the city have an infinitely more monotonous existence than the country girls ever dreamed of. You get up early and work hard, it is true, but the picnics you attend in the summer and the sleigh rides and parties that enliven your winter give you social recreation and change, while there is always the keenest enjoyment for those who know how to read mother nature's book.

Think of spending every working day in a dingy office, writing and figuring constantly, with but half a day's vacation in three years, as one girl I know of has done. Think of spending all the hot summer days at a sewing machine in a factory with theceaseless clatter of hundreds of other machines all about you! Think of walking two miles to work, standing behind a counter all day, forced to smile and smile, though you feel as a villain ought to feel, and again walking home at night! All these things thousands of girls in big cities do.

One girl I know stands and irons ready-made shirtwaists all day, week in and week out. What is the variety of her life? How would you like to exchange your duties with her? Do you not think it would be a welcome relief to them to milk in the cool of the morning, churn, bake, and sweep before the hottest part of the day; peel the potatoes for dinner out under the shade of a tree, and after dinner is over to sit out in the cool shady yard, or rest in the hammock, or take a canter on a pony; or, in the fall, go to the woods in search of nuts, and at night lie down and breathe in the sweet-scented air of the country instead of amid sewer smells and effluvia of dirty alleys?

How would you like to pay out of your scant earnings for every specked apple or withered peach you ate? Why, if you live in the city, you would pay for fruit that you will not pick up lrom the ground now. How would you like the ever-present possibility of losing your job and having your income cut off for a time, with no money to pay the expenses that always accumulate so fast? Think of those things before you give up the quiet and peaceful life of the country with the certainty of a comfortable home, even if you do.—American Weekly.

Honey is one of the most healthful and nutritious of foods. "A land flowing with milk and honey" meant a great deal to the weary travellers in the desert. Give the children all the bread and butter and honey they will eat, at least once a day, and will never get sick and surfeited from too much sweet as they would if they ate the same amount of jam. If they have a slight cold, cough, or any throat trouble, try strained honey with one-fourth lemon juice, giving a teaspoonful every hour.

Like the lava from the crater
Came the gravy on his plate;
For he failed to tip the waiter,
So the waiter tipped the plate.

$3,600

in Cash Prizes for Farmers

Your Photograph May Win a Prize

AMONG the prizes we are offering in our big Prize Contest is one of $100.00 (Prize "C") for the farmer in each Province who furnishes us with a photograph showing the best of any particular kind of work done on his farm during 1911 with "CANADA" Cement. For this prize, work of every description is included.

Now just as soon as you finish that new silo, barn, feeding floor or dairy, that you've been thinking of building, why not photograph it and send the picture to us? The photograph doesn't necessarily have to be taken by a professional or an expert. In fact, your son's or your daughter's camera will do nicely. Or, failing this, you might use the kodak of your neighbor's son nearby. In any event, don't let the idea of having a photograph made deter you from entering the competition. Particularly as we have requested your local dealer to help in cases where it is not convenient for the farmer to procure a camera in the neighborhood. By this means you are placed on an equal footing with every other contestant. Get the circular, which gives you full particulars of the conditions and of the other three prizes. Every dealer who sells "CANADA" Cement will have on hand a supply of these circulars—and he'll give you one if you just ask for it. Or if you prefer, you can use the attached coupon—or a postcard will do—send it to us and you'll receive the complete details of the contest by return mail.

If you haven't received your copy of "What the Farmer Can Do With Concrete," write for that, too. It's a finely illustrated book of 160 pages full of useful and practical information of the uses of concrete.

Write us to-night, and you'll receive the book and the circular promptly.

Do not delay—sit right down—take your pen or pencil, and fill out the coupon NOW.

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The disc drill that can't stall

ANY disc drill economizes seed, time and labor as compared with other ways of seeding. But a FROST & WOOD CHAMPION excels all in accurate sowing, money-saving and the certainty of bigger crop-production. It sows right under hardest conditions.

Built with more strength than it will probably ever need. Continuous steel axle from wheel to wheel, with frame and seed-box solidly attached. Seed-box down low and easy to fill. Tested indexes tell just how much you are sowing. Champion does not compel you to fit the shift-lever precisely into such-and-such a notch. Vary the seed-feed to suit yourself—do it in a second. Champion disc hubs are really dustproof, and are fitted with ball-bearings same as a good automobile. Direct down-pressure on EVERY disc-hub avoids side-strain. No neck-weight on team.

Macdonald Agricultural College praises its CHAMPION DRILL. So do the Experimental Farms throughout Canada Profit by their experience

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Smith's Falls Canada

"Best for Baby—best for you."

Baby's Own Soap

Made of specially purified and refined vegetables oils. It will not hurt the most delicate skin.

Refuse all substitutes.

Albert Soaps Limited
Mfrs.,
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POULTRY.

Something About Geese.

Editor Maritime Farmer:—

"A team of twenty geese a snow white train,
Fed near the limpid lake on golden grain
Amuse my pensive hours"—Pope.

It has been said the cackling of Juno's geese saved Rome from the Gauls 368 B. C. We are told by early historians this particular kind of goose was a white one as Lucretius says: "the white goose the preserver of the citadel of the decendants of Romulus, perceived at a great distance the odor of the human race." That may be alright, but I am inclined to think Lucretius knew a great deal more about other things than poultry in general and geese in particular. We imagine the geese saw rather than "perceived the odor" and were bent on giving the Gauls a noisy reception after the manner of their kind. Even in the matter of noise one is the gainer by keeping well bred geese since one finds them more tractable, and docile, and not so much given to vocal celebrations.

The most absurd charge against geese and the hardest to kill is expressed in the three-fold indictment 'Geese destroy the pasture, eat everything ahead of them and kill everything behind." Nothing could be farther from the truth. I personally know of a family who keep pure-bred geese and have for many years and the silent partner declares that for time and money expended they realize more for them than any other stock on the place. She says: "Our flock has roamed the pastures twenty-five years, and there is no better pasture in this country." Of course it is understood the goose was intended for the pasture, the hay fields after the hay is cut, where they will do extra well, and not the lawn or around the house—that is after they are grown and ready to turn out. Like the young of all our domestic fowls the gosling needs care, and protection from cold rains. Given this and some judicious feeding until nearly feathered, they will grow and thrive like Mr. Finney's turnips. One thing in their favor as compared with other poultry is their extreme hardiness and freedom from disease, and every gosling hatched from the eggs of an adult goose, means a gosling raised without much trouble or expense. Of what other class of poultry can we say this? It is no use to go into any discussion of the common or mongrel goose as we have proved to our complete satisfaction that they are uncertain, small sized, and generally unsatisfactory. Taking up pure breeds we have five to select from, the Africans, Embdens, Toulouse and White and Brown Chinese. The last two although they lay more eggs than the large varieties, are small, nervous, noisy and the least able to stand cold and extremes of weather, timid and excitable, hard to fatten and hard to pluck. Except for crossing with the larger breeds neither the White nor Brown Chinese are of any value in market production, still they lay twice as many eggs as the large varieties and begin earlier in the season.

The Toulouse goose is a valuable bird, well worth keeping, still as they are the latest of all to mature, they are sometimes called "the Christmas goose" and the flesh is rather coarse grained and not of extra quality. They have a thick, blocky body and rather short legs, so at fattening time when they are in good condition the under parts touch the ground and give them an ungainly awkward appearance.

The big White Embdens carry off the palm for real beauty, with their blue eyes, pure white plumage, orange bill and feet. They are as heavy as the heaviest, and make a fine dressed carcass, that sells better than any other, as the rich, yellow skin gives them a decidedly inviting appearance. They lay the least eggs of any of the breeds, as twenty is a good average, they are later to mate and the first eggs layed are apt to prove unfertile.

Of all breeds I prefer the Grey Africans. I believe for an all round entirely practical bird it would be impossible to find it's peer. He is a handsome bird, has a large head, with a large knob, and dewlap under the throat. These and the Chinese geese are different from the others in the head and are the only two breeds

'Arry and 'Arriet

that have the knob. The bill of the Africans is rather large and stout at the base, and his neck is long. His back is long and flat, breast round and moderately full and he has a large, long and upright body. The wings are large and strong, and are folded well against the body, the thighs are short and stout, and shanks of medium length. The back is dark grey, the plumage of the breast is grey and the under part of the body and the thighs are light grey. A dark stripe runs down the neck from the head to the body. The eyes are hazel; bill, black; shanks, toes and web are of a dark orange color. He has a stately gait and a very impressive air of lordly condescension towards the entire feathered race, and such of the farm animals with whom he happens to come in contact. His neck is long and swan like, and while not unduly pugnacious, "he has a way with him", and any farm yard uprising has his prompt veto. He's a self appointed arbitrator, and settles all disputes by promptly separating the contestants, then goes off about his business "honking" triumphantly. But few resist his peacemaking overtures, but if they do he at once lays his neck to the ground, until it looks for all the world like a serpent about to

Poultry Fencing that is Stronger than Seems Necessary

We make our poultry fencing close enough to turn small fowl—then we make it extra strong, so it will last for years and keep the cattle out. The heavy, hard steel top and bottom wires hold it taut and prevent it from sagging.

PEERLESS POULTRY FENCE SAVES EXPENSE

It is well galvanized so as to protect it from rust. It makes such a firm, upstanding fence that it requires less than half the posts needed for the ordinary poultry fence, and that means a big saving to you. Write for particulars.

We make farm and ornamental fences and gates of exceptional quality. Agents wanted where not now represented.

The Banwell Hoxie Wire Fence Co., Ltd.
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Two Minute Talks About

PANDORA RANGE

for Coal or Wood

Its Long Life

THE Pandora Range is for those who desire to make a permanent investment. The high quality of the materials and the superior method of construction assure long life.

The *Body* of the Pandora is very heavy. The *Rods* and *Bolts* are on the outside where they cannot burn or rust out. The *Expansion Rings* of the cooking section provide ample allowance for extreme expansion and contraction and eliminate the possibility of the metal cracking.

The *Cooking Top* is *Burnished* which toughens the surface of the metal and increases its strength. *McGlary Oil Cement* is used between the joints. Unlike cheap, ordinary cement, it will not dry out and need replacing. The *Nickelling* will not tarnish and is many times more durable than the single coat of nickel on ordinary ranges.

The Semi-Steel Fire Box Linings are twenty per cent. heavier than cast or gray iron linings. Sulphur fumes, so destructive to cast iron, cannot penetrate the hard, smooth as glass surface of Semi-Steel. The *Grates* have *Three Faces*, which allows the wear to be distributed on three sides, insuring triple durability.

If you want a range of *guaranteed quality* get the Pandora. It's built to give you lasting service.

McClary's

Stands for Guaranteed Quality

London, Toronto, Montreal, Winnipeg
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70

The Maritime Farmer's New Home is on Clarence St., St. John, N. B.

Why don't *some* flours behave?
Why don't they *keep* good?

Because they contain too much of the branny particles, too much of the *inferior* portions of the wheat — may be little pieces of the oily germ.

Which *act* on one another—that's why some flours "work" in the sack.

FIVE ROSES is the purest extract of *Manitoba* spring wheat berries.

Free from branny particles and such like.

Twill keep *sound*, and *sweet* longer than necessary.

Keep it in a *dry* place, and when needed you find it even *healthier, sounder, fresher, drier* than the day you bought it.

Buy lots of FIVE ROSES.

It *keeps*. 18

Five Roses Flour

Not Bleached Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

strike, and charges. Although I have never in my life seen one of them strike anything on the place, the charge done seems to have all the effect of a blow, for the would-be pugilists "stand not on the order of their going" and seem to forget all their troubles in their eagerness to get out of the way. His voice is quite different from any of the domesticated geese, more like the Canadian Wild goose. As migrating geese often stop in this locality. would be goose hunters have come "honk" but our big African's a bird that could not under any conditions be mistaken for the wild Canadian.

Although they lay 40 eggs on an average, often an individual goose will do much better than that. But the really desirable trait of this breed is the rapidity with which they mature, as they will actually grow up in ten weeks. In handling these geese we have been surprised and pleased that they show so little disposition to resent our efforts to regulate their movements, our 'Arry and 'Arriet will patiently submit to any amount of handling, even lifting 'Arriet from her nest without any hostile exhibition. 'Arry has proved an unfailing source of amusement, although he's enormous and quite a "load" I can pick him up and stroke his long velvety neck, and far from resenting it, he seems to enjoy it. He's certainly an exemplary bird, and knows his name as well as we know our own—go out anywhere in the fields and call "'Arry", be sure he will respond with an answering "honk". While by no means an old bird, and no one can tell how his temper will stand the test of time, if kindly treated I have no doubt he will live and die a courteous gentleman, and a good husband to the worthy 'Arriet.

A phrase that seems to me absolutely without point is the one by which everyone who makes a foolish or short-sighted move is called a "goose." Why such undesired odium should be allied with the name of a

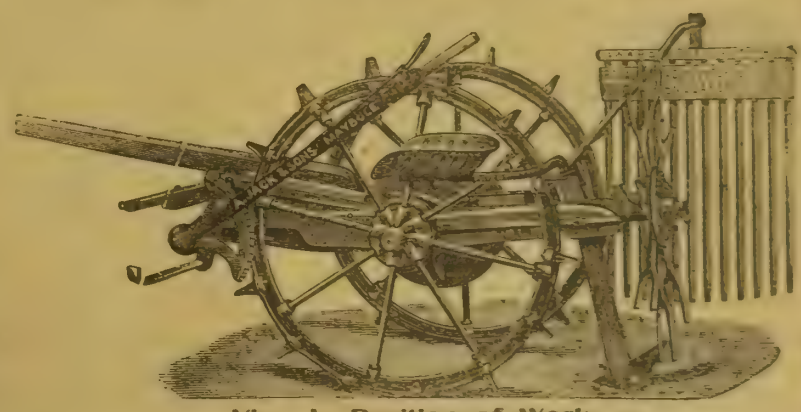
(Continued on page 29).)

The World's Best Potato Digger.

Jack's Royal First Prize
New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position of Work.

The New Patent Caledonian Potato Raiser holds the record as the most perfect Potato Raiser in the world. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, *Canadian Agents* Port Williams, N. S.

Prize Winners at the Charlottetown Exhibition.

(Continued from page 9).

Ewe Lamb—1, Albert Boswell; 2, Ernest Lund; 3, E. B. Boswell.

Flock of Lincolns—1, Albert Boswell; 2, Ernest Lund; 3, E. B. Boswell.

SOUTHDOWNS.

Ram, 2 shears and over—1, Cephas Nunn; 2, Oliver Saunders.

Ram, shearling—1, Oliver Saunders.

Ram Lamb—1, Cephas Nunn; 2, Oliver Saunders.

Ewe, 2 shears and over—1, Oliver Saunders; 2 & 3, Cephas Nunn.

Ewe, shearling—1, Cephas Nunn; 2, & 3, Oliver Saunders.

Ewe Lamb—1, Oliver Saunders; 2 & 3, Cephas Nunn.

Flock of Southdowns—1, Cephas Nunn; 2, Oliver Saunders.

SHROPSHIRE DOWNS.

Ram, 2 shears and over—1, G. L. Boswell; 2, Cephas Nunn; 3, G. L. Boswell.

Ram, shearling—1, Cephas Nunn; 2, G. L. Boswell; 3, L. H. D. Foster.

Ram Lamb—1, G. L. Boswell; 2, Cephas Nunn; 3, G. L. Boswell.

Ewe, 2 shears and over—1, G. L. Boswell; 2, Cephas Nunn; 3, G. L. Boswell.

Ewe, shearling—1, G. L. Boswell; 2, Cephas Nunn; 3, L. H. D. Foster.

Ewe Lamb—1, 2, & 3, G. L. Boswell

Flock of Shropshire Downs—1, G. L. Boswell; 2, Cephas Nunn.

OXFORD DOWNS.

Ram, 2 shears and over—1, A. Mc Kenzie, Long Creek.

Ram, shearling—1, A. H. Boswell, Marshfield.

Ram Lamb—1, A. H. Boswell; 2, Henry Weatherbie; 3, Henry Weatherbie.

Ewe, 2 shears—1, Henry Weatherbie 2, A. H. Boswell; 3, Henry Weatherbie.

Ewe, shearling—Henry Weatherbie.

SUFFOLKS.

Ram, 2 shears and over—Albert Boswell, Jr.

Ram, shearling—Earl Boswell.

Ram Lamb—Albert Boswell.

Ewe, 2 shears—1, Albert Boswell; 2, Earl Boswell; 3, Albert Boswell.

Ewe, shearling—1, Albert Boswell; 2, Earl Boswell.

Ewe Lamb—1, Albert Boswell;2, Earl Boswell; 3, Albert Boswell.

Flock of Suffolks—1, Albert Boswell

SHORT OR MEDIUM WOOL GRADES.

Ewe, 2 shears and over—1, Elijah Saunders; 2, Oliver Saunders.

Ewe, shearling—1 and 2, Oliver Saunders; 3, Elijah Saunders.

Ewe Lamb—1, Oliver Saunders; 2, Elijah Saunders; 3, L. H. D. Foster.

Wether, shearling—1, Oliver Saunders; 2, Albert Boswell.

Wether Lamb—1 and 2, Oliver Saunders.

Best Fat Ewe or Wether—1, Elijah Saunders; 2, Oliver Saunders; 3, Albert Boswell.

DORSET HORNS.

Ram, 2 shears—1, John Tweedy.

Ram, shearling—G. L. Boswell.

Ram Lamb—1, G. L. Boswell; 2, John Tweedy.

Ewe, 2 shears and over—1, 2 and 3, G. L. Boswell.

Ewe, shearling—1, 2 and 3, G. L. Boswell.

Ewe Lamb—1, G. L. Boswell; 2, G. L. Boswell; 3, John Tweedy.

Flock of Dorset Horns—1, G. L. Boswell.

LONG WOOL GRADES.

Ewe, 2 shears and over—1, S. L. Boswall; 2, Albert Boswall, Jr.; 3, S. C. Lane.

Ewe, shearling—1, S. C. Lane; 2, S. L. Boswall; 3, Albert Boswall.

Ewe Lamb—1, Albert Boswall; 2, S. C. Lane; 3, S. L. Boswall.

Wether, shearling—1, S. C. Lane; 2, S. L. Boswall; 3, Albert Boswall.

Wether Lamb—1, G. L. Boswall, French Fort; 2, S. C. Lane.

Best Fat Ewe or Wether—1, S. C. Lane; 2, S. L. Boswall; 3, Albert Boswall.

HAMPSHIRES.

Ram, shearling—1, Cephas Nunn.

Ram Lamb—1, Cephas Nunn;2, Oliver Nunn.

Ewe, 2 shears and over—1, Cephas Nunn; 2, Cephas Nunn; 3, Oliver Nunn.

Ewe, shearling—1, Cephas Nunn; 2, Oliver Nunn; 3, Cephas Nunn.

Ewe Lamb—1, Cephas Nunn; 2, Oliver Nunn.

Flock of Hampshire Downs—1, Cephas Nunn; 2, Oliver Nunn.

SWINE.

BERKSHIRES.

Boar, 2 years old and upwards—1, Samuel Ings, Hazelbrook; 2, Wood & Son; 3, Samuel C. Lane.

Boar, 1 year and under 2—1, Wood & Son; 2, Peter Brodie.

Boar, over 6 and under 12 months—1, Malcolm A. Stewart; 2, Samuel Ings' 3, Wood & Son.

Boar, under 6 months—1, Wood & Son; 2, W. J. Gibson; 3, Peter Brodie.

Sow, 2 years and over—1, Peter Brodie; 2, W. J. Gibson; 3, Samuel Ings.

Sow, 1 year old—1, W. J. Gibson; 2, A. A. Ings, Pownal; 3, Samuel Ings.

Sow, 6 months and under 1 year—1, Wood & Son; 2, Peter Brodie; 3, John Berrigan.

Sow, under 6 months—1, Samuel Ings; 2, W. J. Gibson; 3, W. J. Gibson.

Pair of Pigs, 3 months old—1, W. J. Gibson; 2, Peter Brodie; 3, Wood & Son.

Breeding Sow, with litter—1, Samuel Ings; 2, Peter Brodie; 3, W. J. Gibson.

Sweepstake Boar—1, Samuel Ings.

Sweepstake Sow—1, Peter Brodie.

Pen, consisting of 1 boar and 3 females, any age—1, Samuel Ings.

Boar, 2 years old—1, Stuart Bros.; 2, J. W. Callbeck; 3, Pope Cook, Little York.

Boar, 1 year—1, Stuart Bros.; 2, John T. Roper; 3, George Crockett.

Boar, under 12 months—1, John B. Roper; 2, Stuart Bros.; 3, George Crockett.

YORKSHIRES.

Boar, 2 years old—1, Stuart Bros.; 2, J. W. Callbeck, Summerside; 3, Pope Cook.

Boar, 1 year—1, Stuart Bros.; 2, John B. Roper; 3, George Crockett.

Boar, over 6 months—1, John B. Roper 2, Stuart Bros.; 3, George Crockett.

Boar, under 6 months—1, Wallace Stead; 2, Stuart Bros.; 3, J. W. Callbeck.

Sow, 2 years—1, Geo. C. Crockett; 2, J. W. Callbeck.

Sow, 1 year old—1, J. W. Callbeck; 2, George Crockett; 3, Thos. P. Cass.

Sow, 6 months—1, A. McBeath; 2, J. W. Callbeck; 3, Stuart Bros.

Sow, under 6 months—1, Stuart Bros.; 2, J. W. Callbeck; 3, George Crockett.

Pair of Pigs, 3 months old—1 and 2, J. W. Callbeck; 3, Robert Stuart.

Breeding Sow, with litter—1, Wallace Stead 2, J. W. Callbeck; 3, Geo. Crockett.

Sweepstake Boar—Stuart Bros.

Sweepstake Sow—Geo. Crockett.

Pen, consisting of 1 boar and 3 females—J. W. Callbeck.

Boar, over 6 months—Jas. M. Roper.

Boar, under 6 months—1, and 2, W. J. Gibson; 3, Jas. Roper.

Sow, 1 year old—1, W. J. Gibson; 2, Jas. Roper.

Sow, under 6 months—1, W. J. Gibson; 2, W. J. Gibson; 3, Jas. Roper.

Pair of Pigs, 3 months old—1 and 2, W. J. Gibson; 3, Jas. Roper.

Breeding Sow, with litter of not more than 5 pigs—1, Jas Roper.

Sweepstake Sow—1, W. J. Gibson.

CHESTER WHITES.

Boar, 2 years old—1, Leonard Court

Boar, 1 year—1, Wallace Stead; 2, G. W. Prowse; 3, Leonard Court.

Boar, over 6 and under 12 months—1, T. W. Prowse.

Boar, under 6 months—1, T. W. Prowse; 2, Pope Cook; 3, Leonard Court.

Sow, 2 years old—1, A. H. Boswell; 2, G. W. Prowse.

Sow, 1 year old—1, A. H. Boswell; 2, Pope Cook' 3, Leonard Court.

Sow, under 1 year—1, G. W. Prowse 2, A. H. Boswell.

Sow, under 6 months—1, Pope Cook; 2, Pope Cook; 3, G. W. Prowse.

Pair of Pigs, 3 months and under 6 months barrows excluded—1 and 2, Pope Cook; 3, Leonard Court.

Breeding Sow with litter—1, G. W. Prowse; 2, Leonard Court; 3, Pope Cook.

Sweepstake Boar—1, Wallace Stead.

Sweepstake Sow—T. W. Prowse.

Pen, consisting of 1 boar and 3 females, any age—G. W. Prowse.

EXPORT BACON HOGS.

For the best pen of 2 pure-bred hogs, most suitable for Export Bacon—1, Robt. Stuart, Winsloe; 2, Geo. Crockett; 3, Pope Cook.

For the best pen of 2 hogs of any cross or grade, most suitable for Export Bacon—1 and 2, Joseph Praught.

Messrs. R. E. Mutch & Co. special prizes for pair of Bacon Hogs, to dress between 125 and 180 lbs.—1, Stuart Bros.; 2, Wood & Son.

The Canadian Bank of Commerce, for the best pen of Pigs entered at the exhibition—J. W. Callbeck, Summerside.

Messrs. Davies & Fraser special prizes for 2 best finished hogs not weighing over 125 lbs. when dressed—1, W. J. Gibson; 2, Peter Brodie.

POULTRY.

FOWLS.

Anconas, Mottled Cock—1, Simon Paoli, Jr.; 2, James H. Pritchard.

Anconas, Mottled Hen—1, James H. Pritchard; 2, Simon Paoli.

Andalusian, Cock—1, George Peterson; 2, Thos. Holloran.

Andalusian Hen—1, George Peterson; 2, Thos. Holloran.

Brahma, Light or Dark, Cock—1, Harry Riggs; 2, J. P. McInnis.

Brahma, Light or Dark, Hen—1, Harry Riggs; 2, J. P. McInnis.

Cochin, Buff, Cock—1, H. H. Howard.

Cochin, Buff, Hen—1, H. H. Howard.

Dorking, any variety, Cock—1, Neil A. McKinnon.

Dorking, any variety, Hen—1, Neil A. McKinnon.

Hamburg, Silver Spangled, Hen—1, L. A. Haszard.

Hamburg, Golden Pencilled, Cock—1, John F. Burke; 2, John F. Burke; 3, A. H. Boswall.

Hamburg, Golden Pencilled, Hen—1, and 2, John F. Burke; 3, A. H. Boswall.

Hamburg, Silver Penciled, Cock—1, A. H. Boswall; 2, Lyle Boswall; 3, L. A. Haszard.

Hamburg, Silver Penciled, Hen—1, Lyle Boswall; 2, L. A. Haszard; 3, A. H. Boswall.

Langshan, Black, Hen—1, Mrs. Albert Williams.

Leghorn, White, S.C., Cock—1, Geo. Chilton; 2 and 3, John Whitlock.

Leghorn, White, S.C., Hen—1, Geo. Chilton; 2 and 3, John Whitlock.

Leghorn, Brown, S.C., Cock—1, Geo. Chilton; 2, John Whitlock; 3, Neil Mc Kinnon; 4, Geo, Chilton.

Leghorn, Brown, S.C., Hen—1 and 2, John Whitlock; 3, Harry Lapthorne; 4, Geo. Chilton.

Leghorn, Buff, S.C., Cock—1, Joseph Curran; 2, A. H. McKinnon; 3, Neil McKinnon.

Leghorn, Buff, S.C., Hen—1, Joseph Curran; 2, A. H. McKinnon; 3, Joseph Curran.

Leghorn, Brown or White, R. C., Cock—1, G. L. Simmons.

Leghorn, Brown or White, R. C., Hen—1, G. L. Simmons.

Leghorn, Black, S.C., Hen—1, Geo. Chilton.

Minorca, Black, S.C., Cock—1, Chas. Pippy, Hillsboro; 2, W. J. Cudmore; 3, Robert Hudson,

OPERATION HER ONLY CHANCE

Was Cured by Lydia E. Pinkham's Vegetable Compound

Lindsay, Ont.—"I think it is no more than right for me to thank Mrs. Pinkham for what her kind advice and Lydia E. Pinkham's Vegetable Compound has done for me. When I wrote to her some time ago I was a very sick woman, suffering from female troubles. I had inflammation of the female organs, and could not stand or walk any distance. At last I was confined to my bed, and the doctor said I would have to go through an operation, but this I refused to do. A friend advised Lydia E. Pinkham's Vegetable Compound, and now, after using three bottles of it, I feel like a new woman. I most heartily recommend this medicine to all women who suffer with female troubles. I have also taken Lydia E. Pinkham's Liver Pills and think they are fine."—Mrs. FRANK EMSLEY, Lindsay, Ontario.

We cannot understand why women will take chances with an operation or drag out a sickly half-hearted existence, missing three-fourths of the joy of living, without first trying Lydia E. Pinkham's Vegetable Compound.

For thirty years it has been the standard remedy for female ills, and has cured thousands of women who have been troubled with such ailments as displacements, inflammation, ulceration, fibroid tumors, irregularities, periodic pains, backache, indigestion and nervous prostration.

Flavor

in tea must be distinctive, pleasing and unvarying to merit continuous use. The flavor of Red Rose Tea is all its own; and it never fails to win and hold approval because it never fails in quality. Try it.

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RED ROSE TEA "is good tea"

Minorca, Black, S.C., Hen—1, W. J. Cudmore; 2, John F. Burke; 3, W. J. Cudmore.

Minorca, Black, R.C., Cock—1, E. A. Cudmore.

Minorca, Black, R.C., Hen—1, E. A. Cudmore.

Minorca, White, S.C., Cock—1, Byrne Bros.; 2, Everett Mills.

Minorca, White, S.C., Hen—1, Everett Mills; 2, Byrne Bros.

Orpington, Buff, Cock—1, Albert Duchemin; 2, L. A. Haszard; 3, Robt. Hudson.

Orpington, Buff, Hen—1, J. Blanchard; 2, Albert Duchemin; 3, L. A. Haszard.

Orpington, any other variety, Cock—1, Willis Arbin; 2, Henry Gurney; 3, John Whitlock.

Orpington, any other variety, Hen—1, Harry Lowe; 2, Henry Gurney; 3, Willis Arbin.

Plymouth Rock, Barred, Cock—1, L. H. D. Foster; 2, Heath Foster; 3, Lorne Pigott.

Plymouth Rock, Barred, Hen—1, Heath Foster; 2, L. H. D. Foster; 3, A. H. McKinnon.

Plymouth Rock, White, Cock—1, Geo. Callbeck; 2, Mrs. Albert Boswall, Jr.

Plymouth Rock, White, Hen—1, Mrs. W. A. McEachern; 2, Geo. Callbeck; 3, Geo. Callbeck.

Plymouth Rock, Buff, Cock—1, Neil McKinnon; 2, L. H. D. Foster; 3, Talmage Foster.

Plymouth Rock, Buff, Hen—1, Talmage Foster; 2, L. H. D. Foster; 3, Neil McKinnon.

Rhode Island Red, S.C., Cock—1, Lorne Pigott; 2, Geo. Williams; 3, T. W. Prowse.

Rhode Island Red, S.C., Hen—1, T. W. Prowse; 2, Joseph McDonald; 3, Lorne Pigott.

Rhode Island Red, R.C., Cock—1, J. P. McInnis; 2, L. B. Crockett.

Rhode Island Red, R.C., Hen—1, L. B. Crockett; 2, J. P. McInnis.

Spanish Black, Cock—1, Geo. Peterson; 2, John F. Burke.

Spanish Black, Hen—1 and 2, Wilfrid Duffy; 3, John F. Birke.

Wyandotte, Silver Laced, Cock—1, Geo. Chilton; 2, Robt. Hudson.

Wyandotte, Silver Laced, Hen—1, Geo. Chilton; 2, Robt. Hudson.

Wyandotte, White, Cock—1, Joseph Cudmore; 2, Harold Lane; 3, John Whitlock.

Wyandotte, White, Hen—1, Joseph Cudmore; 2, John Whitlock; 3, Everett Mills.

Wyandotte, Buff, Cock—1, Robert Hudson.

Wyandotte, Buff, Hen—1, Geo. Chilton; 2, Robt. Hudson.

CLASS 46—CHICKENS!

Anconas, Mottled, Cock—1 and 2, Jas. H. Pritchard; 3, E. J. Vessey.

Anconas, Mottled, Hen—1 and 2, Jas. H. Pritchard; 3, E. J. Vessey.

Andalusian, Hen—1, Geo Peterson.

Brahma, Light or Dark, Cock—1, L. A. Haszard; 2, Harry Riggs.

Brahma, Light or Dark, Hen—1, Harry Riggs; 2, L. A. Haszard.

Cochin, Buff, Cock—1, H. H. Howard.

Cochin, Buff, Hen—1, H. H. Howard.

Hamburg, Silver Spangled, Cock—1, L. A. Haszard.

Hamburg, Silver Spangled, Hen—1, L. A. Haszard.

Hamburg, Silver Penciled, Cock—1, L. A. Haszard; 2, A. H. Boswall; 3, Lyle Boswall.

Hamburg, Silver Penciled, Hen—1, J. P. McInnis; 2, L. A. Haszard; 3, A. H. Boswall.

Langshan, Black, Cock—1, Albert Williams; 2, Wilfred Williams.

Langshan, Black, Hen—1, Albert Williams; 2, Wilfred Williams.

Leghorn, White, S.C., Cock—1, C. Balderston; 2, John Whitlock; 3 and 4, C. Balderston.

Leghorn, White, S.C., Hen—1, John Whitlock; 2, C. Balderston; 3, John Whitlock.

Leghorn, Brown, S.C., Cock—1, Chas. Pippy; 2, L. A. Haszard; 3, Thos. Holloran; 4, Geo. Williams; 5, Geo. Chilton.

Leghorn, Brown, S.C., Hen—1, Geo. Chilton; 2 and 3, Harold Lane; 4, Thos. Holloran.

Leghorn, Buff, S.C., Cock—1, 2 and 3, J. Blanchard.

Leghorn, Buff, S.C., Hen—1, A. H. McKinnon; 2 ann 3, J. Blanchard.

Leghorn, Brown or White, R.C., Cock—1, G. L. Simmons.

Leghorn, Brown or White, R.C., Hen—1, G. L. Simmons.

Minorca, Black, S.C., Cock—1, W. J. Cudmore; 2, Geo. Chilton; 3, A. H. McKinnon.

Minorca, Black, S.C., Hen—1, A. H. McKinnon; 2 and 3, W. J. Cudmore.

Minorca, Black, R.C., Cock—1, Geo. Chilton; 2, Robt. Hudson.

Minorca, Black, R.C., Hen—1, Robt. Hudson; 2, Geo. Chilton.

Minorca, White, S.C., Cock—1, Everett Mills; 2, Byrne Bros.

Minorca, White, S.C., Hen—1, Everett Mills.

Orpington, Buff, Cock—1, Christopher Ford; 2 and 3, Albert Duchemin; 4, Christopher Ford.

Orpington, Buff, Hen—1, Arthur Nelson; 2, Albert Duchemin; 3, Arthur Nelson; 4, Christopher Ford.

Orpington, any other variety, Cock—1, Harry Lowe; 2, Harold Lane; 3, L. L. Gurney.

Orpington, any other variety, Hen—1, Henry Gurney; 2, Harold Lane; 3, Henry Gurney; 4, Harry Lowe.

Plymouth Rock, Barred, Cock—1, L. H. D. Foster; 2, Talmage Foster; 3, Heath Foster.

Plymouth Rock, Barred, Hen—1, L. H. D. Foster; 2, Geo. Chilton; 3, Heath Foster.

Plymouth Rock, White, Cock—1, Geo. Callbeck; 2, Mrs. Albert Boswall, Jr.; 3, Mrs. W. A. McEachern.

Plymouth Rock, White, Hen—1 and 2, Geo. Callbeck; 3, Mrs. Albert Boswall, Jr.

Plymouth Rock, Buff, Cock—1, L. A. Haszard; 2, L. H. D. Foster.

Plymouth Rock, Buff, Hen—1, L. A. Haszard; 2, L. H. D. Foster.

Rhode Island Red, S.C., Cock—1, L. A. Haszard; 2, T. W. Prowse; 3, Harold Prowse.

Rhode Island Red, S.C., Hen—1, L. A. Haszard; 2, Joseph McDonald; 3, T. W. Prowse; 4,Charles Stewart.

Rhode Island Red, R.C., Cock—1 L. B. Crockett; 2, J. P. McInnis.

Rhode Island Red, R.C., Hen—1, J. P. McInnis; 2, L. B. Crockett.

Spanish Black, Cock—1, Wilfred Duffy.

Spanish Black, Hen—1, Wilfred Duffy.

Wyandotte, Silver Laced, Cock—1, Robt. Hudson.

Wyandotte, White, Cock—1, John Whitlock; 2, Harold Lane; 3, Percy Hamm.

Wyandotte, White, Hen—1, Harold Lane; 2, John Whitlock; 3, Harold Lane.

Wyandotte, Buff, Cock—1, Geo. Chilton; 2, Robt. Hudson.

Wyandotte, Buff, Hen—1, Geo. Chilton; 2, Robt. Hudson.

Wyandotte, any other variety, Cock—1, Mrs. A. Alley.

Wyandotte, any other variety, Hen—1, Mrs. A. Alley.

CLASS 48.—TURKEYS, GEESE AND DUCKS.

Pair Turkeys, Bronze—1, Mrs. Albert Boswall, Jr.

Pair Geese, Toulouse—1, Almon Boswell.

Pair Geese, White Bremen or Emden—1, Mrs. A,bert Boswell, Jr.; 2, Ernest Lund; 3, Mrs. Albert Boswell.

Pair Geese, any other variety—1, Mrs. Albert Boswell; 2, Ernest Lund.

Pair Geese, Toulouse, hatched in 1911—1, Almon Boswell.

Pair Geese, White Bremen or Emden, hatched in 1911—1 Mrs. Albert Boswall.

Pair Geese, any other variety, hatched in 1911—1, Mrs. Albert Boswall; 2, Ernest Lund.

"Every Little Bit Added to What You've Got Makes a Little Bit More."

GRAB'S KEYLESS BASKET BANK

Its never too late to mend---Get the Dime saving habit to-day. Learn your girl and boy the value of dimes and how they accumulate. Let them learn how quick the insignificant ten cent piece will multiply to dollars.

A Dime a Day--$36.50 a Year

$36.50 a year, in Ten Years with Interest at 4 Per Cent--***$450.00***

It is made entirely of cold rolled steed, with a beautiful oxidized copper finish. First dime locks---fiftieth dime unlocks, Once locked the contents cannot be shaken out, or an axe cannot break it. Each dime deposited is registered on the dial. Bank opens only when $5, $10, $15, $20, $25, and $30 dollars have been deposited. Impossible to break or get out of order.

Price $1.25

Canadian Specialty Co., 154 Prince Wm. St., St. John, N. B.

P. O. Box 228

The Best Agents Supply House in Canada. "If it's Good, We've Got it"

Agents Wanted for this Bank and Other Novelties.

Pair Ducks, Rouen, over 1 year old—1, Lyle Boswell; 2, Albert Boswell; 3, Joseph Praught.

Pair Ducks, Pekin, over 1 year old—1, John Andrew; 2, Mrs Albert Boswall; 3, Almon Boswall.

Pair Ducks, any other variety, over 1 year old—1, John B. Roper; 2, Chas. Pippy.

Pair Ducks, Rouen, hatched in 1911—1, Albert Boswall; 2, Lyle Boswall.

Pair Ducks, Pekin, hatched in 1911—1, Mrs. Albert Boswall; 2, John Roper; 3, Ernest Lund.

Pair Ducks, any other variety, hatched in 1911—1, John Pippy; 2, Chas, Pippy.

BUTTER, CHEESE, ETC.

Butter, best box, not less than 28 lbs., suitable for export, made at any creamery—1, J. D. McRae; 2, J. B. Vantour; 3, Dunk River Dairy Co.

Butter, best 2 firkins, home made, not less than 20 lbs. each—1, Mrs. W. G. Dark; 2, Mrs. Geo. Auld; 3, H. Howard.

Butter, best 2 firkins, Creamery made, not less than 20 lbs. each—1, J. D. McRae; 2, J. B. Vantour; 3, J. P. Simmons.

Butter, best crock butter, home made, not less than 20 lbs.—1, A. H. Boswall; 2, Mrs. E. Prowse; 3, Mrs. B. Rodd.

Butter, best 5 lbs. Butter, in prints home made—1, Mrs. W. A. Mc Eachern; 2, Mrs. L. H. Foster; 3, Edwin Crew.

Butter, best 5 lbs. Butter, in rolls, home made—1, Mrs. L. H. Foster; 2, Mrs. D. Fraser; 3, Mrs. A. H. Boswall.

Butter, best 5 lbs. Butter, in prints Creamery made—1, John D. McRae; 2, J. B. Simmons; 3, J. B. Vantour.

Cheese, best 2 Dairy farm made, not less than 20 lbs. each, made in summer of 1911—1, Miss C. Drake.

Cheese, best 2 Factory, not under 50 lbs. each, to be made after July 1st, 1911—1, Leo Hughes; 2, J. C. Cooke; 3, Jos. H. McDonald.

GRAINS AND SEEDS.

1 Bushel Wheat, White Fyfe—1, Robt Bulman & Son, Rustico; 2, Robt. Drake, Cornwall; 3, Noy Pope, Hazelbrook.

1 Bushel Wheat, Red Fyfe—1, Jos. Duffy; 2, Peter Brodie; 3, Robt. Drake.

1 Bushel Wheat, Campbell's White Chaff—1, Jas. Simpson; 2, Wood & Son.

1 Bushel Wheat, White Russian—1, Robt. Drake.

1 Bushel Wheat, any other variety—1, L. A. Arsenault.

1 Bushel Barley, 2 rowed—1, Benj. Mallett; 2, Ambrose Mallett; 3, J. H. Court.

1 Bushel Barley, 6 rowed—1, F. Bulman; 2, Ernest Lund; 3, J. H. Court.

1 Bushel Barley, hull-less—1, L. A. Arsenault.

1 Bushel Black Oats—1, J. H. Court; 2, Peter Brodie; 3, L. A. Arsenault.

1 Bushel Black Tartarian or Norway Oats—1, Jas. Simpson; 2, E. J. Vessey.

1 Bushel White Oats, Long—1, J. H. Court; 2, Leonard Court; 3, Jas. Simpson.

1 Bushel White Oats, Short—1, F. Bulman & Son; 2, Benj. Mallett; 3, E. J. Vessey.

1 Bushel Buckwheat—1, Hamilton Horne; 2, J. H. Court.

1 Bushel Field Peas—1, E. J. Carew; 2, Sophia Essory.

1 Bushel Beans, White—1, Penelope McKinnon.

1 Bushel Beans, Colored—1, Harold Newson; 2, E. J. Carew; 3, Wm. B. Drake.

½ Bushel Timothy Seed—1, Penelope McKinnon; 2, Hamilton Horne; 3, George Howard.

25 lbs. Alsike Clover Seed—1, Rev. J. J. McDonald.

½ Bushel Flax Seed—1, E. J. Carew; 2, Hamilton Horne; 3, Benj. Mallett.

(Continued on page 30).

FLORICULTURE.

Reader, Chatham, N. B. , Writes:—What care does a Tuberous Begonia require after it is done blooming? Mine seems to be growing thriftily. Will it bloom again this Winter, if I let it grow? Is wood soil the best thing for a Sword Fern? I have a large one that requires repotting, should such soil be sifted? Does a Sword Fern require much sunlight and moisture? There are some little plants growing up near the edge of the pot, could they be separated without hurting the old plant and should they be potted or put in water to root? Is there any way to tell a double Begonia from a single one before they are in bloom?

As soon as the Tuberous Begonia is done blooming it should be dried off by gradually withdrawing water, and placed in dark, cool quarters until Spring, allowing it to remain in the pot. If you wish to use the pot it can be taken out after the soil is thoroughly dried and wrapped in cotton wool. This will help to prevent it's starting too early. If allowed to grow all Winter the bulb is apt to be seriously injured. Wood soil, if not sour, is a good thing for some Ferns but I do not think it is necessary to procure it for Sword Ferns. as a good garden soil, if not of a heavy nature, is just as good. I do not advise sifting soil for potting plants but of course all sticks, stones etc. should be removed. The Sword Fern will do well with little sunshine if it has plenty of light, and it certainly likes plenty of moisture, if applied to the soil at the top. It is very impatient of water in the saucer and such careless treatment is apt to cause the leaves to yellow. The little plants may be dug out carefully, leaving as much roots as possible on them. They should be potted in small pots and kept moist and free from sunshine for some little time. I do not know any sure rule to tell a doubled flowered Tuberous Begonia from a single flowered one when not in bloom. The single varieties are apt however, to be of a more rank, strong growth than the double but this is only guess work after all.

All bulbs and hardy roots should be planted at once as we are apt to have the ground frozen by the middle of the Month. Don't hurry about covering your bulbs, wait until the frosts are heavy and don't cover rose bushes until the leaves are off, as they are apt to mildew if much foliage is tied up closely.

Calla Lilies can be left out in the garden in the shade until the last of August, when they should be potted up in the same sized pots, all old soil being removed and plenty of drainage and good rich soil used instead.

If you want good Dalhias during the Fall months water freely even if the plants look healthy and strong they must be watered to give size and color to bloom. The larger the plants the less water gets to the roots during a shower and often the garden may look quite wet while the earth about the Dalhia tubers would be dry so do not be afraid to water.

Salisbury Correspondent, Writes:—Last year I cut my Rubber plant down. It had grown as high as the ceiling of the room. I made two cuttings and tried to make them grow but they both died. Now on the old stalk there are two new shoots and what I want to know is if I can take these shoots off the old stalk and make them grow? If so, how will I treat them? Shall I take them off this month or later?

We usually root cuttings of this plant by taking the tips and placing them in sand in a box on the heating pipes thus giving them bottom heat. They might possibly be rooted in a box or pot of clean sand if kept constantly moist in an even temperature of sixty degrees. To do this requires some care. Another way, although old fashioned, might suit you better: Get some Coarse Wood Moss, or better the long sphagnum or swamp moss and make an incision in the branch you wish to root—a small cut will do—about this tie a large handful of the moss quite tightly and saturate thoroughly with water and keep constantly moist. Once a day would be fatal to your hopes. This will ordinarly cause roots to form at the incision and when they become quite distinct you can cut off the stem, below them and pot in soil keeping moist and in the shade for a few weeks.

If anyone wants a plant that they "can't kill" get an Aspidistia, commonly called Parlor Palm. The varagated variety is the prettiest. It is certainly very hardy and will stand a lot of neglect.

A VERY DESIRABLE FEATURE FOR SOME HOUSEKEEPERS

A Writer wants to know if we will kindly state the care and culture of Roman Hyacinths and Narcissus bulbs for home use, also would it be advisable to keep them in a dark cellar—where there is a furnace in one corner? Have you all kinds of bulbs?

The usual procedure in handling Hyancinths and Narcissus bulbs is to pot up the bulbs, as soon as they arrive and often watering them so thoroughly that the soil and pot are wet through then they may be placed in a cool, dark cellar where there is no furnace heat and covered slightly with soil to prevent them from dripping out.

S. S. T., Writes:—I am a grower of fine Asters and have tried many times, without success, to save my own seed from extra fine blooms. When should Asters be cut for seed and how should they be treated?

Allow the Aster blooms to remain on the plant as long as possible without their falling to pieces then cut and dry and rub out the seeds.

CHRYSANTHEMUM, THE FLOWER OF THIS SEASON.

The trouble mentioned is one of the weak points of that good old variety of Chrysanthemum, Major Bonnaffon, and probably arises from wilting the blooms and especially from allowing them to remain wet over night or in too close and moist an atmosphere.

I. C. R. Time Table for the Coming Winter.

The Fall and Winter Time Table of the Intercolonial Railway will go into effect on October 29th. There will be practically no departure from the time schedule of last winter. The Ocean Limited will be discontinued until next summer, and the through service between Halifax, Sydney, St. John, Moncton and Montreal will be performed by the Maritime Express which will leave Montreal at 12.05 and arrive at Halifax at 17.15. The night express between Halifax and the Sydneys will be continued for the present. No. 3 and 4 Expresses between St. John and Pt. du Chene will be discontinued.

Here is a woman who speaks from personal knowledge and long experience, viz., Mrs. P. H. Brogan, of Wilson, Pa., who says, "I know from experience that Chamberlain's Cough Remedy is far superior to any other. For croup there is nothing that excels it." For sale by all dealers.

Louden's Litter Carrier

Men and boys like to chore when equipment is modern and satisfactory. The day for pitching or wheeling the manure out of the stable is rapidly passing.

Install a Litter Carrier and do your work better and more quickly than before. Louden's Litter Carrier will work in any stable.

Send us a plan of your stables and let us quote you a price. A free catalogue for the asking.

LOUDEN MACHINERY CO., GUELPH, Ont.
Hay Tools, Cow Stalls and Stanchions, Barn Door Hangings Feed and Litter Carriers, etc.

This Man is Young at 55 Years.

He is a "Health Belt Man;" therefore has the vitality and hot, red blood of youth in his veins; he towers like a giant above the ordinary difficulties of life---be a "Health Belt Men" yourself---it gives manly strength; it makes you young and keeps you young all the days of your life; it takes all the coward out of your make up—let me give you of this abundant vitality, then nothing can ever conquer you but death itself—100,000 men have taken my advice, why not you?

The secret of life-long youth may be summoned up in one wodr—Vitality. If you have this great natural power in abundance years count for nothing. I use no drugs, I recommend none. Just the Health Belt. No privations, no dieting and no restrictions excepting that all dissipation must cease. Put the Health Belt on nights when you go to bed: let it send its power into your nerves, organs and blood while you are s eeping. It gives you a great flow of soft, gentle galvano-vital electricity during the entire night. One application and you are like a new being; it takes all the pain and weakness out of your back; it makes you answer the mornings greeting with 'I'm feeling fine." It is a great strength builder; it overcomes the results of earlier mistakes and indiscretions; gives you a compelling power, so that you are attractive to all women and men with whom you come in contact. Three month's use is sufficient. S. Coolen, Hubhards- Cove, N. S. writes: "I am a man again, thanks to you. Nothing can discourage me now."

This is one among tens of thousands.

Free Until Cured. Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash if you prefer to deal that way.

These Nature Cure Books FREE

Let me send you these books. They contain much valuable health information, are fully illustrated, describe my Health Belt. Fill in coupon or send your name and address on a postal card.

DR. M. F. SANDEN Co., 140 Yonge Street, Toronto, Ont.

Dear Sirs—Please forward me your books, as advertised free.

NAME .....

ADDRESS .....

Something About Geese.

(Continued from page 25)

handsome and stately bird is beyond my comprehension.

A more valuable addition to the farm family would be hard to find. In support of this I will give the experience of Mr. William Rankin and several others. Mr. Rankin is the original Pekin duck man and in his home Western Mass. raises many thousand every year. In speaking of his experience with geese Mr. Rankin says: 'I once let a pair of old Africans run separately and fed them liberally to see the best they could do. The goose layed 51 eggs and I raised 37 goslings. A horse got loose and killed one, one died, leaving 35 for market, these I sold for $81.47. One goose" said he, "gave me more profit than a cow and two hogs. And a neighbour of mine did even better the same season."

Mr. Samuel Cushman who at one time conducted the experiments with geese at the Rhode Island Experiment Station is authority for the following: "He knew a farmer" he writes "who had one year 37 sheep, ewes, from which 37 lambs were raised, and sold at $5.00 each, $185.00. He informed Mr. Cushman that the same season ten geese payed better and ate less.

Another successful "goose man" said every one of his female geese payed him $20 each and he was going into goose raising more extensively.

The facts given above, are by no means exceptional, but merely what one can reasonably expect from the pure-bred geese.

I want to give the experience of a friend who bought a trio of common geese from an Island some two or three miles south of us, where the inhabitants have engaged in goose raising on a small scale for many years. One of the females was an old well matured bird. With these two females she succeeded in raising five goslings. These birds were hard to control and would fly out to sea and sit on the water all night like a gull. When the fall gales began to blow these birds were beaten away from their home island, and carried south by a storm, where they beat up in the surf on some out lying islands, and not one survived. In addition to this habit of "putting to sea" every night they had acquired another equally deplorable one—that of picking up fish offal and refuse to be found about the beaches, by which the flesh was badly tainted, so much so that the market geese from the island from which these breeding geese were purchased, are very hard to dispose of, as they are known to be "fishy" and unpalatable. What a loss to keep such stock, as a man who used to keep a flock in that island told me a goose at her best lays but 15 eggs, and the finest adults won't make more than ten pounds dressed, and rarely that. These birds can be bought in the fall for one dollar each, but knowing the performance of the pure breeds, who would not rather pay say an extra $1.50 for such stock, as they would make it back to their owners in extra weight many times over.

We paid many times the price given for our breeding stock, and would not consider an offer double the amount, in fact we would not sell them at all, and it's not merely that they are so profitable either, because we take an interest in them, and would miss their friendly clatter, as they stalk around majestically by far the most interesting and handsome things on the place.

I am sure as the seasons go by we have made no mistake selecting this breed. Again listen to Mr. Cushman who raises all the pure-bred varieties. African geese are large as the Embdens and Toulouse, lay more eggs than the Embdens and as many as the Toulouse, and they lay them nearly as early as the small Chinese varieties. They are prompt to mate, and gander will mate with more geese, and their early eggs will be more fertile than those of any other large breed. They are steady, docile, and great feeders. Goslings grow faster up to the time they should be marketed and are easily fattened. If you have ten females of Africans, Embdens and Toulouse, with the proper number of ganders on your place and give them the same chance, you will have after the hatching season is over, many more African goslings than either Toulouse or Embden. Probably three times as many Embdens will be secured as Embdens and twice as many as Toulouse—Taken alone or pure-bred they are the most profitable of all breeds.

The best authorities agree that breed stock should be secured in the fall that they may be used to their new quarters, and be contented and well mated before the breeding season opens. That they should be well mated is very important, because geese mate for life and become much attached to their mates, and will not readily change.

Female geese have been known to live and be profitable as breeders up to the fifteenth year, although ten is about the average. As this is the case 'twould seem to be of greater importance to secure good stock. In getting mongrel stock it may be a little saving on the start—but remember the result will be cheap, so cheap that you will probably give up the experiment as too cheap to be worth the time and attention. I think it's because of this inferior stock that one finds such a strong prejudice against geese in some quarters. But the right stock handled intelligently is the most profitable and interesting of all the feathered tribe.—Sarah E. Moses Smiths, Woodwards Cove, Grand Manan, N.B.

AN OMMISSION.

At the recent Chatham Exhibition Mr. James Retson, Truro, N. S., had the first prize Black Minorca Hens, first prize White Wyandotte Hens and first prize White Orpington Hens. This enviable record was inadvertedly ommitted from our list of awards n last issue.

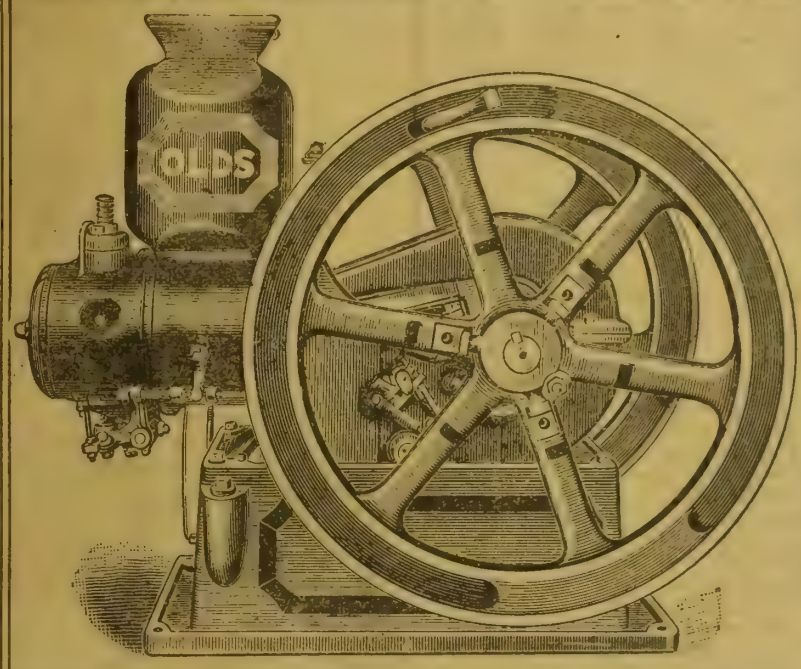
Examination of the Horse in Action.

(Continued from page 17).

his accustomed manner, single or double if a driver, and to the cart or wagon if for heavy work.

The rein should be taken to determine whether he has a hard or tender mouth, and to note his manner of responding to the pull. Also observe whether he shies or frightens at strange objects when being driven. If at the sale stable and the animal behaves rather strangely when hitched to the cart, one should be certain that this is not due to improper fitting harness before rejecting him. A tight fitting collar may make the difference between a proper acting animal and one that is wholly objectionable. The wind should be thoroughly tested for whistling, for roaring, and for heaves. The ear of the examiner should be put to the nostrils, to the throat, and to the side of the chest and the hand placed upon the flank to detect any unnatural sounds or jerking in breathing.—Indiana Exp. Station.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole Sale Representatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Makes Pigs "Stay Put"

The hog never grunted that could get the better of a Maritime Wire Fence. For this springy, taut, vastly strong fence, made of extra-quality hard-drawn coil-spring STEEL wire, has its verticals and cross wires locked together with the death-grip lock that CAN'T loosen or slip under any strain whatever. Your cattle and swine will stay where you put them if you fence with this BETTER fence. Once properly erected, Maritime Wire Fence stays taut, straight, sagless and sightly. It is good for twice the fence service ordinary fence can give. Yet it costs no more

MARITIME WIRE FENCE

Save Yourself Worry and Money

Bid fence worries good-bye, and save money, too, by getting the right fence in the first place. You won't have to be patching your fences every spring if you fence with Maritime Wire Fence. It STAYS put too. Made and sold on honor. Send for the Fence Book and Price Lists. Do this now.

It would pay you to be our agent. Send for new 1911 offer. 12

New Brunswick Wire Fence Co., Ltd. Moncton, N. B.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

REMEMBER! Reeves Munroe, Consulting Electrical Engineer, Taymouth, N. S.

TO hire out for farm work, one or two Scotch lads, 15 to 19. Apply Cossar Farm, Lower Gagetown, N. B.

FOR SALE—White Chester pigs, three dollars ($3.00) each. ARTHUR E. FERGUSON, Gowan Brae Farm, Bathurst Village, N. B.

FOR SALE—Pure Bred Hereford Bull, 11 months old. LYMAN A. WHITMAN. New Albany, Annap. Co., Nova Scotia.

FOR SALE—Registered Cotswolds, 2 Shearling Rams, 10 ram lambs fit for service, 10 ewe lambs. Could sell a few ewes DONALD INNIS, Tobique River, N. B.

FOR SALE—Fourteen purebred and grade Oxford Down sheep, a grand little flock in good shape. Magnificent ram heads flock. Price $125.00. Apply WM. HOLMAN, Sussex, N. B.

FIFTY DOLLARS WEEKLY, to energetic, ambitious, reputable men, with real estate or insurance experience. Permanent, congenial employment. BRUCE SCOTT, Toronto.

FEATHERS WANTED—We pay highest prices for all kinds, feathers, furs, hides, wool, beeswax, tallow, etc. Prompt returns. Send for price list. THE CANADIAN FUR & FEATHER CO., Department 10, 605 Ontario St. East, Montreal.

PRIZEBRED IMPORTED POULTRY FOR SALE—White Orpingtons, Silver Wyandottes, Black Minorcas, first prize winners at Chatham and Fredericton. Can win anywhere. Write, JAMES RETSON, Bible Hill, Truro.

LADIES to do plain and light sewing at home, whole or spare time, good pay; work sent any distance, charges prepaid; send stamp for full particulars. National Manufacturing Company, Montreal.

FOR SALE—Two Purebred Yorkshire boars eight months old, one Berkshire boar six months old, Berkshire sows ready to breed, all prize winners. Apply to STEWART BROS., Alliston, P. E. I.

WANTED.—Sober young man, thoroughly competent in in all branches of mixed farming. Can accommodate a married man. State wager, with or without board. Dr, NICHOLSON, Coxheath, N. S.

BRIGHT young man or woman wanted as correspondent in each town. We pay from $5.00 to $50.00 for a single item of information. Address for particulars. MERCANTILE ASSURANCE ASSOCIATION, Box 317, Halifax, N. S.

REPRESENTATIVE WANTED at once for work in your locality. Will guarantee $2.00 to $3.00 per day. Opportunity to advance rapidly. Will pay liberally for spare time. Work not difficult. Experience not required. INTERNATIONAL BIBLE PRESS, Toronto.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FOR SALE:—White Wyandotte Cockerels from Martin's choice Regal strain, $2.00 each. Also Barred Plymouth Rocks and Buff Orpingtons $1.50 and up. Address ISAAC GALLAGHER, Centerville, N. B.

FARM FOR SALE—Good farm at Avonmore Kings County. N. B., containing 180 acres about two thirds under cultivation, rest in timber, well watered, good seven room house. Barn and out buildings in good repair. Convenient to school, post office and railway. For terms etc., apply F. A. SCHOFIELD, Avonmore, Kings Co.

Stallion for Sale or Trade.

QUAY JUNIOR, French Coach Stallion, a first class siring son of Quay is offered for sale for $500. or will trade for a first class "roadster automobile." This stallion is 8 years old, weighs 1200 lbs., is pronounced sound by veterinarian, is guaranteed fearless, kind and gentle in all harness, will do any kind of farm work and is a good driver. Particulars by letter.

H. H. COOK,
Rural Route No 2, Yarmouth, P. O.

Shorthorns For Sale.

One Bull 15 months old, Color Red, well-bred, and Reg. D. S. H. B.

THOS. F. McAULAY
Fox Harbour, Cum. Co., N. S.

Prize Winners at the Charlottetown Exhibition.

(Continued on page 27).

FIELD ROOTS.

Potatoes, collection of best early varieties, 5 of each sort, named—1, Benj. Mallett; 2, John Berrigan; 3, Arthur McEachern; 4, Jas. McLean.

Potatoes, collection of best late varieties, 5 of each sort, named—1, Messrs. McPhail; 2, Benj. Mallett.

Potatoes, collection of best white varieties, 5 of each sort, named—1, Messrs. McPhail; 2, Benj. Mallett; 3, Jas. McLean; 4, John Berrigan.

Potatoes, collection of best red varieties, 5 of each sort, named—1, Benj. Mallett; 2, Jas. McLean.

Potatoes, Early Rose—1, Alex. Kennedy; 2, John Roper; 3, George Howard; 4, Benj. Mallett.

Potatoes, Beauty of Hebron—1, W. G. Drake; 2, George Howard; 3, Daniel F. Fraser; 4, E. J. Vessey.

Potatoes, McIntyre—1, Benj. Mallett; 2, J. H. Court; 3, Heath Vessey; 4, A. E. Picketts.

Potatoes, Green Mountain—1, W. G. Drake; 2, A. F. Mallett; 3, A. E. Picketts; 4, J. H. Cody.

Potatoes, Carmen, No. 1—1, Cephas Mallett; 2, Messrs. McPhail; 3, Jas. McLean; 4, John Berrigan.

Potatoes, Virginia Gold Coin—1, B. Fitzgerald; 2, Jas. McLean.

Potatoes, Early, any other variety—1, E. J. Vessey; 2, Margaret Mc Millan; 3, Messrs. McPhail; 4, John Berrigan.

Potatoes, any variety, Late Round White—1, A. G. Mallett; 2, Messrs. McPhail; 3, E, J. Vessey; 4, R. Fitzgerald.

Potatoes, any variety, Late Round Red—1, Neil A. McKinnon; 2, Benj. Mallett; 3, W. B. Drake; 4, E. J. Vessey.

Potatoes, any variety, Late, Long White—1, E. J. Vessey; 2, Heath Vessey; 3, Spurgeon Warren; 4, Messrs. McPhail.

Potatoes, any variety, Late, Long Red—1, Wood &Son; 2, W. B. Drake; 3, Neil McKinnon; 4, Benj. Mallett.

Swede Turnips, 5 roots, purple top—1, Patrick Curley; 2, Jas. Arthur; 3, Peter McCallum.

Swede Turnips, 5 roots, green or bronze tops—1, W. H. Carew; 2, H. H. Howard; 3, D. H. Murchison.

Swede Turnips, 5 roots, monarch type—1, Patrick Curley' 2, P. McCallum; 3, Percy Seaman.

Mangel Wurtzel, long red, 5 roots—1, W. B. Drake; 2, Saml. Ings; 3, Patrisk Curley.

Mangel Wurtzel, red globe, 5 roots—1, W. B. Drake; 2, Patrick Curley; 3, John Rogerson.

Mangel Wurtzel, yellow globe, 5 roots—1, A. R. McKay; 2, Peter Brodie; 3, P. Curley.

Mangel Wurtzel, long yellow, 5 roots—1, A. R. McKay; 2, W. B. Drake; 3, Peter Brodie.

Beets, Sugar, white, green top, 5 roots—1, Arthur Burke; 2, John Rogerson; 3, W, B. Drake.

Beets, Sugar, white, red top, 5 roots—1, R. Fitzgerald; 2, George Howard; 3, Arthur Burke.

Carrots, Red, Intermediate, 10 roots—1, Jas. Houston; 2, W. E. Jones; 3, P. Curley.

Carrots, Red, long, 10 roots—1, W. B. Drake; 2, Jas. Houston; 3, P. Curley.

Carrots, White, Belgian, 10 roots—1, W. B. Drake; 2, P. Curley; 3, A. C. Wood.

Carrots, White, Intermediate, 10 roots—1, W. B. Drake; 2, Patrick Curley; 3, Jas. Houston.

Fodder Corn, for summer use, 10 stalks—1, Wilbert Jones; 2, A. E. Mc Rae; 3, Jas. Houston.

Fodder Corn, for ensilage, 10 stalks—1, A. E. Dewar; 2, Jas. Houston; 3, John Roper.

Pumpkins, 2—1, J. L. Jones; 2, P. Curley; 3, Arthur Burke.

Collection of Field Roots, any kind, potatoes led—1, P. Curley; 2, W. B. Drake; 3, A. R. Mc Kay.

FRUIT.

Collection, best 10 sorts 'of Commercial Apples, which can be successfully grown in all the Maritime Provinces—1, H. D. Johnson, Wolfville; 2, Geo. Auld; 3, A. E. Dewar.

Collection, best 5 sorts of Apples, grown on P. E. Island, any kind—1, A. E. Dewar; 2, A. E. McRae; 3, J. H. Gill & Son.

For the best and best arranged County Exhibit of Fruit—1, A. E. Dewar.

Collection of Plums, not more than 15 sorts of 10 each, named—1, A. E. Dewar; 2, E. G. Love.

Collection of not less than 4 sorts, 5 each—1, H. D. Johnson; 2, H. D'Almaine; 3, W. C. White.

HONEY.

Display of Liquid Honey—1, Harry Newsome.

Raise Your Calves Without Milk.

Experience has shown that it is impossible to make a satisfactory substitute for milk out of cereals, hay-tea, oat-meal, porridge, etc. A satisfactory substitute for milk must, as a matter of course, resemble new milk as nearly as possible in chemical composition, it must be well balanced, it should be a complete food, and most of all it must be easily digested and assimilated by the tender stomach of the young animal.

BLATCHFORD'S CALF MEAL has now been on the market a very long time, it has been thoroughly tested and tried and we understand that it is well cooked and prepared for digestion and from the extent of the business and from the testimonials received showing the satisfactory results obtained from feeding it, we recommend our readers to give it a trial.

Messrs. A. A. Archibald & Co., Truro, N. S. will procure a valuable pamphlet for the farmer entitled "How To Raise Calves Cheaply & Successfully Without Milk" and every farmer should have one. It tells how to raise 3 calves at the cost of 1, avoid scours and keeps calves healthy and fat. Tells how to veal calves at about ½ the usual cost, how to save the milk and in fact how to make more money out of calves than you ever thought possible.

The Manufacturers have been selling to and dealing with the Farmers, Stock Owners and Poultry Raisers for over 100 years and their business must be well established in the good opinion of their customers.

Renovating an Old Alfalfa Field.

My alfalfa was badly killed out during the severe winter of 1909 and 1910. I took off the first crop, a thin one, and then cultivated lengthwise and crosswise with a diamond tooth cultivator. When the diamond tooth cultivator is used few plants will be destroyed. I then seeded with 12 pounds of seed to the acre.

This alfalfa field was free from weeds, and had been seeded the previous spring. An alfalfa field could not be renovated in this manner if it o old and weedy. The best method of renovating such fields is to plow and re-seed.—Hy. Glendenning in Farm and Dairy.

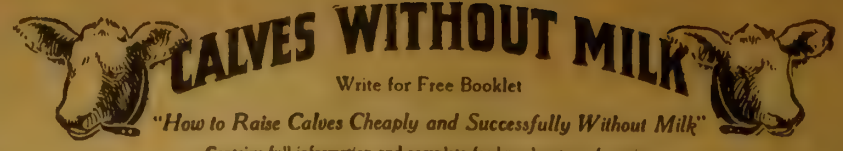
For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111.
"Sunnyside Stock farm," Sussex, N B



Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

Be Sure and Go to

The Seventh Annual

Convention and Fruit Exhibition

OF THE

N. B. Fruit Growers' Association

IN

The St. Andrew's Curling Rink, St. John, October 30th to November 1st and 2nd, 1911

Over $800.00 in Prizes. Many New Features.

Over 400 boxes, 100 barrels and 1,000 plates of apples on exhibition.
Demonstrations and addresses on all phases of fruit growing by leading horticulturists of the Dominion.
Single fare return trips on Intercolonial and Canadian Pacific Railways.
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BREEDERS DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. .B

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.S.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

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W. C. McLeod & Sons, Loch Lomond West. N.S.

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Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N, B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

"Hillside Stock Farm"

Hillside Ayrshires won in 1911, first for herd at Chatham and Fredericton also Male Champion at Halifax and Chatham, and Female Champion at Fredericton. Write or come and see us. At present offering four yearling bulls, and females all ages.
PRESCOTT BLANCHARD, Truro, N.S.

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We offer for sale 1 Guernsey Bull, No. 322,-2 years old in January, 1912, of superior stock, also 2 young Bulls, 1 dropped the 4th of March and 1 the 11th May, 1911 and 3 registered cows, 8, 6 and 5 years old, to freshed in January, February and April, 1912. Agricultural Societies please note.

William Cox, & Son.

L. D. 'Phone Canard, Kings Co., N. S.

MEADOW BROOK STOCK FARM

Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

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FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
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Pure Bred Yorkshires

We have for sale a choice lot of pure bred Yorkshire pigs, eligible for registration (both sexes) Price $2.50 each four weeks old. Would exchange for pullets or year old hens, any pure breed.

ORCHARD HILL FARM,
Brown's Flats. N. B.

FOR SALE.

@ 20 Brown Leghorns, S.C.Cockerels, Both matings from $1.00 up. 15 Brown Leghorn S. C. Pullets from $1.00 up both matings. Single and Rose Comb R. I. Red Cockerels and pullets. 2 Brown Leghorns S. C. Cocks, both show birds. Price $2.00 and $3.00 each.

W. H. HENRY,
Shubenacadie, N. S.

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A little Roup Cure in the drinking water to guard against colds and roup, 25c., 50c. and $1.00 pkges.

Some Lice Liquid to rid your house of mites, 25c., 60c. and $1.00 pkges.

Lice Powder for your hens, 25c., 50c. and $1.00. Some Poultry Tonic or Regulator to help them through the moult and get them into laying order again, 25c., 50c. and $1.00. Send for Catalogue.

MARITIME POULTRY SUPPLY CO.
Moncton, N. B.

FOR SALE

10 good young grade Holstein Cows fresh and forward in calf. All thoroughly tested and good producers. Guaranteed as described. Write for what you need to

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Victoria, P. E. I.

HONEY.

We have for sale a ton of honey gathered from autumn flowers. Amber in color and of excellent quality.

CRAIG BROS.
Amherst, N. S.

Broad View Farm.

offers for sale a few choice Imperial Pekin Ducks, $2.00 each, also a few nice White Wyandotte Cockerels, $1.00 each. Order now.

EGBERT DeYOUNG.

Box 120. Dartmouth, N.S.

Shorthorns For Sale

We have sold eight pure-breds and have a choice lot of roan and reds left, ages from 13 to 26 months. Also a large red bull, 3 years old.

O. C. H. EATON,
Canard, N. S.

Spring rook Farm Ayshires.

Headed by two imported Bulls. Stock all ages, for sale. Exceptionally fine lot of young Bull Calves from cows that won at Amherst 3rd in aged cow class. 1st and 4th in three year olds, and 5th in two year olds.

McINTYRE BROS.
Inspection invited. Sussex, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

Rosebank Farm Jerscys.

We have for sale three heifers by Pogis 40th of Hood Farm due to calve this fall to Foxhalls St. John O'Dreamwold. And some bull calves from one to seven months old. Also some pure bred Yorkshire sows three months old.

JOSSELYN & YOUNG
St. John, N. B.

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Lot 33 Winsloe Road, P E. I.

Breeder and Importer of Shropshire Southdown and Hampshire Sheep.

Some good animals of either sex of the above breeds for sale at reasonable prices. Inspection invited.

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YORKSHIRE SWINE.

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S. J. GOODLIFFE, - Sussex, N. B.

Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

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Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns.

Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

GLEN VIEW POULTRY YARDS, - SUSSEX, N.B.

COBEQUID FARM HOLSTEINS

Offering some fine bull and heifer calves sired by Sir Rooker Posch Artis and Helbon Dekol's Prince, from cows and heifers that are producers. Can spare a cow or two bred to freshen next fall. Inspection solicited.

SAMUEL DICKIE, Central Onslow, Col. Co., N.S.

BROOKLAND'S HOLSTEINS FOR SALE

I am offering for sale one pure bred Holstein bull, Eke DeKol Paul, Jr., three years old, dam, Lady Pietertje DeKol. Record day for milk, seventy pounds. Sire, Eke DeKol. This bull is also first cousin to Grace Fayne 2nd Homestead, champion seven day cow of the world, 35.55 lbs. butter. Also a half brotner, six months old, out of same cow, sired by Ormsby Veeman. Write for prices. First come, first served.

C.H. Giles, 'Phone 464 P. o. Box 119, Brooklands, Fredericton, N.B.

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Those who desire to purchase some of the best blood obtainable in all the leading breeds of sheep will do well to write me for prices. I have a car of beauties coming from Ontario which I intend to exhibit at the Maritime Fairs. Make a point to see my exhibit and be convinced I have the goods and that they may be bought right. Special attention paid to Farmers' Societies.

JAS. A. TELFER, Sunny Brae Sheep Ranch, Sussex, N. B.

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Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBA[illegible]or, - TRURO, N. S

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YOU only need to look at the contents page of this book to see how complete and comprehensive it is. In all the hundred pages between its hard, cloth-bound covers, there is not one single superfluous word--nothing but a carefully indexed mass of necessary information. There is no other book in existence that deals so thoroughly with every vital, essential fact--that so clearly tells the farmer

"How to Build Rural Telephone Lines"

When you get this book, read it over at least twice. You will need to do that to assimilate the information it contains. No matter in what phase of the work you are interested—whether you want to know about telephone company organization, whether you want to know about the actual construction of the line, whether you want to know what other community-owned telephone companies have done, or whatever it is you do want to know, you will find the facts set forth in detail in this book. This volume has cost a lot of money and careful study to prepare and we really ought to charge for it. As long as the edition lasts, however, we will send it **free,** but only to those who, by asking for it, signify that they are really interested. Are **you** interested? If so, clip the coupon, fill in your name and address and mail it to us today.

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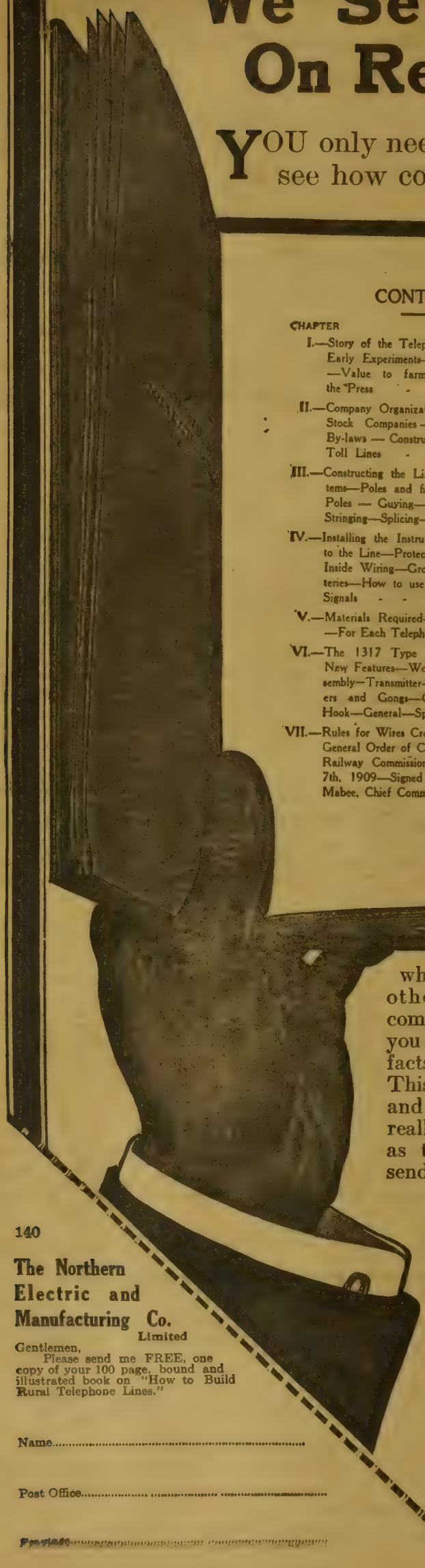

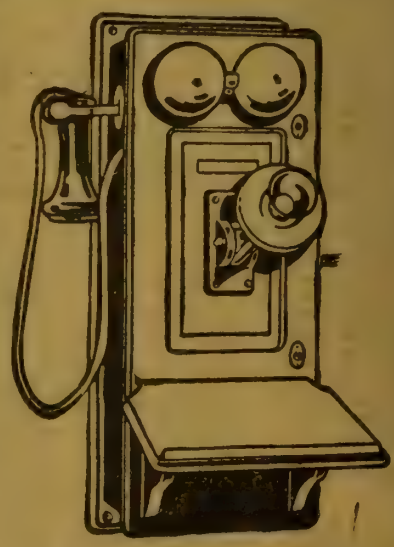

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., OCTOBER 31, 1911 No. 2

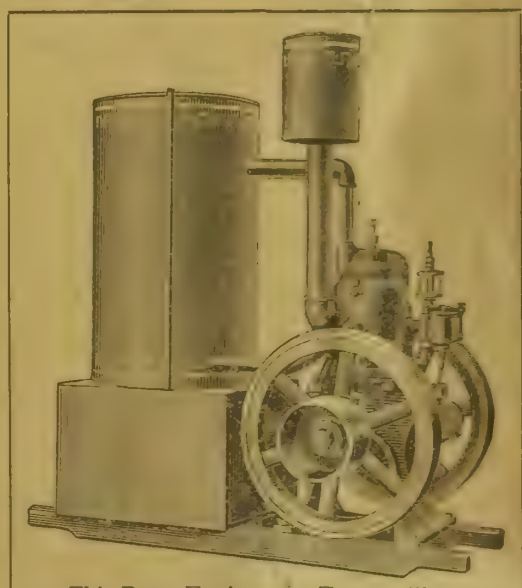
Page Work Engines

Since our first advertisement appeared a month or so ago giving particulars and prices of our engines, we have had many orders. People seem to readily realize that they cannot afford to go without an engine at prices we make—a 3 1-2 horse power at $138. or a six horse power engine for $188. The engines use for fuel either gasoline or kerosene. These engines are powerful but light and can be carried from place to place where work is to be done.

You may be wishing you had an engine to help you do your work, but may be unfamiliar with engines and have an idea that a gasoline engine is an uncertain, complicated thing. If you think so your fears are groundless, for gasoline engines are so developed nowadays as to be just as reliable as any other machine. Anyone can operate a gasoline engine, as there is no danger. No engineer is needed. There is nothing to blow up. Simply put gasoline or kerosene in the fuel tank and give the fly wheel a turn and away she goes for all day. Go off and leave it if you want to. It is safe.

A gasoline engine is started instantly. You do not have to wait to get up steam. When you are through work stop the engine and, and consumption of fuel stops at once. Hence, you can run the engine for only ten minutes, and you use only the fuel required for operating it that length of time.

As to cost of fuel, a Page engine uses only 7-8 of a pint of gasoline or kerosene per horse power per hour. Hence, if you were operating our 3 1-2—4 horse power it would use less than 1-2 gallon per hour, which at 15c per gallon would cost you only about 7 1-2c per hour. Probably you would not work the engine to its limit and fuel would be less accordingly, for a gasoline engine uses fuel only in proportion to the work it is doing.



This Page Engine on a Farm will pump, saw wood, run a cream separator, washing machine, churn, silage cutter, fanning mill, root cutter, grindstone, etc. It may be easily moved from one place to another, and is always ready to run. It does the laborious and tedious chores of the farm.

We are getting many orders from the Maritime Provinces, especially from Prince Edward Island, although Nova Scotia and New Brunswick are not far behind. Dealers find the Page engines a good line to handle as they are so low in price and so high in quality. We are getting so many applications for agency that we hope to have a thorough organization in the engine branch of our business in the near future.

Marine Engines

We have in above referred particularly to stationary or work engines. But we are also supplying marine engines from 2 to 36 horse power. Catalogue of either style on request.

The Page Wire Fence Company, Limited

37 DOCK ST., ST. JOHN, N. B.

HEAD OFFICE: WALKERVILLE, ONT.

One of the Many Letters We are Receiving Daily

Monastry of Our Lady of Charity,
Ottawa, Ont., Aug. 11th, 1911

Asepto Soaps, Ltd., St. John, N. B.

Dear Sirs:---Please accept our Sincere thanks for having so promptly sent us the premiums asked for. We are delighted with them, they are so beautiful. We remain,

The Sisters of Our Lady of Charity.

Do you realize how quickly you can procure a beautiful premium from us? and that the following articles carry coupons that count together on the same premium?

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Asepto Powder.
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Asepto Hand Cleaner.
Asepto Potash or Lye.
Asepto Ironing Wax.
Asepto Bluing.
Asepto Gloss Starch.
Asepto Scouring Soap.
Asepto Harness Soap.
Naptho S
Venus Floating Soap (toilet)
Scott's Scouring Powder.

Turpentine
Salts
Talcum Powder
Banner Cocoa
Senna
Household Ammonia
Sulphur
Banner Sweet Chocolate
Banner Bitter Chocolate
Banner Soda or Saleratus

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Ebony Lustre - - $0.25
Success Lustre - - 10
Ebony Combination in Black Tan or Oxblood, 10c and 25c sizes
White Canvas Polish
Little Coon Stove Polish
Ebony Paste Polish

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Camphorated Oil
Cod Liver Oil
Heavy Machine Oil
Oil of Tar
Fish Oil
Carbolated Oil
Castor Oil
Harness Oil
Sweet Oil
Neatsfoot Oil
Olive Oil
Sewing Machine Oil

Veterinary Dept.

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Pendleton's Condition Powders
Pendleton's Gall Cure
Pendleton's Hoof Grower
Pendleton's Horse Liniment

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Cream Tartar
Ground Cloves
Whole Cloves
Allspice
Nutmeg
Mustard
Ginger
Pepper
Cinnamon
Mixed Spice
Cassia

Banner Fruit Syrups

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Lemon
Orange
Raspberry
Pineapple
Cherry
Lime Juice

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Strawberry
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Dr. Scott's Pills
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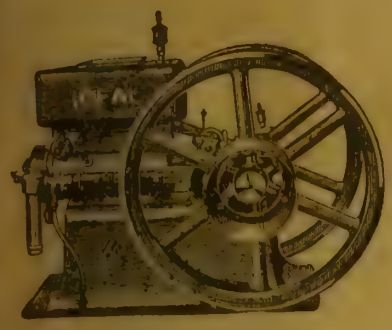

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Give Him an Agricultural Education—It is the Best Heritage You Can Leave Him.

The Boy, preparing for Medicine, Law, Theology Literature, Business, etc., must, if he would succeed, have an Education. The Prospective Twentieth Century Farmer should have Equal Advantages.

AGRICULTURAL COLLEGE, TRURO, N. S.

Tuition FREE to All Students from the Maritime Provinces.

Next Session of Full Course Begins November 1st, 1911

Next Shourt Course for Farmers and Farmers' Sons Begins January 2nd, 1912.

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies Begins January 2nd, 1912

A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time, in English, Mathematics, Book-Keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have not had an opportunity to acquire a high school education and now wish to improve their knowledge in all lines.

Students completing the two year course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Argicultural Colleges. For full particulars apply to—

M. CUMMING, B. A., B. S. A., - Principal Agricultural College, - Truro, N. S.

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173-177 William St., MONTREAL
VANCOUVER - - WINNIPEG

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Isn't that just about the size of it---when something shoddy and cheap is foisted on you in place of the

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You see, the early disability of the thing, and poor performance while it does hang together, makes it a losing proposition no matter how cheap.

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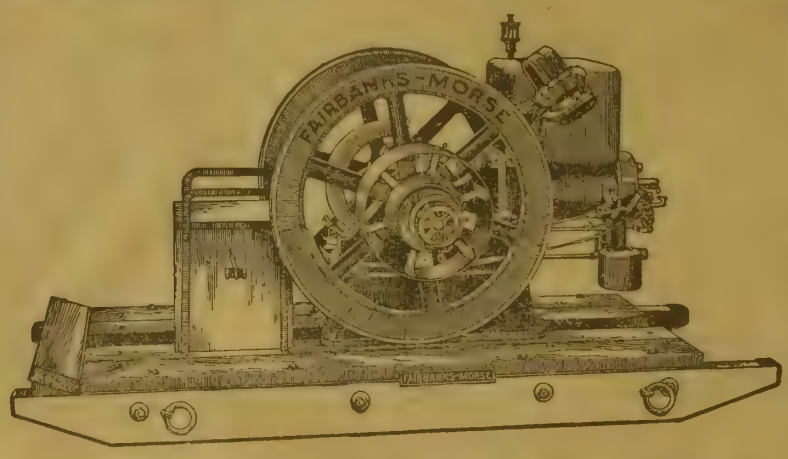

The Farm Labor Problem

The two great problems on the farm to-day are time and labor, especially at this time of year when you are gathering in your crops and preparing for the winter months. Wouldn't you welcome a machine that could work away all day, doing your tedious jobs, such as running a cream separator, threshing, cutting corn or pumping water and sawing wood. This is what a

FAIRBANKS-MORSE GASOLINE ENGINE

will do for you, being built for such service and has proved this to over 112,000 users, affording them cheap and reliable help at all times, and any season. Our engines for out-door work are made to run in the coldest day as well as the hottest. Take up your pencil and fill in the coupon and mail it to M
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MONTREAL
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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, OCTOBER 31, 1911. Number 2.

Paint and How to Use It

PAINT HAS VALUE

I do not believe that the value of paint as an asset is even yet fully recognized by the people who use it. A prominent paint manufacturer used to advertise, that "good paint costs nothing, because it saves more than it costs." This is the fact which is oftenest forgotten—that paint not only freshens and beautifies our surroundings, but that it also protects the surfaces to which it is applied and saves them from decay.

It does more than this: It promotes general cleanliness and thrift. If the painting is regularly attended to on the farm, we may be pretty sure that other things will not be neglected. After the house is painted, other shortcomings are apparent and a general slicking up naturally follows. Furthermore,

The Champion Herd at the 1911 Nova Scotia Provincial Exhibition.

Winners of the Silver Tea Service and Tray donated by the Merchants Bank of Canada, F. M. Scarff, Manager Halifax, N. S. for the best herd any breed, consisting of 1 bull, 4 cows, 3 years old and over and 4 heifers, over one year and under 3 years. Awards made on the basis of 75 per cent for correctness of type and 25 per cent for show condition. Owned and exhibited by McIntyre Bros., "Sprig Brook Farm," Sussex, N. B.

Paint may be bought in two forms—as a heavy paste, consisting of white lead in oil and colors for producing the desired tints; or as prepared paints, ready for use.

Prepared paints can be used by anyone who will carefully follow the printed instructions accompanying them: though with them also the practical painter's superior knowledge makes it well worth what it costs to employ him.

There has been much discussion of late as to the best season for painting. I prefer the early fall months and my own painting is always done during that season. The reasons for this preference are: 1. The atmosphere is dry and the surfaces are in proper condition. Moisture is fatal to new paint. It causes blistering, peeling and cracking. 2. There are no insects blundering about and sticking to the fresh paint. 3. Cold weather is better than hot weather for new paint. The new paint hardens slowly during the winter and by summer is ready to stand any weather. Paint applied in the spring is likely to be baked and blistered by the sudden advent of hot weather. 4. Painters for some inscrutable reason are usually more amenable in the fall than in the spring and will better heed advice to give plenty of time for drying between coats.

A safe rule is to paint only on dry surfaces in dry weather, and to allow a week between coats. If this rule be followed and an excess of dryer avoided, satisfactory work can be done at any season when the thermometer does not fall below 40 degrees nor rise above 80 degrees.

It is harder to get good results on modern lumber than it was on the lumber our fathers knew. That was chiefly clear white pine, well-washed out during the long journey of the raft to the saw mill, and air dried for months or years before it was sold. We pay the penalties of progress just as much as we profit from its advantages. There is little white pine left and that little is not good and is ill-prepared for painting. Mostly we see yellow pine, cypress, etc. These two are abominable woods to paint, the yellow pine because it is uneven and full of rosin, the cypress because it is hard and greasy. The paint must be tempered to suit the lumber.

When about to paint a new house, we first examine the surface. If it is soft and absorbent, the paint is made very thin for the first or priming coat. If a ready-for-use paint has been selected it must be thinned with about two quarts of pure raw linseed oil and one pint of turpentine to the gallon of paint as applied. If the lumber is hard and nonabsorbent, like oak, chestnut, maple, etc., the priming coat must be thicker. For such woods one quart of oil and one quart to three pints of turpentine will be a sufficient addition to the gallon of paint.

Yellow pine and cypress require special treatment. It is best to allow them to weather for six months or more before painting at all. When ready to paint yellow pine all knots and resinous streaks should be given a coat of shellac varnish. The priming coat should then be prepared as for hard-wood, except that there should be a little more turpentine. The priming coat for cypress is the same as for yellow pine.

The trick in priming is to spread the paint out well and to work it into the wood. This coat is the foundation, and if it lets go the job is ruined. The necessity of working it well into the pores is self-evident.

The priming coat, if properly mixed and applied, will dry with a "dead" surface—that is, without gloss. The next coat will adhere to such a surface far more firmly than to a glossy surface.

After the priming coat is thoroughly dry, which will be in three or four days (best to give it a week), all nail holes, etc., should be stopped with putty, preferably colored to match the paint, by working into it a little of the paint itself. The best putty is cheap and it does not pay to economize on this item.

The treatment of the second coat depends upon the number of coats decided are absolutely necessary for good results, though a single coat is often made to suffice, from false ideas of economy. Three coats of paint properly brushed out are together but little thicker than tissue paper, which is certainly thin enough, considering the service required. It is a proverb among paint men that "three thin coats are twice as efficient as two thick coats."

If, however, two coats are the limit, the finishing coat should be as it comes from the can, applied with a full brush and spread evenly, and smoothly, brushing first across the boards and then lengthwise.

If three coats are used, as is proper, the second coat should be thinned with only enough turpentine to reduce the gloss, about 1½ pints to the gallon of paint will usually suffice. This coat should be well brushed out. A full week should be allowed for drying. For the third, or finishing coat, the paint should be applied as it comes from the can, unless found too thick for smooth working, in which case a very little raw linseed oil may be stirred in. This coat should be applied with a full brush, well brushed out, and finished by lightly brushing lengthwise of the boards.

Repainting over old paint requires judgment. The surface is carefully examined as to condition. If the old paint has peeled or shows signs of letting go, scrape off with a steel scraper as much as can be detached and sand-paper the worst spots. If the old paint is dry and absorbent, thin the new paint, as for second coating with oil and turpentine, and finish with a second coat of the paint as it comes in the can.

If the old surface is in fairly good condition, firmly adherent and not very spongy, use the new paint as directed for third coating on new work.

The choice of tints and colors is largely a matter of taste and training; but there are certain rules of universal application and certain practical considerations which should be taken into account.

The first of these practical considerations is the fact that the darker shades, all things being equal, wear better than white or light tints. This is an unfortunate fact, but nevertheless a fact.

The second fact is that a tint usually wears better than the white paint from which it is made. A prominent painter, after inspecting all the tests to which reference has been made, remarked, "It is a curious fact, that the addition of small quantities of almost any old thing to pure white lead seems to improve it." This is a hint from a practical

man worth bearing in mind.

The general rules for the selection of colors are:

1. Light colors for a dark or shady situation; darker colors for the full glare of the sunlight.

2. Light colors increase the apparent size of a building, dark colors decrease it.

3. Startling contrasts—as of green and purple, blue and yellow, red and blue, should be avoided or very sparingly introduced.

4. The general color scheme should harmonize with and should be governed by the character of the building, its architecture and surroundings.

A volume might be written, volumes have been written on this subject, so it is hopeless to attempt to cover it here. One of the most practical and helpful booklets of this sort available is the little illustrated pamphlet, issued about two years ago by the Paint Manufacturers Association, under the title "Fashions in House Painting." It contains some 14 or 15 color schemes suited to houses of various types, and was prepared for the association by a representative committee of painters and architects. Anyone can have a copy for the asking, and I could not hope to improve on its suggestions.

As the end of all this advice and explanations, I would say, select a paint of good repute, but hire a painter to do the practical work of applying it.

The interior of the house is still more important than the exterior from sanitary considerations. Paint, flat wall coatings or one of the hygienic kalsomines are not only more wholesome, but also more beautiful than wall paper, and in the long run cost no more.

Beyond the instructions which accompany these products, no advice is necessary, except the precaution that before applying an oil paint to plaster or cement, the surface should be brushed over with a solution of zinc sulphate in water (equal parts of each by weight) and allowed to dry 48 hours before painting. The same rule holds for painting on concrete, cement, or plaster in any situation.

As for wall paper, it is a nesting place for germs, it cannot be washed, and has nothing but cheapness, convenience and variety to commend it. But if wall paper is used—and I soppose it always will be—don't double its unwholesomeness by adding layer to layer. In some states the removal of old paper before repapering is required by law. It should be so in all states.

TREATMENT OF FLOORS.

Rugs, also, as most people know, are more wholesome than carpet. Hardwood floors usually go with rugs, but are not absolutely necessary. An ordinary floor in good condition may be stained and painted into a satisfactory substitute, provided the cracks are filled with one of the several "crack fillers" which can be bought in paint stores.

Belore anything else is done, the floor should be thoroughly scrubbed and dried, rough places sand-papered and nail holes, etc., stopped with putty. After the cracks have been filled, one of the advertised varnish stains may be applied and over this two coats of good floor varnish. Or the floor can be painted after filling with a good floor paint, which is so made that it dries harder and tougher than ordinary paints.

A floor finished in either way is very easily cleaned by wiping with a damp cloth.

Some housewives have a mania for varnishing furniture. I have seen a fine old mahogany clock case so thickly encrusted with successive coats of bad varnish that it looked like black cast iron. The best advice to people with this propensity is that of "Punch" to people about to marry—"Don't!" Rub the old furniture thoroughly with a mixture of boiled linseed oil and turpentine, and let it go at that. If scratched, rub out the scratches with boiled oil and whiting, then apply the boiled oil and turpentine. Varnish that requires complete removal may be removed with varnish remover. This should be done in the open air, as these compounds are very inflammable.

Porch chairs, etc., should be painted each spring with a thin coat of chair paint, red and green being the colors generally preferred. Carriage paint will serve if chair paint is not at hand.

The Nova Scotia Horticultural Show.

Nova Scotia Fruit Growers refrained from showing fruit at the Provincial Exhibition, owning to the fact that the exhibition was held at so early a date that only practically unmature fruit would be available for the display which would be a poor advertisement of the industry that has assumed such large proportions in the far famed Annapolis and Grand Pre Valleys and other sections of Nova Scotia.

The Fruit Growers of Nova Scotia came to the conclusion some years ago that a Provincial Fruit Show held at a time when the apples could be shown at their very best would be the best advertisement of the fruits of their labors that they could possibly have.

They have held several, magnificent well patronized shows at various places in the Valley. This year the Show was located in the Evangeline Skating Rink, Wolfville, which was decorated for the occasion with numerous flags and bannerettes.

The exhibit of apples was easily the finest ever shown in Nova Scotia and was greatly admired by visitors. The past season has been a most favorable one in every way for the production of fine apples, and the display as arranged on the tables was indeed a picture. There was also a good exhibit of pears, and a few plums. In vegetables, too, many good specimens were shown.

There were 2430 plates of magnificent specimens of apples and numerous plates of pears, quinces, pears and grapes, a splendid showing, laid out on four tables sixty feet long and eight feet wide. There was also a very creditable display of roots, grain and products of the dairy.

The whole length of the Curlers' side of the building was taken up with a fine display of apples in boxes and barrels.

The gallery was occupied by an excellent display of fancy work and domestic science exhibits.

Secretary, I. B. Oakes and his Staff worked energetically, to make all the machinery run without friction. The weather was ideal and the attendance was all that could be desired.

A side feature of the fruit show that helped to attract a large crowd of visitors was the horse show at which there were upwards of forty

T. L. Harvey, Mayor of the town and President of the Exhibition Commission, made a brief opening address, in which he spoke of the bountiful crop of agricultural and horticultural products with which the Province had been blessed—the finest exhibit of fruit ever shown in the Maritime Pravinces, and he doubted if it could be excelled in any other portion of the Dominion.

Prof. Cumming, who was the next speaker, thanked the management for giving him this opportunity to be present. This, he said, was the fifth Horticultural Exhibition held under the auspices of the counties of Kings, Annapolis and Hants, in rotation.

He was glad to be able to congratulate the fruit growers of these Counties on showing the evenest and finest all-round collection of fruit yet exhibited in this Province, due partly to the favorable season for fruit growing.

This, he said, was the twelfth exhibition held in Nova Scotia this season, not including the Provincial; and he would say right here that while it is good policy of the Government which enables the holding of these successful local exhibitions, the farmers should be public spirited enough to stand by the Provincial show and make it the success it ought to be.

While it would be a difficult matter to collect in any other section such a magnificent collection of fruit, the unfortunate thing was that it could not be seen by the people of Great Britain and others whom we would like to know that right here in the Annapolis Valley are the finest fruit areas to be found anywhere; for description alone would not have the same effect. He wished we could devise some means to make the fact more widely known.

He had visited this season every Province in the Dominion, and he returned with the honest conviction that in agricultural products Nova Scotia ranked with the best, and in fruit growing we did not have to take a back seat with any of them.

Thirty years ago Nova Scotia raised in the vicinity of 40,000 barrels, but see what an advance had been made—this season the apple crop being estimated from one to one and a half million barrels; and if in the next thirty years the same advance is made, who can estimate what the fruit production would reach, when it was known that not more than 10 per cent. of our fruit growing areas had been broken up. And as the world learns more of the great value of these areas, a further impetus would be given to the fruit growing industry, and our development would keep pace.

He had a word of warning to give to fruit growers. This had been such an exceptionally fine season that the man who sprayed his trees and the man who did not fared pretty much alike, so that the non-sprayer entertained the opinion that spraying was a useless expense. This was a great mistake, and if he put the theory into practice, a damaging one, for should the next season be only an ordinary one and not so favorable, the non-sprayer's fruit shipped in 1912 to England and other countries will do us much harm. He hoped this word of warning would not be unheeded.

Prof. Cumming spoke of the various Co-Operative Fruit Shipping Companies in the Province, and of the great advantage accruing therefrom—the greatest benefit being the care taken to have the fruit packed true of the grade. This co-operative idea, he was glad to know, was taking hold in Nova Scotia. In Denmark, Co-Operative Companies had been productive of great good, and the same would result wherever introduced.

He was glad that the management had afforded him the opportunity to see this magnificent display of fruit and vegetable products, and sincerely hoped the Exhibition would prove in all respects a great success.

LIEUT.-GOVERNOR MacGREGOR.

The Lieutenant-Governor gave a brief address. He said it was his duty to say a few words, and he would be brief. He was thankful to the management for giving him an opportunity to see for himself what he had before heard so much about, as to the fruit growing capabilities of this section of the Province, and he felt impressed to say that the realization far exceeded his expectations, and was delighted to see spread out before him such a magnificent display of fruit, beautiful to the eye, and no doubt gratifying to the most fastidious taste. Ours was certainly a great country and as he came along today and saw spread out before him this beautiful garden of the Province, with such splendid fruit growing areas, and such wonderful possibilities, he could not understand why so many of our young men leave it to try their fortunes in the West, and not always to succeed. He did not wish to decry the West, far from it, for he had made money there, but its possibilities for making a good living were certainaly no better than in Nova Scotia, and fruit growing was only partally developed. He hoped the annually unite to conduct such creditable horticultural exhibitions would continue to make substantial progress, and thus advance the prosperity of the Province. It was to him a source of pleasure to be present, and he now gladly pronounced the Exhibition formally opened.

Mr. Foster, M. P., for Kings, was asked to address the gathering which he did briefly. He first spoke of Prof. Cumming's admirable address, aad said the Local Government had certainly made a wise choice when they selected Prof. Cumming to fill a position in which he displayed such good judgment and so much ability. He spoke of Nova Scotia as a veritable Garden of Eden, replete with rich opportunities and great possibilities, and urged the young men to stay by the Province, and they would be amply rewarded. He complimented the exhibitors upon the splendid products of farm and orchard here displayed, and urged the farmers of Hants, Kings and Annapolis to work well together to make them the banner counties of the Province.

The Implement Shed.

Many farm implements from their very nature are only in use during a quite small proportion of the time they exist. The binder for instance is inactive for eleven months of the year or more. And it is a question whether more deterioration and wearing out of machinery doesn't take place on the average farm through neglect and exposure to weather conditions—which could be avoided—than by wear and tear when in use. In fact a prominent feature on a badly run farm is nearly always neglected machinery.

The main indispensable thing is an implement shed, and its chief property, dryness—protection from moisture above and below. A further valuable protection against the insidious attack of damp is the liberal use of oil on the more delicate parts of the machinery. This can be applied when the implement is put away for some time, and wards off the corrosive rust which costs the owner so much of the value of the machine. If the lack of time or money forces the owner to postpone the erection of an implement shed, a temporary protection may be had in the shape of a tent, or even a waterproof covering fasten over each implement. This, though less efficient than a damp-proof shed, is a great deal better

The Big New Brunswick Fruit Show.

As we go to press the New Brunswick Apple Show is being held for the second time in the City of St. John. The display of New Brunswick grown fruits in St. Andrews Rink is a sight well worth seeing. Last year's show, was a revelation of New Brunswick's possibilities in the fruit growing line; this year's show further reveals these possibilities and also shows what a vast amount of improvement can be made in one short year by the application of practical, scientific knowledge to the direction of work in extending the important industry of fruit growing.

Last year the Dominion Department of Agriculture, showed boxes of fruit from British Columbia, Ontario and Nova Scotia, side by side with New Brunswick grown fruit and the contrast was so much in favor of the latter that it was thought unnecessary to repeat the comparison this year.

The whole display is a magnificent object lesson in what may be done in New Brunswick in the line of fruit growing. When a few such wellgrown, well-colored fruit can be grown as is shown at the exhibition it only needs more capital and more energy—the enthusiasm is already there—to grow thousands of barrels for export trade and should furnish one of the greatest drawing cards to attract the attention of new settlers. Could the whole display be shown intact in London or some other large British city we venture to say that a great many intending emmigrants, who have their eyes set on the golden West, would seriously consider the opportunities offered by New Brunswick fruit lands.

The New Brunswick Department for Agriculture, as is being said by many of the prominent speakers and visitors to the fruit show, are to be congratulated on their aggressive Horticultural policy and their happy choice of so efficient an horticulturist as they have in Mr. Turney.

under the auspices of the Department of Agriculture, undertook to conduct some experiments in the renovation of several old neglected orchards in the counties of York and Albert, for illustration purposes that would be an incentive to owners of similarly neglected orchards to try to give their trees a new lease of life. Pruning, fertilizing, cultivation and spraying were done under Mr. Turney's direction according to the most approved modern methods. That success has crowned his efforts is clearly seen by the tastily arranged display of No. 1 fruit that presents itself to the visitor in the form of a pyramid of boxes and plates of apples accompanied by information placards and photos of orchard scenes near the Rink entrance. Stretching beyond this and on either sides are long tables laden with plates of apples for competition in the singles, the collections and for special prizes, while ranged across the farther end of the rink in a sloping position is displayed upwards of four hundred boxes of McIntosh, Fameuse and other table varieties gathered by the Department of Agriculture from orchards in various parts of the Province. The success attained in this work will, we hope, induce fruit growers in other parts of the Province to send out to the Department of Agriculture the cry "Come over to Macedonia and help us". We know the appeal will not be in vain.

On the northern side of the Rink the St. John River Valley Farm and Fruit Lands Company, a company organized for the purpose of developing fruit lands and inducing new settlers to buy land in New Brunswick and who have a land area of upwards of 900 acres of which Mr. A. Parker, an enthusiastic practical fruit grower of Nova Scotia is manager, are making a creditable exhibit. Further down on the same side of the building Mr. Tappan Adney, Secretary of the Carleton County Fruit Growers' Association has charge of a very pleasing display of Carleton County fruit. The good works done by the late Francis Sharpe of Woodstock in promoting Horticulture lives after him. Although Mr. Sharpe is dead and gone his voice still seems to speak as one after another of his theories and predictions are being verified and are coming true.

The private exhibits are very numerous, coming from ten of the counties of the Province and representing a great many varieties of fruit.

There is also a fine exhibition of Jellies, Jams and preserved fruit, prominent among which is a very nice exhibit put up by the Domestic Science class pupils of the McDonald Consolidated School, Kingston, N. B.

The Canadian Fairbanks Co. and R. B. Westhaver have an exhibit of power and hand spraying machines. These machines have become an absolute necessity to the equipment of any successful, up-to-the-minute fruit man.

Professor W. T. Macoun of Ottawa, Professor W. Saxby Blair of McDonald College, St. Anne De Bellevue, Que. and Professor Percy Shaw of the Nova Scotia Agricultural College are on hand to place the awards and address the Fruit Growers at their annual convention which is being held in one of the rooms adjoining the rink.

A. G. Turney
Horticulturist New Brunswick Department of Agriculture.

A Partial View of the 1911 New Brunswick Apple Show

The exhibit in the foreground is that made of fruit picked from the orchards undergoing renovation during the season of 1911, under Mr. Turney's skilful direction. In the back ground across the end of the building, may be seen the carload of boxed fruit exhibited by the New Brunswick Department of Agriculture.

The public official opening was held on the evening of October 30th when a large number of visitors and prominent fruit growers listened attentively to eloquent addresses, brim full of optimism and encouragement, by C. N. Vroom, President of the N. B. Fruit Growers' Association, Hon. Dr. Landry, Commissioner for Agriculture, Hon. Robert Maxwell, Commissioner for Public Works and Prof. W. S. Blair, who all complimented Mr. Hubbard, Secretary for Agriculture, Mr. Turney, Provincial Horticulturist and the enthusiastic Fruit Growers on their success in developing one of the greatest resources of the Province.

Among the prominent members of the Association present we noticed the veteran fathers of the organization, Messrs. J. C. Gilman of Fredericton and S. L. Peters of Queenstown, Clark of Sunbury Co., Flewelling of Kings Co. and others, radiant with the realization that has come after long years of hard work and anticipation. They are there to encourage the younger men to move onwards and upwards to a higher plane of perfection in their vocation.

A list of awards and the deliberations at the annual convention will be given in our next issue.

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THE ISOLATED BREEDER.

The young breeder of dairy cattle like the young professional man or the young merchant must establish for himself a reputation before he can enjoy his success to the fullest measure. Only in exceptional cases is it possible for one to spring at once into the public eye and attract the attention of all comers by some spectacular feature or individual. The man whose success is more lasting is the man who enjoys a steady, continual growth in his work. There will of course be accidents and back sets that cannot fail to be discouraging but at the same time the success that will finally be enjoyed will depend upon keeping everlastingly at it with a fixed aim in view. The young breeder in many instances will be a pioneer; that is, he will be isolated from others similarly interested and as a natural result it will be necessary for him to fight his battles unaided and alone. The breeder who is located in the communities where there are others following the same line of work will have an opportunity to get advice and encouragement and he will also find that his market is stimulated by the buyers that are brought to the community by the older established breeders. The isolated breeder must depend in many instances upon mail-orders for it is difficult to get the prospective buyer to go out of the beaten route of travel to hunt for stock. Some of the finest trade that is brought into any community comes through co-operative buying and selling ; that is, the best deals are often made where more than one breeder is interested. A man will go to a community where he can pick up from one to a carload of cattle more quickly than he will hunt out an isolated breeder who has at best only a few individuals for sale. In this community of breeders there will be a better field for one to select from and the cost of the animals will be reduced because the travelling and freight expenses will be at a minimum. Also the loading and other incidentials that are known only to those who have had actual experience in this work will be less expensive. It naturally follows then that if one is not fortunately situated he should undertake to stimulate an interest in his particular breed of cattle by judicious use of his bull in the neighbor's herds. An interest can be awakened among the other good dairymen who are in the same vicinity better through an illustration of what the real dairy breeds will do by the monthly milk check. As soon as a man finds that his neighbor is drawing larger pay for the work that he does in feeding, caring for and milking his cows, he will begin to investigate for the purpose of finding the reason why. If a man can be shown that the answer is better dairy cattle it will not take him long to build up a grade herd and this is almost invariably the stepping stone that leads directly to the pure bred herd. When two or three men undertake work of this kind it doesn't take long to establish a real community.

The isolated breeder who is successful has the entire market to himself but it is a questionable advantage for it is a time honored saying that competition is the life of trade and as soon as any individual or organization secure a monopoly, the chances are that their market may be neglected and sales are naturally more dificult. The young breeder is always the target for criticism and the laughter of his neighbors and he deserves credit and encouragement. Everything that can be done should be brought about to stimulate his interest and keep him awake to the possibilities of his business. He should keep constantly before him the success that has been made by others who have struggled along against the same disadvantages, although discouragements may come, let him try to realize that they can be made the stepping stones to success. If these young men who are now in the breeding business will use good common judgement and stick to their proposition, keeping ever before the possibilities which the obstacles that seem to obscure the way there is little question but what success will eventually crown their efforts.

BUSINESS IS BUSINESS.

A successful city merchant, somewhat run down with the strain of business, once paid a few days visit to the home of his brother, a farmer doing moderately well, whom he had not seen for many years. The visitor took the keenest interest in everything on the farm, and though he made few comments asked innumerable questions. In fact, the interest he took in everything seemed to do no less towards recuperating his health than the rest and the change of air and scene.

"You seem to take a great deal more interest in this place than I do," said his farmer brother one day, "If it was a business, like that you've got in the city, you couldn't be keener on it."

Why, that't just the reason," he replied. It seems to me that farming is just as much a business as anything that goes on in the city, and though of course I couldn't run a farm now without making heaps of blunders, maybe I could make a few suggestions as to the business side of it. You work hard enough, but you don't seem to me to get as much money out of this farm as you ought.

"Let's hear what you have to say then," said the farmer. You're not a farmer, it is true, but I'm not fool enough not to pay any attention on that account. Fire ahead,"

"Well, I didn't know barley from wheat until I came here, but I guess I can help you a bit for all that. Where you fall short, it appears to me, is in attending to the markets. A man who wants to do any selling must find out what the buyer wants, when he wants it, and how he wants it. If I didn't attend to that rule in the city, I'd soon go to the wall. Now take those lambs you were telling me about yesterday. You got a wretched price for them, for the market was dull. But sometimes the dealers will give fancy prices,—they have to—for prime quality lambs for Christmas and Easter markets for example. People will pay liberal prices for it then. It wants forethought and careful management months in advance, but isn't it worth it ?

"Then again take the batch of poultry you sent in to market the other day. I asked you and you said you hadn't fattened them, Then too they were all sizes, whereas it is the good-sized fat fowls that poultrymen pay good money for, unless of course they are broilers. A fortnight in the fattening coop would not have been much trouble, but it would have brought in some extra dollars.

"Speaking on that subject, why don't you caponise your cockerels ? There is a big demand for capons, for the flesh is of prime quality, and there is three times as much of it on the breast, where it is wanted, of a fat capon, as there is ordinarily. Caponising tools are not expensive, and I understand the work is simple, and done in a minute.

"All this means a lot of extra work ? Yes, that is true, especially brain work. You cannot do everything, but the important thing is to plan to do that work which will bring in the most returns. Get other men to do the manual labor the minute you can afford to hire them. If you set your thinking-box to it, ideas will soon spring up, and then all you have to do is to carry them out. But the main thing is to discover what the public wants, and then give it to them."

Can you say : "I am satisfied that the dairy is a paying proposition for me and has been made so by sticking to one established breed, keeping a bull that was better than my cows, using the milk scales and Babcock test, weeding out my poorest cows and studying the feed proposition."

* * *

How much is it worth to you, brother farmer, to be your own boss. Did you ever set it down among your assets ? Think about it, whenever you become a little discouraged over your prospects.

Cooked Food For Stock.

There are perhaps, few questions of stock management in regard to whic stock management in regard to which there is a greater difference of opinion than on that of whether it is worth while to cook food for stock. There are those who maintain with great positiveness that it is. There are others who, writing from the scientific side mainly, object that cooking adds nothing to the digestibility or the nourishing character of the food, and that the cost and labor of cooking are thrown away, or at best meet with but a small return in the opportunity afforded of smuuling into the stomach of the animal food that it would otherwise reject, and which cannot, therefore, be of much leeding value. The feeder who has a good supply of steam on the farm will frequently have found it most convenient, and will have satisfied himself on many occasions that he has been able to provide palatable rations for his stock, which would otherwise have been unsatisfied had not the convenience for cooking been at hand. How far this has been a gain must, of course, depend on circumstances. It might have paid him better to be better supplied with cakes and roots and other foods; but a man must cut his coat according to his cloth, and there is generally on every farm, at some time or other, a scarcity of good foods, and a variety of fodder that cannot be classified as first-rate, but which has to be made the best of, and if cooking will make it possible at small cost to use it, it would seem to be a mistake to refrain from cooking.

At any rate, it will hardly be disputed that food may profitably be cooked for pigs. The pig is an animal that suffers from cold more than any other. A litter of pigs in the winter season is a trial that the wise pig-keeper is anxious to avoid, more especially after he gas once undergone the visitation. Unlike most other animals, the pig does not lie on its bed, but as far as possible gets into it, and pigs kept together will be noticed in cold weather huddled up as closely as possible for warmth's sake. We contend that, particularly in severe weather, it is not a matter of no importance whether the sloppy food given the animal be comfortably warm or icy cold. If the food is cold it has to be raised to the temperature of the body, and some of the food has to be used for this purpose; this is a loss that would be avoided il the food were warmed. Moreover, the pig is chilled, its comfort is impaired, and the fattening process is retarded so that there is a double loss. It may be questioned whether the same rule will hold good with cattle generally, but the dairy cows might very well have some of the mashes warm. In the end it resolves itself into a question of expense. If steam is already available this is practically nil, and where it is not there are now on the market many cheap cookinh apparatuses which will enable a supply of hot water to be obtained at all times at a small cost. Some of these are exhibited from time to time at our agricultural and other shows, and farmers would do well to inspect them.

Necessity of Phosphate of Lime.

The absolute necessity of a supply of phosphate of lime in arable soils was clearly demonstrated by the experiments of Boussingault. He planted a series of different kinds of plants in calcined sand containing no nitrogen, phosphate, potash, or any other element of plant life; then he applied to the plants all the recognised elements of fertility excepting phosphate of lime. The plants languished, and failed to develop. He then repeated the experiments, adding phosphate of lime, and the result was a rapid and perfect growth.

CONCRETE WORK IN FREEZING WEATHER.

UNTIL a few years ago, although concrete had already been generally adopted throughout the country by contractors and farmers for almost all structural work, it was the practice to stop all work on this form of construction as soon as the cold weather set in.

It has been found, however, that concrete work may be carried on in cold weather successfully, and with but very little more trouble than under ordinary circumstances.

This fact is of great benefit to the farmer, as it is in the colder period of the year that he is able to find time for building and making the many articles around the farm to which concrete so readily adapts itself.

With a few simple precautions it has been found that concrete can be used, not only in freezing weather, but when the thermometer has been actually below zero.

If the concrete freezes before it starts to "set," it will not be injured, but if the freezing takes place after the "setting" action has started up, the concrete is likely to be damaged when it thaws, owing to the expansion of the melting water forcing the particles apart and making the concrete crumbly. On the other hand, if the concrete has a chance to become thoroughly "set" before freezing, no harm will be done. To give it this chance you must first of all prepare the materials as described below, and secondly, you must protect the concrete after it has been placed in the "forms."

PREPARATION OF MATERIALS.

Concrete will, on its own account, develop a certain amount of heat in

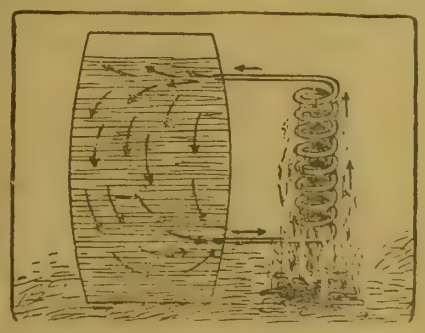

FIG. 1. SHOWING SIMPLE METHOD OF WATER HEATING.

the "setting" process. But in cold weather, some outside assistance, in the form of artificial heat, is necessary. The best way to develop this artificial heat is to warm the materials before mixing. This shortens the time that it takes the concrete to "set" and lengthens the time necessary to bring it to the freezing point. Bear in mind that the less water used, the quicker concrete "sets." Therefore, it is advisable to use as little water as possible in the mixing during cold weather.

HEATING WATER.

A simple and easily-made vessel for heating water is shown in the accompanying drawing. (See Fig. 1.). A coil is made of one-inch pipe with the ends fastened in the barrel and made water-tight. A small fire built under the coil will heat the water rapidly and will keep it in circulation, thus keeping all the water heated.

For this purpose it is wise to use a length of malleable iron gas-pipe, because it is easily bent into the required coil. This is done by taking a log or fence-post about the size of the coil and bending the pipe around it. This method prevents the pipe from "buckling" and makes the coils more regular in size.

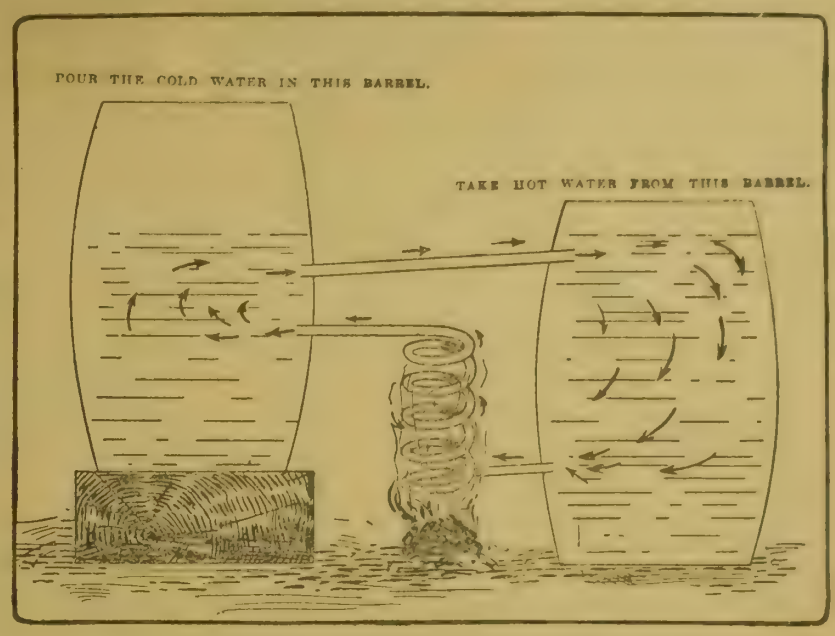

FIG. 2. SHOWING TWO-BARREL METHOD OF HEATING WATER.

Where concrete work is being done on a large scale, it is advisable to use the two-barrel heater shown in Fig. 2. This allows the water to be constantly replenished without reducing the heat of the water in the barrel from which the hot water is taken.

Most farmers, however, possess large boiling kettles, used during butchering time, or for making soft soap, etc. One of these will do equally well.

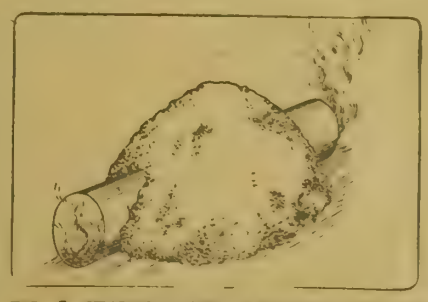

FIG. 3. SHOWING HOW MATERIALS MAY BE HEATED BY MEANS OF A FIRE IN AN OLD STOVE-PIPE.

HEATING SAND AND STONE.

Sand and stone may be very easily heated by making use of two pieces of stove pipe, one piece for the sand and the other for the stone. The pipes are laid on the ground in such a position as to allow the wind to make a good draft. The fire is then built in one end. The flames pass through, heating the whole pipe, and as fresh fuel is added, the cinders are pushed along the pipe and gradually work out at the other end. The sand and stone should be piled on top of the stove pipes, and will soon thaw out and become heated.

In very cold weather, the cement may be heated by laying the bags on top of the sand, but this is not absolutely necessary, as the cement itself must be kept dry until used, whether the weather be hot or cold.

TEMPERATURE REQUIRED.

Materials should not be heated to too high a temperature. A good way to judge the proper amount of heat is to make them just hot enough to be comfortable to touch. Care should be taken not to use any frozen lumps of sand.

PROTECTING CONCRETE IN POSITION.

After the concrete has been placed in "forms" it should be protected so as to keep the heat in as long as possible. This is more essential in thin structures than in massive walls and foundations; for the latter will hold their own heat longer on account of their thickness.

Wooden "forms" are non-conductors, and will retain the heat in the concrete up to a certain point, but the concrete should be protected on top by a covering of canvas or heavy paper, with a layer of ten or twelve inches of manure on top of this. Straw will also answer the purpose. If manure is used, care should be taken to prevent it from coming in contact with the concrete, as it will discolor it, and possibly even seep through sufficiently to weaken the structure.

PROTECTING THIN STRUCTURES.

In the case of thin walls where extra cold weather calls for additional protection, heavy paper should be nailed to the vertical posts of the forms, (see Figure 4,) thus leaving an enclosed air space between each pair of posts. These air spaces will have about fifteen degrees higher temperature than the outside air. The "forms" should always be left on longer in cold weather, as it takes longer for the concrete to harden.

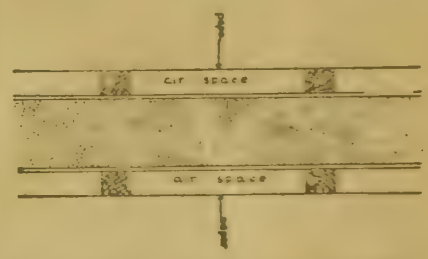

FIG. 4. PAPER TACKED TO WOODEN SUPPORTS TO PROTECT CONCRETE FROM FROST.

There is no reason why concrete cannot be used with complete success in cold weather if these simple precautions be followed.

"Best for Baby—best for you."

Baby's Own Soap

Made of specially purified and refined vegetables oils. It will not hurt the most delicate skin.

Refuse all substitutes.

Albert Soaps Limited
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HORTICULTURE.

Quality Counts in Fruit.

I should place at the head of the list the quality of our eastern grown, and partirularly our northeastern grown fruit. I believe there is no other section where flavor, aroma, juiciness, sweetness, in fact, all those factors on which we base quality, more particularly in the apple, but to a greater or less extent all fruits, are more highly developed than they are right here in the Maritime Countries. This is not my own judgment alone, though I have had many opportunities of comparing the fruit of this region with that of other sections, and particularly with the far western apples so generally found in full possession of our best fruit stores. Almost without exception, when our eastern apples are as well grown and have been as carefully handled, I have had no hesitation in saying that the advantage of quality lies with our home apples.

If this is so, the importance of this one fact more than outweighs all other possible advantages that the west may have over us. "Quality" ought to be our motto, to be kept constantly before our growers from the time they select their varieties until the ripe fruit is placed in the hands of the consumer in absolutely perfect condition as to growth and handling. It ought to be dinned into the ears of the customer, and in every way possible brought to the attention of the other senses, particularly his sense of taste, until to call for eastern apples would not be the last, but the first thing he would think of doing. Of course, the western grower scouts at the idea that the east can grow fruit of better quality or even of as good quality as ge can grow. And this matter is yet to be tested, but whatever the quality when the fruit leaves the trees, I believe there is no question that when the western fruit gets into the hands of the eastern consumer it is not in most cases of as good quality as that of equally well-grown eastern fruit.—Prof. F. C. Sears, Mass, Agri. Col.

Disposing of Low-Grade Apples.

Hand thinning immediately following the "June drop," or earlier with varieties like Wealthy, to one in a cluster and 6 inches apart, is the ideal way of solving the problem of disposing of low-grade apples. When systematically followed it tends to produce the annual bearing habit. By following and practicing the recognized up-to-date orchard methods thorough spraying, liberal fertilizing, early plowing and frequent cultivation—the orchardist is reasonably sure, barring frosts and windstorms, of crops of good quality. These, with hand thinning, will pack a large percentage of No. 1's and a few No. 2's of good quality.

By making at least two pickings of all varieties and three of some, the drops or windfalls are lessened in quantity, the harvesting season prolonged, and total crop production increased. By using at least three sizes of fruits in grading for packing in barrels, the trade demands are better supplied, especially when a certain uniform sized apple is needed for a certain market, or to be sold at a popular price. By following the suggestions outlined, a large percentage of crop remaining will be windfalls, and these may be disposed of to shippers of "bulk" cars, to canning factories, or to evaporators, according to local market conditions, grades and prices. In many cases evaporators have been erected as a means of crop protection against hail and windstorms, unexpected fungous attacks and second brood of codling moth.

In large apple producing centers a combination of canning factory and cider mill has been very satisfactory, contracting for all drops and culls after packing certain grades of barreled fruit, sizing this mixture by using mechanical graders, thus relieving the orchardist of considerable work during the rush of picking and packing. The future of the evaporated fruit industry is uncertain. Doubtless we cannot expect present high prices to continue, but by meeting trade demands for a higher grade product, consumption may be increased and fairly remunerative prices secured. There may be an overproduction of canned goods, with lower prices as a result. One must be ever on the alert as to market changes and crop conditions.

By establishing a co-operative packing house, plants for the disposal of low grades naturally follow. With the enormous acreage of apples being planted and soon to produce crops, a year of overproduction with attending high prices may possibly awaken the orchardists to conditions and the necessity of thorough organization.—N. E. Homestead.

Why Not Raise Celery.

One of the many side lines certain to bring in a handsome profit to any farmer with iniative and push, and with an eye on the demands of the market, is the growing of celery. Some may object that if a farmer does raise any he cannot sell it. Here however we beg to differ. There is always a demand for good succulent vegetables, and though celery;unlike potatoes can be done without, people will buy it at a good price if they are sure of the quality. Two things the celery grower must have to command success, he must supply healthy and tender celery, and he must get in touch with and the confidence of the consumers.

As to the first point, to avoid getting woody and stringy stalks, (which must be avoided at all costs) plant out the celery fairly late, the end of June is a good time. By doing this the plants will grow more quickly and therefore will be more tender than those planted early. A good plan is to plant in trenches. These can be made with a plow, turning a furrow each way. Plow twice so that a trench 15 or 16 inches deep with sheer sides and two feet apatt is formwed. Two rows can be placed in the trench each eight inches from the side. Thus there will be about eight inches between the rows.

The banking of celery takes place from the outside, that is, the earth is dropped in between the trench and the rows, but the banking between the rows must keep pace with it. This operation must keep up well with the growth of the plants, which must not grow very much above the level of the earth. A good rule is to do the banking once a week.

On the arrival of the cold weather the plants must be covered. A convenient method for a farmer is to use green feed sheaves. Place one on each side of the trench and one on top. Thus both protection and bleaching is arranged for the celery plants, while the sheaves are of course still available as feed.

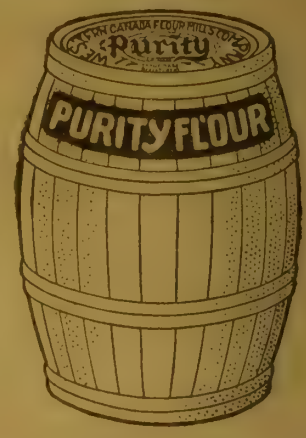
When the bleaching has been thoroughly accomplished the plants should be placed in shallow trenches in the cellar. Enough earth is placed around the roots to keep life in the plants and prevent rot from occurring. In this way the celery can be well kept for many months.

It will be seen from these remarks that the growing of celery requires no great skil, or experience, but only care and attention such as anyone ready to give his mind to the business can devote to it.

Try the flour that holds the confidence of thousands of home-cooks

THE present huge demand for PURITY FLOUR shows the confidence in which it is held by thousands of home-cooks.

Those who have used PURITY FLOUR have come to believe in it. They look on PURITY as a friend. They feel they can trust it implicitly, because each and every lot of PURITY FLOUR has always been uniform—always up to the high standard of quality that has made it famous.



Wouldn't you, too, like to use a flour you could always rely on? Wouldn't you like to feel certain that your bread, cakes, and pies were going to turn out exactly right? That's just how you'll feel when you become a user of PURITY FLOUR — the confidence-creating flour.

PURITY FLOUR gives high-class results, because it *consists exclusively* of the *high-grade portions* of the best Western hard wheat.

On account of the *extra* strength of PURITY FLOUR please remember, when making pastry, to add *more* shortening than an ordinary flour requires.

PURITY FLOUR

"More bread and better bread"

And when making bread add *more* water, and PURITY FLOUR will expand into more loaves than the same weight of ordinary flour can produce, thus making "*more bread and better bread.*"

Make your next flour order spell P-U-R-I-T-Y F-L-O-U-R.
It costs slightly more, but it's worth the difference.
Add PURITY FLOUR to grocery list right now.

104

Important for the Fruit Industry.

Now that autumn has come again and the summer is gone, the various species of song birds which have spent the season with us are gathering together into flocks in preparation for their long flight to the South. It is not an uncommon sight to see a hundred or more of them together on a single ?ree, some of these cool mornings, causing it to look fairly alive with them.

At this time of the year, too, there always comes a great temptation to boys and lovers of the gun to get down the shotgun from the attic or chimney corner where it has stood during the summer, and 'go after birds," and, failing of larger game, it usually happens that the song birds have to sufer.

It would be impossible to estimate the value of insectivorous birds to the farmer. They are of the utmost service to him. Why is it that we hear so much more, nowadays, about the inroads of insect pests than formerly? Largely because we have permitted the ruthless destruction of

birds to go on in such an unrestrained manner, year after year. The shotgun is the best friend that the injurious insect has in all the world. Going out after birds with the gun, and its usual sequel, is the equivalent of lending aid and succor to that most dangerous enemy, the all-destructive worm.

It is the duty of every reader of this publication to do all in his power to protect birds from the shot gun, this autumn. He is sacrificing his own interests, encouraging his enemies, doing an injustice to his neighbor and to his country if he does not endeavor to stay the hand of the thoughtless destroyer of bird life whenever the opportunity offers.

Let the gun stand in the chimney corner this fall. It will do more good there than anywhere else.—Maine Farmer.

Aid Wounded Trees.

Early fall is the time to watch your valuable old shade and fruit trees. Watch for the hollow trunk, the broken limb or the exposed wound where fungi may enter and ruin the stately old friend.

From any wound remove all the decayed wood, with a chisel and adz, to the sound, hard wood, and smooth off the edges of the cavity to allow the free growth of the inner bark.

After the cavity has been thoroughly cleaned out, disinfect it with corrosive sublimate, creosote or even paint. Creosote is better, as it penetrates farther into the wood. The cavity should now be filled with concrete, one part Portland cement to two parts sand. Make it thin so that it can be poured in at the top of the opening. When the cavity is large it is necessary to re-enforce the concrete by placing iron bars across the inside. It is also best to drive large nails part way in around the inside, and this enables the concrete to adhere better to the trunk.

As the filling shrinks considerably in large cavities, the walls should be first coated with a thick layer of tar. This expands and fills the shrinkage crack, making the cavity air tight. There is now no chance for any disease to enter and get in its work.

After the filling has set a little, the surface should be smoothed off even with the inner bark. In a few years the cambrium will completely cover the filling, making a good looking tree.

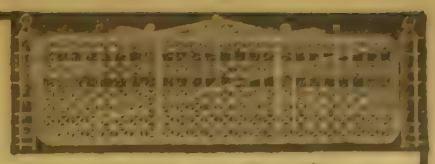
Heading Back Young Trees.

Finding several growers with the opinion that young trees should not be headed back the first year, or not at all, which in the majority of cases, is a great mistake, I am giving you the results of an experiment which we carried out in Ontario County last season. Probably about two hundred trees were cut back at time of planting. Later in the season the unpruned portion suffered so greatly that we were compelled to prune some of them in order to save the trees, as so many died back further than they should have been cut.

This season, the foliage of the trees which were cut back at the time of planting, is in the very best condition. The trees stand erect and have made a wonderful root and body growth. The dying trees cut back late in the season are looking equal to those not cut back, which all show a sickly condition.

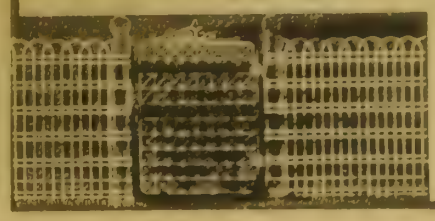
The remainder which were cut back this spring show the effect of having too heavy a top for the roots. They have been whipped back and forth by the wind, have made no body growth and appear to be a year behind the portion headed back. During the winter the trees suffered very little from freezing back, all portions being equal in this respect. The loss in trees seemed to be sustained by the unpruned portion, which goes to prove trees are better cut back at time of planting.—R. R. Waddle in Canadian Horticulturist.

Strength and Service



That's what you get in Peerless Gates—the strength and service that keep them swinging evenly on their hinges year after year. They won't warp or sag because the frames are made of heavy, steel tubing, electrically welded into one solid piece.

Peerless Farm and Ornamental Gates



We manufacture lawn, poultry and farm fences and gates. We build them as they should be built, and give the most satisfactory service. Our standard of quality is high, and we stand behind it. You can always depend on Peerless goods. Write for full particulars.

THE BANWELL HOXIE WIRE FENCE CO., LTD.
DEPT. K, WINNIPEG, MAN., HAMILTON, ONT.

How We Have Fresh Rhubarb in Winter.

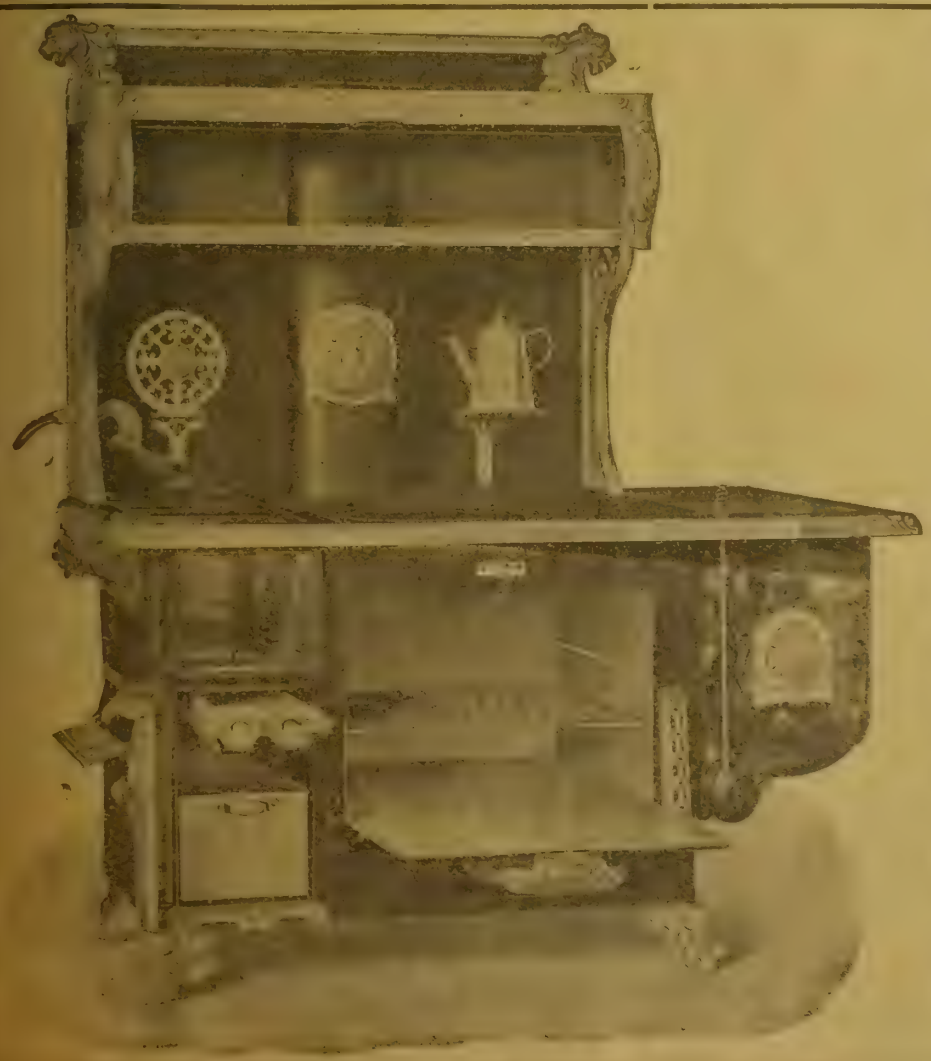
Rhubarb of most delightful flavor may be grown and had fresh during the wintertime on any farm where the roots are available. We have received much satisfaction from the rhubarb we have been growing in the wintertime now for some years. Our practice is to get the men to dig up three or four roots of rhubarb late in the fall and have the roots set on a board in the garden so that they will not freeze down and be impossible to get them loose. After they have been frozen solid, the roots are carried into the cellar of the house and placed in a dark corner, where they are banked smoothly with a few buckets of earth.

As soon as the frost thaws out of the rhubarb the plants begin to grow, and in a very short time they will have great long stalks without much leaf and be ready to cut for rhubarb sauce.

It makes a nice variety for the table to have some fresh rhubarb now and then throughout the winter. Since it is such a simple matter to grow it in the cellar there is no reason why almost any farmer should not have it.—Farm and Dairy.

When large strawberries are desired rather than quantity most of the runners must be cut off. Two to five runners may be left to each plant. These should be carefully trained by hand so that the young plants may have plenty of room to grow and produce large fruit.

This system requires a large amount of time and labor and is used mostly in small gardens where a few berries of extra quality are desired for table use.



The Universal Favorite

Is a High-class Family Steel Range, honorably built of the best material, and put together as tight as a steam boiler, and is guaranteed to cook and bake perfectly.

NOTE:—The spacious fire box for wood.
The large fire box opening, 7½x8½ inches.
The roomy square oven.
The top-hinged key plate.
Also note how easily the coal grates can be removed.
The linings can be changed from coal to wood, or vice versa, without the disturbing of a bolt.

There are thousands of Universal Favorites in the homes of our farmers, making cooking and baking a pleasure and the kitchen work easy and light.

THE UNIVERSAL FAVORITE is specially built to meet the requirements of farm homes. The top is large and roomy with six pot holes, the oven will bake sixteen loaves of bread in pans 4 1-2x10 inches at one time. The fire box for wood is 29 inches long, and will burn coarse wood of any kind

NO RISK IS TAKEN, as an unconditional guarantee goes with every UNIVERSAL FAVORITE that it will cook and bake perfectly.

The Universal Favorite is procurable from a dealer in your market town. Manufactured by,—

FINDLAY BROS., CO. Ltd., Carleton Place, Ontario.

H. H. DRYDEN Sussex, N. B., Representative for Maritime Provinces.

DAIRYING.

Why Not More Improvement in Farm Butter?

'Tis true, and pity 'tis, 'tis true, and no one regrets to acknowledge it more than myself that the great bulk of dairy butter does not rank as first class. I have wondered why this is, and have come to the conclusion that the majority of buttermakers have not a right standard of butter and do not know the requirements for a high-class trade. The most fastidious and critical consumers of butter are the rich. This is because they pay prices that insure the greatest skill and care being taken in the manufacture of the butter. After being accustomed to the sweet, delicately-flavored, lightly salted and lightly colored butter, the change to an inferior make is quickly noticed.

COMPARISONS ARE EDUCATIVE.

Why does not the farm butter maker improve as she should? I believe it is because the only butter she has an intimate acquaintance with is her own and she has grown so used to the faults therein that to her they cease to exist, and she thinks her butter equal to any made. Improvement almost solely comes by comparison. We are the poorest judges of our own make and should seek the honest opinion of reliable judges and profit by their criticisms. There is a whole lot in getting used to a thing; the poor little city boy, when in the country on a "fresh air vacation," didn't like the eggs because they lacked taste and smell.

I remember a like experience. I had taken a first prize for butter, and so proud was I that when I went to visit a farmer friend I took along a piece of my prize butter. It was tasted by the family and the good man of the house frankly admitted he liked his own better and thought it was equally as good and insisted on his wife going to the cellar for a sample. She demurred a little, but obeyed. I feel my surprise yet, for when I tasted it, it was as turnipy as could be. And what was I to say—a guest of the house? I was frank and told them they had become used to the turnip flavor, but it wouldn't do in the show ring.

SOME POINTS ABOUT FLAVOR.

Wherein is our farm butter at fault? I trust that my readets will understand that I am writing in a most friendly, helpful spirit and hope fault? I trust that my readers will tend toward improvement. In the first place, the cause of the objectionable flavors is too frequently due to badly ventilated, dirty cow stables, and uncleanly milking. Milk seems capable of absorbing every odor that comes its way. Then the separator is ever a bone to pick at, but I believe in respect to its proper care there is a marked improvement. There are still those, however, who would hesitate and find an excuse if you asked to see their separator. A separator must be thoroughly washed every time it is used—not just a dipper or two of warm water run through it; we don't call that washing—but the bowl taken apart and well washed and scalded.

And now comes the greatest reason why so much of the farm butter, and the cream sent to the creameries, is off flavor: The cream is not quickly cooled after it is separated. I don't know why it is, but I do know that the warm cream from the separator, if given no particular care but merely set aside to cool, develops a peculiar flavor that I can detect in the cream and butter every time. Cream should be quickly cooled to 55 degrees or below by placing the can in cold water. If water be scarce pour the cream in shallow pans so it will the more rapidly give off its heat, and set the pans in a cool place.

MUCH CREAM IS TOO RIPE.

Lots and lots of butter ranks as second because the cream was overripe. Much of the cream is kept too warm during the ripening process and in winter especially is held too long before churning. The delayed churning gives to butter that "cheesy" flavor. Cream when ready for use should be of the consistency of molasses, smooth and velvety when poured and of a pleasant, mild, acid taste. Always err in having it under rather than over-ripe. We should look at the ripening process in cream much the same as that of fruit. We eat a pear slightly under-ripe, and while it has not the good flavor of one in exactly prime condition, still if it were over-ripe we would not relish it at all. I strongly urge more intelligent care of the cream from the time it leaves the separator till it gets into the churn.

THOSE WHITE SPECKS.

We have all noticed tiny white specks in farm butter—a bad fault, for if such butter has not already an old flavor it wil, soon develop one. These specks can easily be avoided by keeping the cream stirred right from the bottom to the top. The skim milk settles to the bottom, and if it is not well stirred in with the cream, becomes firm and adheres to the butter-fat during churning.

Sometimes care is not taken when warming the cream for churning. If overheated the casein or curdy matter hardens and white specks in the butter follow. Pouring hot water into the cream to hasten the churning has the same bad effect.

Manybutter makers still guess at the churning temperature, and too often the result is a soft, greasy mass in the churn instead of firm, wheat-like granules. Soft butter holds the buttermilk, cannot be well washed, and is in a bad condition to be salted and worked; and behold the product! a butter weak and spongy in texture, buttermilk in the brine and the color streaked and mottled.

A SERMON BOILED DOWN.

Just these few words in closing. 'Tis a tale oft told by me: Adjust the separator to give cream testing 25 per cent. butter-fat, or, in other words, cream that will make from two and one-half to three pounds of butter a gallon; have cream on the sweet side, rather than one day too old; never fill the churn over half full (better only a third full); churn at that temperature (found by the use of a thermometer and a clock), which brings butter in from 20 to 25 minutes; have the butter in the granular form when through churning; wash it in the churn, using quite as much water as there was cream; use from three-quarters to one ounce of salt a pound of butter; give it a thorough working; print and wrap neatly in parchment paper; keep in a cool, clean place, and get it to the consumer as soon as possible; observe cleanliness in every detail of the work. This summary is the boiled-down essence of a sermon on "How Farm Butter May Be Improved."—Laura Rose, Guelph, Ont., in Farm and Dairy.

How I Make First Class Dairy Butter

Every farmer's wife and daughter should have it as an aim and ambition to be able to make high-class butter. We do not speak disparagingly of the article our ancestors produced with their very crude methods, and who have handed down to us so many useful hints. Science, observation and experience, however, have taught us that more modern methods have met with greater success. To insure the best results in butter making the best appliances and greatest care on the part of the maker must be exercised in the preliminary stages and also throughout the entire process of butter making.

The first essential in the manufacture of any article is good raw material, and perhaps in no realm is this more necessary than in the production of high-class butter.

More and more attention is being paid to the selection of good dairy cows. They must be comfortably housed and well and regularly fed. If we want milk we must give plenty of good wholesome food and an abundance of pure water; the latter is just as essential as the former.

MUCH MILK IS SPOILED BY DIRT.

Much milk is spoiled by dirt and bacteria before it leaves the stable. It is wise to keep the cows and their surroundings as clean as possible. The milking should be done quickly and thoroughly by a cleanly person and the milk strained through a very fine sieve or through two or three thicknesses of cotton.

We consider the cream separator the ideal method of getting the cream from the milk. A separator if properly handled should mean more butter, better butter, more money, better young stock and less labor, especially for the woman. The skimming and washing of endless pans and cans, and the warming of the milk for the calves is done away with—the cream alone to be cared for. The separator should be washed each time it is used.

In caring for the separator cream the main point we bear in mind is that fresh cream should not under any circumstances be added to the cold cream previously gathered until it has been cooled to about 55 degrees, as the fresh cream added from time to time soon causes the cream to become too sour. To make good but-

Cream Profits That Stay in Your Pocket

Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

Frictionless Empire

Empire Line Of Quality Separators

they can get not only the style and size separator they want, but also the one that nets the greatest return for the money invested for the longest term of years—the one that makes profits that STAY in their pockets.

Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

Let us also PROVE that Empires turn easiest, are simplest, most sanitary, highest quality and most satisfactory. Write postal now.

We also handle Gasoline Engines and Rock Island Dry Batteries. Write us for prices first mail.

Empire Cream Separator Co. of Canada, Ltd.

Sussex, - - New Brunswick.

Farm Agents Wanted in Unrepresented Districts.

THE DOMO SEPARATOR

THE CHEAPEST AND BEST.

Prices and Capacities

	Capacity	Suitable for	Prices
Domo B	110 lbs.	1 to 2 cows	$15
" O	150 lbs.	2 to 5 cows	$20
" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
" 4	670 lbs.	15 to 30 cows	$65

Sent on trial to responsible parties

For particulars of Free trial offer write to

J. de L. TACHE,

General Canadian Agent, St. Hyacinthe Que,

Agents Wanted all over the Maritime Provinces.

The Terrible Pains of INDIGESTION

Mr. Wm. H. MacEwen, Mount Tryon, P.E.I., says:—"For more than a year I suffered with all the terrible pains of indigestion, and my life was one of the greatest misery. It did not seem to make any difference whether I ate or not, the pains were always there, accompanied by a severe bloating and a belching of wind. I did not even get relief at night, and sometimes hardly got a bit of sleep. In my misery I tried many remedies said to cure indigestion, but they did me not one particle of good, and I fully expected that I would always be afflicted in this way. At this time my brother came home on a visit, and urged me to try **MILBURN'S LAXA-LIVER PILLS**, and got me a few vials. By the time I had taken one vial I began to improve and could eat with some relish. I was greatly cheered, and continued taking the pills until all traces of the trouble had disappeared, and I could once more eat all kinds of food without the slightest inconvenience. I am so firmly convinced of their virtue as a family medicine I have no hesitation in recommending them."

Milburn's Laxa-Liver Pills are 25c. per vial, or five for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

SAVE THE DIFFERENCE

Ask yourself why "peddlers'" and other inferior cream separators are being discarded for

SHARPLES
Tubular Cream Separators

The purchase price of inferior separators is only the beginning of continual expense. Owners of such separators have lost cream and paid for repairs until they were sick of the sight of their inferior machines. We are telling you just what these people frankly tell us every day in explaining why they discard their cheap machines for Tubulars.

They tried to save a little difference in purchase price. But they found they lost a big difference every year in profits. They finally got the Tubular and now save this difference in profits every year.

Consider these facts. Act wisely. Don't do what others regret they did. You will finally have a Tubular—so get it now.

Remember that Dairy Tubulars have twice the skimming force of others, skim faster and twice as clean, contain no disks, wear a lifetime, are guaranteed forever by the oldest separator concern on this continent. Our local representative will show you The World's Best for the asking. If you do not know him, ask us his address.

Write for catalogue No. 194

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

For Diarrrhoea, Dysentary, Cholera, Cholera Morbus and all pains and cramps, children or adults there is nothing just as good as

Gates' Certain Check.

ter from cream gathered in this way we keep it sweet and free from bad odors until enough has been gathered for a churning, stir well each time new cream is added, then ripen all the cream at once.

Very fair results can be secured by using naturally ripened cream, but we much prefer using a starter or culture. A very good, practical culture for farm dairy use is naturally thickened skim milk, which has a mild, clean, acid flavor. It is at its best just after thickening. If the ripening process is started in the morning the cream should have an acid flavor and be slightly thickened by night. At this stage I give it a thorough stirring and place it where the temperature will fall to that at which we wish to churn. We try and regulate the temperature and quality of the cream to have butter come in about 30 minutes.

Before using the churn it should be first rinsed with hot water, then thoroughly scalded with boiling water (occasionally it is well to give a scouring with salt), then cooled with cold water. When pouring the cream into the churn we strain the cream through a perforated dipper to remove any pieces of hard, curdy milk it may contain. In winter, if necessary, we add just enough coloring to give the butter a nice, pure tint.

No definite temperature for churning can be given, but I prefer about 60 degrees in winter and 50 degrees in summer' When the butter has just come we add a few quarts of water, a few degrees colder than the cream. This gives the butter sufficient liquid to float in and allows the buttermilk to run off more freely. When the granules are the size of wheat grains we drain off the buttermilk through a perforated dipper.

We wash the butter, by straining into the churn as much water at a temperature of about 50 degrees as there was cream at first. We turn 12 or 15 times, then drain off all the water. If the butter is for immediate consumption one washing would suffice, but if for packing, two washings are better.

We now take the butter from the churn, weigh and remove to a V-shaped lever butter worker. We sift on good dairy salt to the amount of three-fourths of an ounce a pound of butter for prints and seven-eights of an ounce a pound for a package. We then work by means of downward pressure, avoiding the sliding motion as it injures the grain of the butter. We work just sufficiently to expel moisture. I use the oblong pound print and wrap each print neatly with good parchment paper (that has been previously drawn through cold water) having printed on it our own stamp. We keep prints in a cool place, see that they hold weight, and get them to market as soon as possible.

The most suitable package for shipping is the 56-lb. box lined with paraffine wax and heavy parchment paper. We pack the butter firmly and [illegible] with parchment paper and [illegible]t salt paste.

To insure the keeping quality of the butter we have good milk, ripen the cream properly, churn at a low temperature, wash twice, salt seven-eighths of an ounce to the pound, work twice, pack firmly in tub or box, exclude the air, and keep the butter at as low a temperature as possible. —Mrs. S. H. Pugh in Farm and Dairy.

Keep the Heifers.

If you must sell some of your cattle, keep as many of the best heilers as you possibly can. If you have a lot of steers on your place and your neighbor is sacrificing a lot of good heifers, sell your steers and buy his heifers. Your steers will bring as much—perhaps more—than you will have to pay for the heifers, and you will have a foundation for a breeding herd, and breeding herds are going to be valuable in the very near future.

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"Waiter, this is better salt than we get in the States".

"Yes sir, that's what all the tourists say.

We always use Windsor Salt in this hotel. In fact, practically everybody in Canada uses Windsor Salt for the table."

"There, my dear, is a hint for you.

Now that we are going to live in Canada, we must start our housekeeping right with Windsor Salt.

Put the name in your 'want book'—

WINDSOR TABLE SALT". 45

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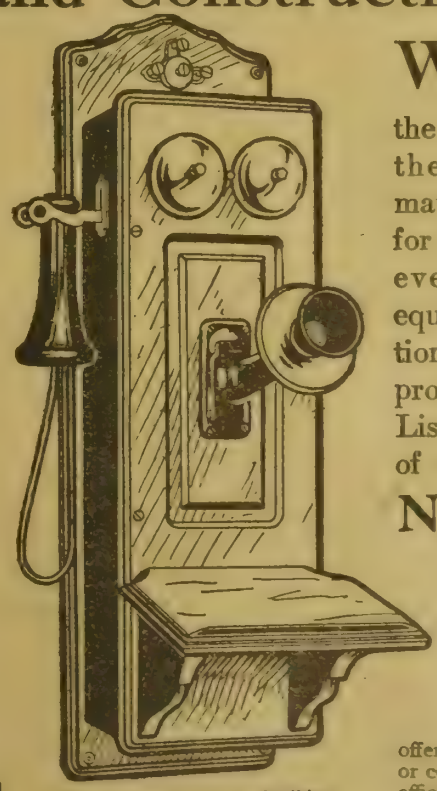

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WE make the highest-grade telephones on the market. We guarantee them against defects in material and workmanship for 10 years. We handle everything in high-grade equipment and construction materials. We ship promptly. Write for Price List. Also send for a copy of our

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It contains the latest information on how to build, equip and maintain rural telephone lines. At the same time ask for particulars about our

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Canadian Independent Telephone Co. Limited

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LIVE STOCK.

Falling of the Calf-Bedprolapsus Uteri

At one time the means at our disposal for securing the retention of the uterus or vagina that had been relieved were less efficient than they are to-day. They took the form of trusses, generally improvised for the occasion, or sutures were employed, generally ineffectively, because badly inserted. Now we have available a cheap and handy instrument, which is easily applied and is very effective, in the shape of West's vulval clamp. This is made in different sizes, to suit mares, cows, ewes and sows, and should be kept on hand for use in emergency on every breeding farm. After the return of the organ the cow should be kept standing for some time with her hind parts higher than the fore-end, for just as this favours reposition so it favours retention.

TRUSSES.

It is hardly likely that there will be a properly constructed truss available, for it would hardly pay, except in the case of the large stock-breeder or dairyman, to invest in a Gowing or other approved pattern. These can, of course, be easily employed when the emergencies arise, or when a cow is suspected of being likely to put out her calf-bed. Most likely a truss will have to be improvised, or sutures depended on, unless the precaution has been taken to provide for emergency by having at hand one of the clamps referred to above. A truss can be improvised with waggon-ropes, the method of fixing which is thus described by Law:—"Take two ropes, each more than double the length of the animal, bend each double, and intertwist them at this bend so as to circumscribe an oval opening a little larger than that of the vulval; this having been adjusted to the orifice the two upper ends are carried around the rump, crossed over each other repeatedly in their passage along the back, and finally tied to a collar previously placed round the neck; the lower ends are carried down between the thighs, one on each side of the udder, and forward on the sides of the abdomen and chest to be fixed to the collar. It may be made as tight as seems necessary, and will tighten at every effort at straining, so that eversion becomes impossible. It may be made more secure by attaching the ropes to a surcingle as well." On hop-growing farms, where the material has been available, we have improvised a truss out of hop-pocketing. Taking a doubled piece, about eighteen inches wide, this is passed under the tail, drawn tightly round the animal, sewn at the chest, and kept from slipping down by broad straps of the same material over the back and withers. The pessary is another means of retention, and a quart champagne bottle is sometimes employed, the neck end being towards the vulval opening.

CLAMPS AND SUTURES.

With reference to the employment of sutures, if sufficiently stout and properly put in, they are fairly effective. The mistake usually made is in having the material too thin, not taking a deep enough hold, and in sewing the labia together, so that each stitch passes through the lining membrane of the vulval. This should never be done, whether in the case of cow, sow, or ewe, because it causes irritation, sets up expulsive efforts, and may cause inflammation. The sutures should be put in with a deep hold well outside the labia, almost to where the hair begins, and carried from side to side, knotting each stitch across the vulval opening so as to form a close network over it. A leather bootlace makes a good suture material, and is much less irritating than string, which is commonly used. With further reference to the use of the prolapsus clamp, it is preferable to sutures in every way. Being of plated metal and perfectly smooth, it can easi,y be sterilised by means of boiling water, it can be applied "in once," and with less pain to the animal and labour to the operator than the insertion of a number of sutures; the sharp teeth cause less irritation than suture material, and the fine screw arrangement permits it to be adjusted to any degree of tension, either quite closing the vulval opening, or permitting the easy escape of urine and uterine discharges. In cases of chronic eversion of the vagina we have had both cows and ewes wearing these instruments for weeks, while fattening for the butcher, without displaying any inconvenience. Further, the instrument is easily removed and replaced whenever occasion arises, which cannot be done with sutures.

When all efforts to return the uterus have failed—and when it has been out for some time before detection and has become enormously enlarged, they do sometimes fail—there remains only amputation. This has been successfully accomplished, but need not be described here, as it is the work of the veterinary surgeon. In deciding upon this operation it must be remembered that if left alone the cow is certainly doomed, because the protruded organ will mortify, while if amputation is resorted to at once the animal may possibly recover and be fed for beef. After treatment in cases of successful reposition and retention consists in careful nursing, the use of antiseptics locally, and the administration of remedies calculated to keep down inflammation and prevent blood-poisoning, especially wherewhere the organ has received injury during its exposure or return. For this purpose salicylic acid has proved most effective. Unless there are special circumstances surrounding the case, such as superexcellence as a milker, or a high commercial value on account of pedigree, no attempt should be made to breed from a cow that has once suffered from this lesion. In many cases recovery is so complete that the animal is quite capable of breeding again, but there is a distinct risk of a recurrence, and at calving time such animals should be carefully watched and put into a truss, and every effort made to prevent straining. The mischief is that the recovered cow is often sent to the bull again, and sold when forward in calf, or "springing," without any intimation to the purchaser as to what happened at the last calving. If this was given there would either be no deal or a bad price, and the man who foolishly sends such a cow to bull should be honest and calve her down himself.—Pateley Bridge.

Treating Hogs for Lice.

Lice are frequently introduced into the herd when new breeding stock is purchased. It is always best to examine newly purchaeed stock before turning them with the herd. The louse is gray in color with black along the side of its body. It is from one-eighth to one-quarter inch long when full grown and is therefore easily detected with the naked eye. The presence of large white eggs or "nits," on the hair is sufficient indication that the animal is infected. They may be suspected if the hogs do considerable scratching, particularly after night. The lice will be found in greatest numbers back of the ears, behind the forelegs and around the root of the tail.

If the weather is warm enough and a dipping tank is convenient, the animal should be dipped in any of the common coal tar dips.

If these are used, however, it will be necessary to repeat the treatment during the second week, as the dip has no ill effect on the eggs. The eggs generally hatch in eight days and two dippings are usually sufficient. This depends, however, on the care taken in dipping and the hogs should be examined after being dipped to prove the absence of lice.

Where there are only a few animals to be treated or when the weather is cold, hand-dressing will have to be resorted to. Kerosene emulsion seems to give the best results in general for this purpose. The emulsion is made as follows: Take 1 pound of soap and dissolve in two gallons ;of water. When thoroughly dissolved, add one gallon of kerosene. This will make enough for treating 15 to 20 hogs. If a spray pump is used, to apply the wash, dilute the above solution with 5 parts of water. If a spray pump is not convenient, dilute the solution with 15 parts of water and apply with a brush. Thorough rubbing with the brush loosens many of the eggs so that it is seldom necessary to give more than a second treatment in this manner. This treatment commends itself as being simple effective and inexpensive, save as ;to the element of time. Care should be taken in cold weather not to allow the hogs to get out in the wind until they are thoroughly dried, as they are quite susceptible to pneumonia.—Iowa Agriculturist.

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With "INTERNATIONAL STOCK FOOD"—
The best known and most reliable Stock Food on the market.
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Here Is What One Stock Raiser Says
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Gentlemen :—
Please find enclosed postal notes for $15.00, the amount of my account. I have found International Stock Food excellent for my horses and cattle, and pigs. It has given me every satisfaction, and I would not be without it. As soon as my present supply is finished I shall send a further order.
(Signed) J. V. SMITH.
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See How the Whole Top Opens Up
The Wringer Board extends from the side, out of the way of the cover. This allows the entire top to open—makes it easy for you to put in and take out clothes—gives you plenty of room to work.
MAXWELL'S HIGH SPEED CHAMPION is the only washer with this big opening. It is also the only washer that can be worked with a Crank Handle at the side as well as with the Top Lever.
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Maxwell's High Speed Champion is the best constructed, the easiest running, the handsomest finished washer on the market.
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DAVID MAXWELL & SONS,
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Maxwell's Favorite Churn
The kind of Butter you make, depends much on the churn you use. If you want rich, delicious, quality butter, get a Maxwell's "Favourite" Churn.
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Metallic Ceilings are fireproof, absolutely.

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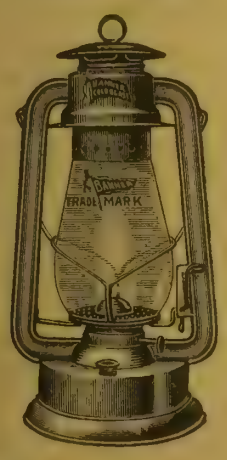
Double Seemed Well Cannot Leak.



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To any person who can supply the correct names of these two well-known Canadian Towns, and fulfil conditions below, we offer our 15-Dollar Lady's **SOLID GOLD WATCH**, fully jewelled. Stamped, as a **FREE GIFT.** (Silver Watches are presented to Gents.)

Send your attempt, together with stamped addressed envelope for reply to FELLOWS & Co., Wholesale Watch Merchants, 79 Adelaide St. East, Toronto. The winner is required to purchase a Chain from us to wear with watch. The name of this paper must be mentioned. Prize-winners of last competition were :—

Mr. Lawrence Fisher, Union St., Waterloo, Ont.

Mr. J. Ferguson, 52 Marquette St., Sherbrooke, Que.

J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is that not better than to pay a five dollar doctor's bill? For sale by all dealers.

Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St., St. John, New Brunswick.

Temperature in Health and Disease.

In connection with the table of average normal temperatures of the principal domesticated animals, and their slight variations due to ordinary physiological influences, it may be pointed out that forty years ago, or less, the test for the existence of fever and inflammation in animals under treatment for disease was the state of the pulse and such indications of increase or decrease in the internal temperature as could be gathered by putting the fingers into the mouth, and that of the body surface by feeling it. It is astonishing what the old-fashioned cow-leach was able to do in this respect.

Now we have a much more reliable and sensitive instrument than the fingers, in the shape of the clinical thermometer. This cheap and handy little instrument is calculated to be of great assistance to the horse-man and stock-owner who does not understand much about the pulse and its indications in disease, for the temperature is something he can see registered, and the register remains fixed until the index is disturbed. The principles of thermometry are not difficult to master, and every animal owner, and especially anyone who keeps a large head of stock, may advantageously acquire and learn the use of this instrument.

There are several makes of clinical thermometers, but the essential features are much the same in all of them—a hermetically sealed glass tube with a bulb at one end containing mercury, a graduated scale with figures marked on it, and a self-registering index, which shows the internal temperature of the body of the animal on which it is used, and remains in position until a few vigorous shakes or jerks dislodge it.

The ordinary clinical thermometer used by the veterinary surgeon is the same as that employed by the medical practitioner, from whom it was originally adopted, but a few years ago there was brought out an animal clinical thermometer, suggested by Professor F. Hobday, F.R.C.V.S., which is best suited for the purpose of the stock-owner, because it leaves him less dependent on memory as to the normal or healthy temperature of the different animals of the farm. The instrument, which is sold at prices ranging from 3s. 6d. to 10s. 6d. by veterinary instrument makers, is graduated from 95 to 112 degrees, and each degree, divided into fifths, has arrow marks indicating the average normal temperature of the several domesticated animals.—Pateley Bridge in Farm and Home.

Insurance Against Blackleg.

Satisfactory immunity is readily granted to cattle at the present time against the ravages of blackleg, or symptomatic anthrax, says a government bulletin, through the injection beneath the skin of the susceptible animal of some material containing the living but weakened germ of the disease. The amount of this material is so graduated that it causes the prompt development of the very disease that is being guarded against, but only in a mild and comparatively harmless degree. There is considerable elevation of temperature, and there may even be limited tumor formation, but only in the rarest cases does this type of blackleg, that has been intentionally produced by inoculation, progress so far that the animal is seriously injured. The value of artificially produced immunity in the struggle against this disease is shown by the fact that the loses of young cattle which reached from 15 to 20 per cent in certain infected localities previous to the discovery of vaccine treatment, have been reduced to one-half of one per cent at the present time where vaccines are used.

Gathercoal Barn

Shingles Catch Fire

One big, live spark, and shingles catch like kindling wood. Besides, the thousand curled-up edges give the best sort of lodgment and starting place for flying brands.

One-half the fire loss would be prevented if shingle roofs of adjoining buildings did not *catch* sparks blown from fires.

NEPONSET

PAROID ROOFING

Is Made to Resist Fire as Well as Water

Buildings covered with smooth, fire-resisting NEPONSET Paroid stand undamaged next to big fires when a shingle roofed building would be doomed. You can greatly reduce danger of fire if you use NEPONSET Paroid, which lasts longer than shingles and costs less to buy and less to lay.

You make a permanent investment when you buy NEPONSET Paroid; roofs laid 13 years ago are still good. Farmers who have studied roofing requirements are putting it on their best barns—on all buildings worthy of the best roof protection.

NEPONSET Proslate is the NEPONSET Roofing for your house. Looks like rich brown stained shingles—but is without their defects.

If you have a roof problem, solve it right. NEPONSET *book of facts may help you.* Today *is the day to send for it.*

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This Food-Tonic Quickly Restores Strength

After a serious illness, ordinary food should be supplemented by a strengthening tonic. For this purpose

NA-DRU-CO Tasteless Cod Liver Oil Compound

is recommended very highly. In its preparation the disagreeable flavour of the natural Cod Liver Oil is entirely removed, while its well known nourishing and tissue-building qualities are retained. The use of hypophosphites together with the active principle of Wild Cherry and the Tonic properties of Tolu, and Extract of Malt is also part of which aids in the assimilation of other foods.

Children in particular enjoy the pleasant flavor of Na-Dru-Co Tasteless Cod Liver Oil Compound, and quickly regain health and strength when Nature is aided by this scientific food-tonic. Your Druggist has it in 50c. and $1.00 Bottles.

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FOR EVERY AILMENT THERE'S A NA-DRU-CO SPECIFIC BEARING THIS TRADE MARK. SEE THAT YOU GET IT.

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Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

THE HORSE.

Grooming Horses.

In dealing with this question, a distinction should be made between "light" horses which the farmer uses for his business or pleasure, and the horses at work on the larm. In the case of the farm horse, a good brush-over is all he usually gets in the way of grooming, and is as much as he really requires. The light horse, on the other hand, requires a good deal of grooming, and it should be borne in mind that though a clean, shiny and smooth coat is one object in the case of the light horse, it is not the ference between the stabled animal and the horse in a state of nature. As long as the horse remains in a state of nature, taking only the exercise required for gathering his food, and feeding only on laxative diet, grooming is not needed, because the debris of the food and the excretions of the system are carried off mainly by the action of the bowels and kidneys. The cart-horse, whose work is slow, can get on with very little grooming; the hunter and the race-horse, on the other hand, whose whole systems are developed to the utmost, require much more grooming than is necessary for the carriage and the ordinary riding horse.

By means of glands in the skin an albuminous fluid termed "sweat" and the loss of fat which it involves in a fatty material called sebum are secreted. This and the dandruff, or powder removed from the skin by brushing, are important when considering the need for grooming more or less. In the case of exposed horses the presence of this greasy secretion prevents the penetration of rain, and it also guards against undue loss of heat. Free grooming, therefore, by the loss of fat which it involves in the removal of the dandruff, exposes the animal to the risk of chill. How much or how little of this fatty material is present will depend on the diet. Fed on hay alone, there is very little in the dandruff, while on oats there is a considerable amount, The heavy farm-horse usually gets a great deal more hay than oats; he moves at a slow pace, and his work exposes him to the elements very much, in addition to which he is often turned out all night to grass. It is much more important that he should be ted and his food be partly digested before he is turned out to work than that he should undergo a lot of brushing and currying.

The first thing the driver should do on reaching the stable is to give the horses as much water as they care to drink, and throw them a feed of corn. The dung should then be mulched out, together with the soiled straw, the bedding tucked up under the manger, the shoes examined, and the stalls swept out clean. If the quarters are very dirty, they should be water-brushed. A little litter is then shaken down under the feet.

The tools most commonly employed in the farm stable are the currycomb and dandy brush—the body brush, used so freely in the light-horse stable, being rarely used, and not really necessary. The currycomb should be employed lightly to loosen and separate hair matted with sweat or dirt, or to remove dried dung from the quarters. In the light-horse stable it is an instrument employed solely to clean the body brush of dust and dandruff, and should never be used on the skin. It will set some thin-skinned, high-couraged horses all ends up, and even in the case of the thicker-skinned, less sensitive, and more docile cart-horse it should not be rubbed to and fro into the hair and ground into the skin in the manner commonly practised. The actual cleaning should be done with the whisk-brush, commonly called a dandy. The horse should be turned in the stall, and, beginning at the near side, the head and neck, and parts of the body as far back as behind the shoulder, should be well brushed. taking the brush in the opposite hand the off-side should be similarly treated. Special attention should be paid to the poll, the crest or root of the mane, and the hair on the legs. In stables where the legs are not washed on returning from work there may be a good deal of dirt to remove from them, and there is no item of more importance in grooming heavy horses than attention to the proper cleaning of the legs and hair about the heels. To a limited extent the currycomb may be employed here to loosen the dirt, and where the horse has an abundance of long silky "feather" the mane comb may also be used with advantage. Having finished with the fore-end, the horse should be again turned to the manger, and the body, quarters, and hind legs well brushed. The root of the tail is a part much neglected, and very often its dirty condition is the foundation of that irritation which causes the animal to rub it against the stall-post or other projection, of course causing soreness and loss of air.

After all this brushing there will be a considerable amount of light dust settled on the surface of the hair, and this is generally removed by a wipe over with a coarse rag or piece of sacking, which also gives more or less polish to the hair. In the light-horse stable this polishing is done mainly with a wisp, finished off with a dry, soft rubber, but the wisp is almost unknown in the cart-horse stable—more's the pity, for it is an excellent polisher of the coat, and a grand stimulant to the skin. Its principle is friction, and friction will polish a stone. Wisps are made either of hay or straw, the former for preference, twisted up into a long band, and then into the form of a pad in a fashion easier done than described. A cart-horse may have too much brushing, but hardly too much wisping, and as it is hard work he is never likely to get it. After wisping, the mane and tail should be combed out and lightly water-brushed, the eyes, nostrils, duff, and dock sponged clean, and a general wipe over given with a soft rubber. If any vigour has been put into the business, the horse should then look well, and be sufficiently clean in his skin for his welfare and his work. To make his labour effective, and to produce the best results with the least expenditure of power and in the shortest time, the man should aid his muscles with his weight. He should stand well away from his horse, and lean his weight on his brush or wisp, especially the latter, using long, clean, steady strokes with plenty of weight behind them. This pentrates the coat more efficiently, polishes it more effectually, and is really less exertion to the man than if he employs his muscles only. Except in the case of the currycomb used to separate sweaty hair or a coat caked with dirt, the working should follow the natural direction of the hair. It is less irritating to the horse, and more effective as regards cleaning. If the horses are turned out at night during the summer, or run in open yards, less grooming is required than with the stabled animal. The night temperature is often low, and the weather often wet. The great thing, then, is to get them up early, and give a feed of corn before they are yoked, letting the grooming consist of a light brush over and in making them look as well as circumstances will permit. The grooming finished, permit the horses to stand feeding until the time arrives to get away to the fields to be ready to start into work at the customary hour.

What is done at night when they return must depend a good deal on circumstances. It is desirable to leave horses dry and comfortable, especially about the extremities, but we are not believers in worrying around horses for hours after their day's work is over, and in these matters there is no great difference between horses and men. It is no good having men about the stable half the night; get them there in the morning if you want your team to look well, work well, and last well. We have said nothing up to now about the "light horse," except by way of comparison, nor if he is engaged in agricultural work is it necessary. If his feeding and work are identical he may be treated on similar lines, but if he is used for fast work and is fed to enable him to do it, his grooming must be of a more thorough character. We must spend more time on it, and employ different tools and methods.

A Docked Horse.

Some of us Christian people have woefully failed in sturdy opposition to wanton cruelty, to suffer the return of a practice which should have passed with the dark ages. See the noblest of our animal brethren, the horse, deformed and tortured to please a whim of degenerate taste. A docked horse is such a monstrosity, artistically, that it is astounding that those claiming even rudimentary taste can regard it with even the least degree of allowance. Artistically, a docked horse is in the same plight as a bird without a tail, the most unbalanced, forlorn creature that instinctively hides itself for very shame and self-disgust.—James H. Ecob, D. D.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevent the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

Hillsboro, N. S.

DEAR SIR:—I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.
W. A. C. RANDALL, M. D.

MESSRS FRASER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASER THORNTON & CO., Cookshire, Que.

DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

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OR PAIN KILLER FOR THE HUMAN BODY
Gombault's
Caustic Balsam
IT HAS NO EQUAL
For the Human Body —It is penetrating, soothing and healing, and for all old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions CAUSTIC BALSAM has no equal as a Liniment.
A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints
We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.
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ABSORBINE *STOPS LAMENESS*
from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered. Horse Book 9 E free.
ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Will tell you more if you write. $1 and $2 a bottle at dealers or delivered. Manufactured only by
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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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is interested and should know about the wonderful
MARVEL Whirling Spray
The new Vaginal Syringe. Best —Most convenient. It cleanses instantly. Ask your druggist for it
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If you suffer from bleeding, itching blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Sick headache is caused by a disordered stomach. Take Chamberlain's Tablets and correct that and the headaches will disappear. For sale by all dealers.

POULTRY.

Time at Hand for Separating Boarders From Workers.

The time has arrived when the layers and the boarders must be separated if the poultry is to pay for its keep and a profit as well during the winter. Every unprofitable bird should be disposed of as soon as fitted for market, barring, of course, the best of the cockerels, which are to be saved to breed with next year, or to be sold in the spring for breeding purposes. No matter what the breed is, the cockerels that come nearest to the requirements of the American Standard of Perfection are the ones that should be kept, and not too many of them; this of course depending upon the circumstances in each individual case. The average farmer will not dispose of more than half a dozen cockerels to good advantage in the spring, though he might sell many more at a good price if he advertised skillfully and judiciously. The rest of the male birds should go as prime roasters at Thanksgiving, or certainly not later than Christmas, and ought to bring a good price, being properly fattened.

These birds should be placed in a pen by themselves, where they are confined to narrow quarters, being fed liberally with a wet mash, consisting largely of cornmeal, some fat meat, and a liberal supply of cracked corn, milk, table scraps and whatever fattening foods are easily obtained. A few weeks of feeding in this way will add materially to the weight of the bird as well as the quality of the meat, and if the best market is sought, to the profits on each individual bird. Keep the birds that are colored right, brilliant in plumage, active, that crow at an early age, that dominate the flock, are sturdy of build and have brilliant eyes, and send the rest to market after a time in the fattening pen.

The same rule applies to the pullets when properly adapted. An expert can tell at a glance which of the pullets may reasonably be expected to become good layers, and will quickly dispose of those that are likely to become mere boarders at the expense of the rest. Actual value as layers can be positively determined only by trial and records kept with trap nests, but the careful observer who uses good judgment need make few mistakes, and can keep his flocks fairly clear of drones. The well-bred birds that are bright of eye, brilliant of feather, with plump clean legs, breast well covered with firm flesh, fluff, broad and well formed, those that are first off the roost in the morning, last on it at night, and busily scratching and singing all day long, are the ones that will make good layers and money makers when the cold winter comes; and these are the birds that should be given good care, good food and a good place to spend not only their days but their nights; and the reward for the attention and care given them will be ample.

The listless pullets, those that are dull of eye or narrow of breast or stern, those that eat as though it were a task instead of a pleasure, should be separated from the others and prepared for market as soon as possible, but they should not be fattened in the same pen with the cull cockerels. They will do much better by themselves, and it will be better for the cockerels too, to keep the two separate.

It is a mistake to kill all of the yearling hens every fall, or to get rid of them in any way, though many breeders do it. A few hens will lay well in their third year and amply pay for their keep, besides furnishing the very best of eggs for hatching, and many hens will pay a good profit the second year from eggs for market alone. Those that have laid well the first year and show little or no diminution in activity the second summer will be profitably kept through the second winter if well provided for. It is better to keep them separate from the pullets and watch them carefully and get rid of any that are not laying well by December, after moulting. Do not try to force them, but give them plenty of green food and some meat, keep a vigorous cockerel that is strong in the points where they are weak, and your eggs are likely to hatch well and the chickens to be strong, in the spring. Do not use pullets' eggs for hatching purposes when it can be avoided. You may have good luck with them in every way, but the chances are much against it.

When you look your yearling hens over in the fall, and those that are older, if you have any, give them a thorough inspection for physical defects. If you have many hens, there are likely to be some that have distended crops, or that bag down behind, or that have sore back either through roughness of the cock birds or from other causes, or that show signs of weakness in one way or another, and these should be quickly sent to market to avoid serious difficulties later. If there are signs of disease that are likely to injure the carcass, the bird should be killed and burned or buried deep. It will not pay to attempt to cure such birds unless they have peculiar value as breeders, and even then the result will be of doubtful value.

Get rid of all your weak birds before winter sets in in real earnest, and give your strong healthy birds the additional room; be sure they are free from parasites at the outset, and keep them so; give them a variety of food, including meat and green stuff of some kind, and plenty of it; keep the quarters clean, and occasionally dispose of a bird that is not coming up to your expectations as a layer, and there is no reason why the egg basket should not contain an abundance of eggs all winter long.

The following is a good rule to adopt at this season: "When in doubt, cull."—H. L. Goodwin in Maine Farmer.

Poultry Fattening.

A bulletin entitled "Fattening Poultry," describing successful methods of fattening poultry on a large commercial scale and giving complete data on the feeding of over 100,000 birds, has just been issued by the United States Department of Agriculture. It gives information of operations on an extensive scale, and so far as known, is the first publication showing the cost of producing a pound of gain in poultry.

"The successful feeding of poultry depends largely on the ability of the feeder to notice the condition of the chickens on feed," is one of the fundamentals laid down by the bulletin. "The common practice in poultry packing houses is to feed each lot 17 days or less. Most of milk-fed chickens are fed 14 days. Practically all of the special feeding in this country involves the use of milk, which produces the 'milk-fed chickens of the market. Milk, while the least expensive, seems to be the most essential constituent of the ration, and when a feeder cannot get milk in some form he generally does not attempt to fatten poultry commercially.

"Crate feeding from troughs is the method employed in this country by most of the large fattening establishments, with 6 to 10 fowls in a crate. Birds fed only for a short time may be forced on highly concentrated feeds, whereas if fed longer they may need a ration containing a greater variety and less concentrated.

Get the Hens Back on the Job Shelling Out Eggs
We guarantee you will cut the molting period in half if you give your hens
Pratts
Poultry Regulator
They will be back at work again laying more eggs than ever. Pratts Poultry Regulator is a Conditioner, Regulator, Egg Producer and prevents disease by keeping the digestive organs working properly, regulating the bowels and purifying the blood.
Satisfaction Guaranteed or Money Back
Our dealers refund your money without question if any Pratt Preparation fails to please you.
25 lb. pails $2.50. Also in smaller packages and 100 lb. bags. If your dealer cannot supply you, write us.
Pratts Cholera Remedy is guaranteed to prevent and cure this disease. Pratts Lice Killer will positively destroy lice.
We will mail you free copy of our 1911 Poultry Book on request.
PRATT FOOD COMPANY OF CANADA LIMITED
Dept. 68. Toronto, Can.

Milk For Laying Hens.

Milk is excellent for both breeding and laying hens. It contains lime, albumen, and other elements necessary for the production of eggs. On the farm, skim milk is usually abundant and forms one of the cheapest and at the same time one of the most valuable foods to be had for fowls. Glabbered milk may be made into cottage cheese where a large amount of it is to be secured. It may also be fed in the raw state in limited quantities or in the mash. Do not feed it with the calculation of its forming their sole drink. Milk creates a thirst rather than quenching it. Butter milk is also excellent for laying hens, but if fed too liberally it has a tendency to produce looseness of the bowels.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

The Man Behind the Smile.

I don't know how he is on creeds,
I never heard him say;
But he's a smile that fits his face,
And he wears it every day.

If things go wrong, he don't complain
Just tries to see the joke.
He's always finding little ways
Of helping other folk.

He sees the good in every one,
Their faults he never mentions;
He has a lot of confidence
In people's good intentions.

No matter if the sky is gray,
You get his point of view;
The cloads begin to scatter
And the sun comes breaking through

You'll know him if you meet him,
And you'll find it worth your while
To cultivate the friendship of
The man behind the smile.

Love's Barrier.

(Continued from last issue.)

"You will have to take your place, dear, and why not at once? It will be better so. Everybody will expect it. It is natural that at first you will feel a little strange. People will be very kind. I love the villagers. They are so simple, outspoken and true. They never say behind your back what they are afraid to say to your face. I think moorland folks are like that. There's something in the wideness of things that helps them."

"I shall say and do the wrong things all the time when I do anything at all, unless you are there to help me," said Helen decidedly, pausing with the soap in her palm, and the water dripping from it. "It isn't fair. I told Claude it must be a condition, and you know I said it in my letter to you, too."

"Yes, you did; but you see, dear, neither of us took it seriously. Both my brother and I felt from the first that I should have to go. I don't feel in the least bitter about it, and, after all, the Court Farm is not very far off. You can see me easily as often as you wish."

"How far is it?"

"About three miles up in the Fells direction, not very far from Mardocks. But there, that doesn't help you much. You will soon learn the geography of the place when Claude begins to take you about the parish. We have to think what will be best for him, dear. I know that he prefers to have the house and you to himself. Any man would, and the sister who outstays her welcome is, well, to put it quite plainly, a fool for herself."

Helen ruefully dried her face on the rough surface of Jane's best huckaback towel. There was nothing soft or luxurious in the whole of the house; everything had been purchased with a thrifty eye to its wearing qualities; and there had been no stock of fine damask or linen or old silver to come down, the sort of legacy which adds grace and distinction to a homeplace.

For the first time Helen began to wonder what the early surroundings of the Secretans had actually been—the present product of their environment seemed so hopelessly common. It was a good name, and though he had spoken of his poverty, she had not taken him so literally. She had been in many country parsonages, some of them poor and homely enough, but always there had been the redeeming touch, the air of refinement, the indescribable something which marks the surroundings of the gently born. She had never seen anything like this.

Jane's cheerful voice went on gathering strength and cheerfulness now that the ordeal was actually over.

"You will find Hannah very good as girls go. She belongs to Midcar, and I trained her myself. She really begins to cook quite fairly well, simple, plain things, of course, such as we have been accustomed to and can afford, and we have a woman from the village once a fortnight for the washing. Her name is Mrs. Ridd. She can always come for an extra day when you want her. The Yorkshire folk are very hardy and good workers. I never have to complain that any of them are unwilling."

Helen let the cloud of her hair fall about her shoulders, and Jane, leaning forward, fingered it lovingly.

"How beautiful! It has a red-gold light on it in parts," said Jane, who loved beauty, but could not create it. "Some folks 'as 'air an' some 'asn't," she added humorously. "Now look at my bit of a scrag. I can't do anything with it, however hard I try."

"That's what's the matter, dear, you try too hard," said Helen, peeping through the red-gold cloud. "Hair was never meant to be screwed and pinched like that. It wants coaxing and petting. Some day I shall do it all over again for you and take all that bead-trimming off your frock," she added daringly. "What's that?"

"Hannah is trying to ring a gong we never use!" cried Jane, laughing almost hysterically. "Can't I help you? We must hurry; Claude will be getting quite impatient while we are enjoying our women's talk. He hates to wait—let me help you."

"We can't hurry," replied Helen solemnly. I'm sorry he hates waiting, but to-night he mustn't mind. Don't you love women's talk, Jane, when women understand one another? It's lovely, I think, and it's quite lovely to have you."

As she deftly wound the thick coil about her shapely head, she bent suddenly forward and kissed her new sister again, Jane rose rather hurriedly her eyes full of tears.

"I'll just run down, dear, and see that everything is quite right, and tell Claude you won't be a minute. We are dining to-night actually in honour of you. Usually we have high tea, you know, at half-past six or seven, according to what there is to do in the evening."

Helen nodded, her mouth full of hair-pins, which made Jane remember Lydia Rash. Her heart was very light as she sped down the stairs. With such a delightful creature all things were possible. She foresaw that the personal loneliness from which she had suffered so often, not quite understanding the dull ache at her heart, was over: She was going to be Helen's actual equal and ally, and they would never misunderstand one another. She was still smiling when she went through the open door of the dining-room.

"Well?" said Secretan with a note of strain in his voice.

"It's all right. She'll be down in a minute," said Jane, a little breathlessly. "I'll just put the plates on the fender. How lovely she is, Claude and how sweet. I've never seen anybody quite like her. She will astonish people very much."

Secretan's face lit up with the joy of pride and possession.

"I felt sure you would admire her, Jane. Tell me what she said. Does she seem pleased with things? She came out of something very different, I assure you. Never have I thought the house so bald and ugly till I tried to look at it through her eyes."

"Oh, she'll alter it quickly enough," replied Jane, bending down to the fireplace. It isn't that exactly. It's the unexpectedness of her, which makes her quite fascinating; but I can't think, really, how you dared ask her to marry you. Why, she simply might have married anybody."

"What were you talking about?" he asked jealously. "I've been listening to your tongues wagging for the last quarter of an hour."

"Oh, nothing but women's talk, dear. She was trying to persuade me to stop here, but it's impossible, of course. Tom Courtney is coming for me to-morrow afternoon at three o'clock. I thought that would give Helen and me a long enough morning to go over the house together."

She stood up beside him with her hands lightly clasped in front of her, her kind, strong face still illumined with an inward joy.

'She will be a power in the place if—if things go well with her, Claude. I do pray God they will go well. But——" and here she lifted her eyes with a sudden boldness to his face. "You will excuse me saying this just for once, Claude: I am going away to-morrow, and will pass out of your intimate life altogether. Helen will never be driven. She must be coaxed and petted," she added, thinking of Helen's own words regarding a more trivial matter. "She is a woman who knows her own mind, and if she is left alone, she will come quite all right."

"There's some hidden meaning in these words, Jane—what are they?" he asked quickly.

Jane made a little deprecating gesture.

"If there is a hidden meaning it is a very simple, innocent one, dear," she said in a low voice. "You have had your own way all your life. Our dear mother never crossed you, and I have followed just in her lootsteps. Perhaps I ought to have been a little different. You will not be able to go on just as you have been doing, dear, because Helen is one who will expect consideration and carve out a way for herself. She will have her own thoughts, her own ways, her own ideals. But there, pray forgive my little homily. It's my last chance, and please God, love will teach you, and Midcar Rectory will be a happy home, to which people will turn naturally in their joys and their sorrows. Yes, please God, that is what it will be."

The door opened and Helen came in. She was looking very radiant with the heightened colour which excitement and the cold moorland water had left in her cheeks. Secretan sprang forward to set her chair, but with a little smiling gesture she declined to sit at the head of the table.

"Not to-night, dear; I am only a guest, a guest at the inn," she added; and somehow the words sent a little chill across the table, and even Jane's uplifted spirit sank. She did not make any demur, however, and even while Secretan would have laughingly insisted, she slipped into her place and the meal began.

Pictures in Home Decoration.

Nearly every household is well furnished with pictures; the question is, What shall be done with them? For their preservation, they must be framed but how? In general, we find the

tea is the result of care and experience in blending—must be the combination of fine flavor, smooth strength and richness. Because all these elements are so generously included in Red Rose Tea it well merits the term "good tea."

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AFTER SUFFERING YEARS

Cured by Lydia E. Pinkham's Vegetable Compound

Fox Creek, N.B.—"I have always had pains in the loins and a weakness there, and often after my meals my food would distress me and cause soreness. Lydia E. Pinkham's Vegetable Compound has done me much good. I am stronger, digestion is better, and I can walk with ambition. I have encouraged many mothers of families to take it, as it is the best remedy in the world. You can publish this in the papers." — Mrs. WILLIAM BOURQUE, Fox Creek, N.B., Canada.

The above is only one of the thousands of grateful letters which are constantly being received by the Pinkham Medicine Company of Lynn, Mass., which prove beyond a doubt that Lydia E. Pinkham's Vegetable Compound, made from roots and herbs, actually does cure these obstinate diseases of women after all other means have failed, and that every such suffering woman owes it to herself to at least give Lydia E. Pinkham's Vegetable Compound a trial before submitting to an operation, or giving up hope of recovery.

Mrs. Pinkham, of Lynn, Mass., invites all sick women to write her for advice. She has guided thousands to health and her advice is free.

appropriate color of a frame in the picture itself. For example, a brown photograph looks well in brown of a shade half way between its lightest and its darkest tone. Black and white prints are best set in gray. Water colors and etchings with white mats are beautiful in bands of gold. Nowadays mats, however, are often discarded. Dull gilt is admirably suited to oils, although black may be employed.

The great danger in framing is that attention will be withdrawn from the picture itself. That danger forces us, in hanging our picture, to avoid large-figured or bright-tinted backgrounds, since the wall must be subordinate to its decoration.

Again, the obtrusive and treacherous cord must give place to an almost invisible wire; and it is amazing how heavy a weight fine wire will sustain. One nail is no longer considered the proper support for a large picture. Strength is secured by two hooks for the wire; thus the triangle it formed when leading up to a single point is exchanged for parallel lines, in harmony with those of the wall.

Some decorators feel that a massive piece of furniture should stand beneath a large painting to give apparent stability. Certain it is that a tiny ornament under a flicture of great weight seems in danger of being crushed.

Small views ought, indeed, to be grouped together, with care that the colored and the uncolored be combined separately. Then the groups themselves should be balanced. In fact, all pictures should be so massed that the light and the shade of any one or all may be nearly equalized. Of course, the effect of both natural and artificial light must be carefully noted.

Naturally the faces of our best beloved will be cherished in private or living room, instead of guest chamber or parlor. Yet an old portrait of homestead view, artistic in workmanship, ought not to seem obtrusive even to strangers.

The center of a picture should be nearly level with the eye, above it rather than below. Angels and madonnas, though, may perhaps be allowed to hover on airy hights, and a mountain may rear itself ceilingward. Streams of water pouring down upon our unprotected heads are peculiarly dangerous to peace of mind.

It is better to divide our treasures, and line hall or stairway, than to give parlor or living room walls a crowded appearance. Every view, every portrait needs space for itself in order to win recognition.

Time, study and patience are required to frame and hang pictures properly, but the end crowns the work, for thereby the home gains not only ornament but inspiration.

Home or House?

The very first requisite of a home is happiness. To make a happy home atmosphere, there must be no fear. There must be no friction or discord. The furniture must not be too good to use, the floors too beautiful to walk upon. The divans must be couches for repose, and if a tired body feels like lying down upon a mattressed bed in the daytime, no terror of disarranging lace covers and wonderful shams should stand in the path to rest.

A woman of tact and resource can manage to make her home comfortable and keep the appetites of her family appeased, while she allows each member of it to find comfort and freedom within its precincts, and retains leisure for the development of her mind. It is all a matter of disposition and excutive ability—and tact.

Don't be a Whet Hen.

Early in my married life I decided that there was more work here than I could possibly do, so I began studying which to do and which not to do. I finally decided it did not make much difference just so the most important things were done, and I kept my temper, not that I was in the habit of losing it often, but that I would not allow the duties of home to make me fretful. I settled the question early that my children should not in later years think of mother as "an old wet hen," and of home as a place where mother worried herself and every one around her, about the things that wouldn't stay fixed, and the things that couldn't be fixed.

I want to tell you mothers, not harshly, however, that many of you make your children miserable, and you don't know it, by fretting so much about the work and if you were to ask them after they had homes of their own, what you guess mother is doing, they would say, "Oh, just fretting around there—you know she always frets, but—it wouldn't be mother if she didn't fret." You see she wouldn't seem natural to them if she didn't fret.

Now, young mothers, I ask you with a heart full of love to consider this subject. You are young and can keep yourself from falling into this habit, and for the sake of your children and the peace of your home don't be "an old wet hen."

A GROWING SCHOOL IS

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

Just twice as many students enrolled in September of this year as in the same month last year.
It will pay you to attend this successful school.

Send for catalogue now. Address

W. J. OSBORNE - Principal, Fredericton, N. B.

A Sencible Merchant

Bear Island, Aug. 26, 1903.
Minard's Liniment Co., Limited.

Dear Sirs,—Your traveller is here to-day and we are getting a large quantity of your MINARD'S LINIMENT. We find it the best Liniment on the market making no exception. We have been in the business 13 years and have handled all kinds, but have dropped them all but yours; that sells itself; the others have to be pushed to get rid of.

W. A. HAGERMAN.

Last Year Was by Far the Best Year We Ever Had.
Last Month Was By Far the Best September We Ever Had.

Reasons: Up-to-date courses of training, superior equipment, elegant new premises, best of all, our strong staff of specially trained teachers.

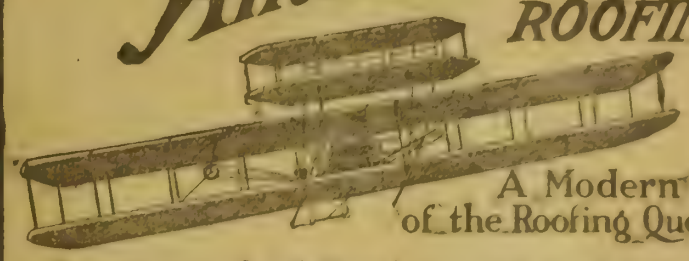
Send for catalogue.

S. KERR

Principal.

If you have young children you have perhaps noticed that disorders of the stomach are their most common ailment. To correct this you will find Chamberlain's Stomach and Liver Tablets excellent. They are easy and pleasant to take, and mild and gentle in effect. For sale by all dealers.

Amatite ROOFING



A Modern View of the Roofing Question

Tin makes a good roof *if you paint it.*

Canvas makes a good roof *if you paint it.*

Any felt makes a good roof *if you paint it.*

Even paper makes a good roof *if you paint it.*

But Amatite makes a good roof if you *DON'T* paint it.

On a painted roof, the paint is what gives the real protection. The rest of it has no function except to provide a smooth unbroken surface with no seams or cracks, to which the paint can be applied. Anything which has strength enough to keep the wind from blowing it away or the rain from beating it in, will be waterproof if you use paint enough.

Amatite Roofing, however, needs no painting. *It is a real roofing*—a roofing that can be left out in the rain without the slightest damage.

The wearing surface is mineral matter embedded into a heavy coating of pitch and never needs painting.

We shall be glad to send you a sample of Amatite free of charge if you will send a postal request for it to our nearest office. The sample will show you what the mineral surface is like.

Everjet Elastic Paint

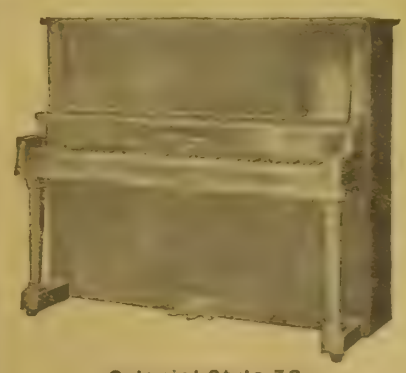
A lustrous carbon black paint, very cheap, very durable—for protecting all kinds of metal and wood work.

THE CARRITTE-PATERSON MFG. CO., Limited

ST. JOHNS, N. B.
HALIFAX, N. S.

THE PIANO THAT WILL ENDURE

Sherlock-Manning Pianos are built to last, because special care is given each smallest detail in their construction. The result is a piano that pleases the eye and ear, and that will satisfy always.



Colonial Style 70

Hear It's Rich Tone

Listen to the Sherlock-Manning Piano. You'll be charmed with it's rich singing tone. And moreover, this same beautiful tone will still be rich and powerful after years of service.

You can get no better value for your money. If you are thinking of buying a piano, see ours. We can save you a hundred dollars.

Write for address of warerooms where these beautiful pianos may be seen. Be sure and write for our latest catalogue.

If you do not know the Sherlock-Manning dealer near you, write us and we will gladly introduce you to him or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.

SHERLOCK-MANNING
Piano and Organ Co., LONDON, CANADA

(No Street Address Necessary)

The Care of Young Children.

Most doctors believe that the change from an exclusive milk diet to a more or less mixed diet should be very slow and gradual; the effect of the change being watched from day to day and week to week, bearing in mind that milk is the ideal food of the young child. Milk should be the chief constituent of the child's dietary until the sixth year; but beginning at the end of the second year, the milk diet should be gradually displaced by small quantities of chicken or mutton broth that have been skimmed of fat, rare steak, mutton chop, white fish, fresh vegetables, rice pudding, soft custards, cocoa, oatmeal gruel, etc. All kinds of pastry, confectionery and fried food should be excluded.

In feeding children in acute illness, Nature's method of induction of loss of appetite, obviously intended to prevent overfeeding while the digestive powers are weak, should be taken as a reliable guide. Delicate infants will sometimes withstand a serious illness with hardly any nourishment at all. Like fish they seem to sustain life on water; and this should be given to them very freely.

After a few days' illness, if food is still refused, an attempt should be made to have the child take small quantities of liquid food, such as freely diluted milk, toast water, albumin water, some artificial infants' food of recognized value, malted milk, etc.

Older children may be nourished on strained cereal, gruels, eggnog, chicken, mutton, or beef soup from which has been strained the solid constitutents, beef tea, beef jelly, water ices, ice cream, fresh fruit juice, etc. Great care should be exercised that all these foods are freshly prepared, and kept in a cool place, well-covered, in clean crockery or agate or glass dishes.

FEVER AND FEVERISHNESS IN CHILDREN.

Contemporaneously with cutting the teeth is a development of the nervous system, and similar changes occurring in the digestive organs, preparatory to the reception by the stomach of food other than milk. During this period these structures are particularly sensitive to all forms of irritation. It is not, therefore, surprising to find fever, convulsions, sickness and diarrhea common in infants cutting teeth. All or any of these symptoms may be caused by a chill to the surface of the body, from insufficient clothing, or by errors in diet.

It is to be borne in mind that acute illnesses may occur during the teething period; and that the fever which often occurs, is totally unconnected with teething. The rule should be not to credit "the teeth" with being the cause, until other causes for fever have been eliminated.

Tonsilitis is a frequent cause of fever in children. The throat should be examined as a matter of routine in all cases of feverishness. Irritation of stomach and bowels is a frequent cause of fever. The frequency with which children of all ages suffer from taking food unsuitable in quality or excessive in quantity, is well known; but the varied consquences of such injudicious feeding are frequently not recognized. It is surprising how the temperature may run up and the infant have convulsions simply from the irritation caused by a few undigested milk-curds, only to fall as rapidly to normal when this material has been gotten rid of.

Feverish attacks after children's parties are more common, and often of graver import than they were a few years ago. This often happens as a result of the pernicious custom of having the refreshments furnished by caterers, instead of having simpler foods prepared at home. It sometimes happens that the food furnished by caterers is not fresh; and the frequent use of tinned lobster and other foods is a serious menace on account of possibility of ptomaine poisoning.

BATHING OF INFANTS.

Do not try to bathe a child in your lap. Pad a table well with a folded wool blanket, and have some soft wool material for a covering blanket If the infant is feeble or the weather cold, a hot water bottle should be placed between the folds of blanket upon which the baby lies. If the table is large enough, place your bathtub on it; otherwise place conveniently on your right hand, on a chair or box. Place the fresh clothing to get warm and arrange toilet basket, towels and soap, oil, powder, etc, near the bathtable.

Have two washcloths, one for bathing the head, and the other for the rest of the body, in order to prevent possibility of contaminating the eyes. --Mary H. Tufts.

CARE OF THE TEETH.

Every year people are getting more and more familiar with the fact that good health depends largely upon good teeth. Horace Fletcher has demonstrated the necessity for chewing food thoroughly. We cannot possibly get proper nourishment from our food unless it be well masticated.

Not only good health, but good looks, demand well-kept teeth. Who has not seen an otherwise pretty face spoiled by poor teeth? The boy or girl who has his own living to make will find that he is seriously handicapped even in applying for a position if he has neglected his teeth.

Mothers cannot impress upon their children too early the importance of systematically caring for the teeth. Just as soon as the little toddler is able to hold a toothbrush he should be taught to brush his teeth before breakfast, after each meal, and just before going to his little crib at night. The toothbrush should be carefully chosen. It should not be too stiff nor yet too soft.

The question of what dentifrice to use is most important. There are dentifrices on the market which are dangerous, inasmuch as microscopic examination of them shows that they contain pieces of gritty matter which are absolutely injurious to both the teeth and the gums. The teeth should

Had a Weak Aching Back and a Nasty Sick Headache

Mrs. W. R. Hodge, Fielding, Sask., writes:—"A few lines highly recommending Doan's Kidney Pills. For this last year I have been troubled very much with nasty sick headaches, and a weak aching back which caused me much misery, for I could not work, and had no ambition for anything. My kidneys were very badly out of order and kept me from sleeping at nights.

"I tried many kinds of pills and medicines but it seemed almost in vain. I began to give up in despair of ever being well and strong again when a kind neighbor advised me to try Doan's Kidney Pills, which I did, and am thankful for the relief I obtained from them for now I am never troubled with a sore back or sick headaches. I will always say Doan's Kidney Pills for mine and can highly recommend them to any sufferer."

Price 50c per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct specify "Doan's."

A Windsor Lady,s Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser." also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

When you have a bad cold you want the best medicine obtainable so as to cure it with as little delay as possible. Here is a druggist's opinion: "I have sold Chamberlain's Cough Remedy for fifteen years," says Enos Lollar of Saratoga, Ind., "and consider it the best on the market." Sold by all dealers.

Feel Young Forever

Let Me Put Vitality Into Your Blood, Nerves, and Body. Follow Me to Health and Manhood. I Can Show You What Others Have Done to Change Debility, Weakness, and Despondency Into Health, Strength, and Vigor.

Vitality is the measure of the man in this day of big deeds and monster achievement. He who has great vital strength cannot grow old. Years count for nothing if you have the vitality in your blood and nerves. My Health Belt with suspensory attachment is the FOUNTAIN OF PERPETUAL YOUTH. It pours quantities of electro-vital force into your weakened system. It works quietly, mildly, continually hour after hour while you are sleeping. It is your opportunity as it has been the opportunity of tens of thousands before you ; it supplies you with that vitality upon which health and courage depend. It is a power and strength giver of the highest order. No drugs, nothing to take internally, no dieting, no hardships of any kind. Simply use the Health Belt nights until you are restored to vigor. It never ceases until you have as much courage and self-reliance as the biggest, fullest blooded man you know. Your eyes will have the sparkle of full health, you will have the vigor of a strong, healthy man. Henry Eggman, Norwich, Ont., writes : "Thanks to the use of your Health Belt I am young again. It restored me after all else failed. Use my testimonial as you see fit." This is but one of thousands. Get the free books and read of others.

Special rheumatism attachments to my Health Belt carry the Electro-Vitality to any part of the body, the neck, back, arms, legs, feet. It finds and drives away all pains and aches ; it has often completely cured a weak back in one night so that it never returned again. It is a wonder remedy for chronic ailments of the nerves, blood and muscles.

FREE UNTIL CURED.

Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the word. Liberal discount for cash if you prefer to deal that way.

These Books Sent Free

Let me send you these books. They contain much valuable Health information, are fully illustrated, describe my Health Belt. Fill in coupon or send your name and address on a postal card, or if possible call at office and see Belt. Office hours : 9 to 6 : Saturday until 9 p. m.

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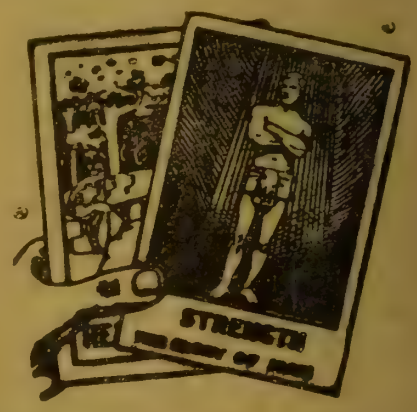


Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St., St. John, New Brunswick.

This Beautiful Catalogue

Is handsomely printed on fine quality paper of extra weight and finish. It shows many hundreds of different designs in Men's and Women's Fine Furs and Furlined Garments. Eighty pages of elegant halftone engravings with truthful descriptions and PRICES and such prices! Never before have the people of Canada been offered an opportunity to buy

PAQUET FURS

At the actual MANUFACTURER'S PRICES of Canada's Largest Fur Factory. And REMEMBER—you don't need to pay one cent in advance! We'll send the Furs, PREPAID, to any Express office in Canada for Free Examination. If you are not convinced that the value cannot be matched, return them, at our expense. If you are pleased—and we KNOW you will be—pay the Express Agent the catalogue price and the Furs are yours. Could anything be fairer?

The Coat Illustrated Here.

No. 208—Man's Coat in Genuine Raccoon, very good quality, well matched skins, length 50 inches, shawl collar, quilted lining, Special

$50.00

THE PAQUET COMPANY LIMITED.

QUEBEC, - Canada.

be cleansed with lukewarm water and a good dentifrice. It is well to brush the upper part of the teeth downward and the lower teeth upward. The under surface of the teeth should be carefully brushed from the gum toward the grinding surfaces. The grinding surfaces, of course, should be thoroughly brushed in all directions.

After each meal all particles of food should be carefully removed from between the teeth with either a quill toothpick or with dental floss. Do not use a wooden toothpick. They are dangerous as tiny splinters are apt to lodge between the teeth.

In addition to being painstaking about the daily care of the teeth a semiannual visit to a good dentist is necessary. He should examine the teeth thoroughly and fill all minute cavities. The old saw of a stitch in time saving nine is especially applicable in dentistry. A tiny cavity may be filled with almost no pain or expense. If allowed to run a short time it will easily cost nine times the pain and expenditure.

So closely allied are good health and good teeth that in many public schools dental inspection of the children has become a part of the school system. Blanks with diagrams of the teeth are furnished and the needs of each child are marked and sent to the parents. With these blanks goes an urgent recommendation that the child be taken at once to the family dentist. Where parents cannot afford this the work is usually done by dentists who devote one-half a day a week to the cause.

When dental inspection becomes compulsory in all schools we will certainly have a stronger, healthier race, for good health and thoroughly clean teeth go hand in hand.

The Worth of a Wagon Lies in It's Tires

Wheel and tire troubles are over for the man who equips his farm wagons with T-K Wide-Tire Steel wheels. They will carry 25 to 50 per cent. heavier loads in deep mud or over the rockiest roads without delay or danger of accidents. They make farm work lighter; stand any strain and are proof against breakage.

T K Wide Tire, Steel Wheels and Handy Farm Wagons

This is the sort of wagon you want for doing all kinds of work around the farm. It is handy for loading and unloading, will carry as great a load as any team can haul, and because it never needs repairs it is the most economical wagon on the market.
Write for descriptive literature.

Tudhope-Knox Co., Limited, Orillia, Ontario

Home Music a Pleasure Asset.

It is an acknowledged fact that the value of music in the home cannot be overestimated. This is especially true in the case of homes scattered far and wide, because it is a means of bringing people together more frequently than they would perhaps meet under ordinary circumstances and everybody knows recreation and sociability are necessary to the happiness and, in fact, health of every man, woman and child. If we are to keep well and happy we must enjoy the society of each other from time to time and nothing adds so much to the pleasure of social festivities as music.

Those who love music will need no other inducement to lend their presence to any gathering where it will be heard, while those not particularly interested in the art can always enjoy the social side of it and be duly appreciative. Therefore music benefits directly and indirectly and certainly everyone is better for it.

Again, music is one of the greatest charms for whiling away dull evenings. Time simply flies under its spell, and when weather conditions prevent any visiting or merrymaking, to be able to turn to music in one of the pleasantest recreations imaginable. Hence it will be seen how necessary it is to make some provision for music in the homes of those people who cannot, because of circumstances, attend concerts, theaters and similar public entertainments, but must depend upon each other for amusement.

Vocal music is always popular, especially with older persons, and when there are a number of young people available it is quite an easy matter to form a quartet of voices and a chorus which under a leadership, could get up similar cantatas, part songs, etc. People who love music are by no means confined to the class living in cities and large towns. There are many living remote who are quite as appreciative.

If the singing could be accompanied by an instrument so much the better, and, if it could be a portable one the value would be increased, because the musicians could visit from house to house together.

The talking machine has undoubtedly done much to lift the monotony from the lives of those living far apart from each other. All that is best in music and dialog can be brought to one's door by the talking machine. All or any of it may be had for the buying, so that all tastes from grand opera to vaudeville may be gratified.

Utilizing Unsalable Apples.

I have experimented with hand mills of various kinds to see what I could recover from cider fruit, and I have been able to take out of apples by ordinary hand mills over one-half of the juice present, and usually less than one-half. Fruit that goes to vinegar factories averages 12 per cent sugar; that is, a bushel represents about six pounds.

Three pounds of sugar to a bushel of apples is a high result with the ordinary hand mills. With an 80-ton hydraulic press, I have been able to recover four gallons of juice from 50 pounds of fruit, double the quantity I could recover with the hand mills, and yet I left in the pulp about 12 per cent of the juice. Practically 25 per cent of the total weight of apples went out in pomace, or from 4 to 8 per cent of the sugar. With the best power mills, under a most efficient working system, it is certain that practically 5 per cent of sugar is thrown out in the pomace.

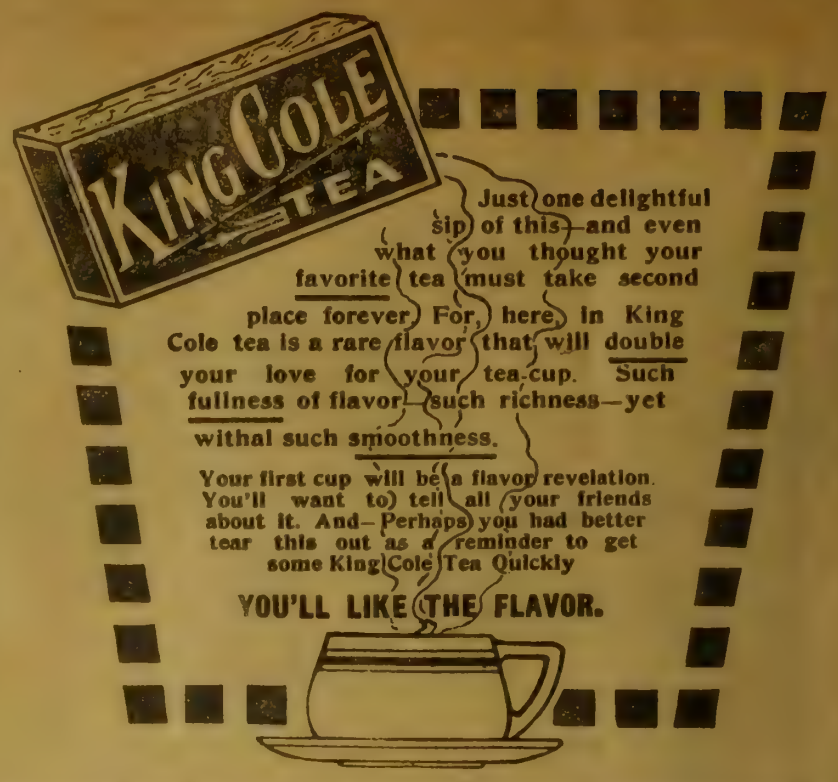
There are something like 5,000,000 bushels of apples worked up every crop year in New York state for by-products. If we assume that 24 per cent of this fruit will be left as pomace, we will have about 60,000,000 pounds of pomace, which will contain 3,000,000 pounds of sugar, or 1500 tons. Data collected for 1909 indicate that this quantity of pomace is produced and that 5 per cent of this pomace is sugar.

In regard to the large amount of sugar that goes out in the pomace as waste, I have never yet seen a manufacturer or a farmer who handled this pomace so as to recover nearly all the sugar left in it. Thousands of tons of pomace are thrown out without the slightest attempt being made to recover the sugar. Some people put it back on the soil, but it ought not to be put on the soil at all until well rotted.

It has been well established that it can be successfully used for cattle food. In France and England it is fed very successfully. Vermont and Massachusetts experiment stations have also experimented with it, and for several years have been feeding it successfully to milch cows.—Prof. W. B. Alwood, U. S. Dept. of Agriculture.

A Word About Recipes.

One day I carried a cake of my own making to a friend I was visiting. Whether out of polite flattery, or because she really liked the cake—it is well not to inquire of oneself too closely concerning the motives of


KING COLE TEA
Just one delightful sip of this—and even what you thought your favorite tea must take second place forever. For, here, in King Cole tea is a rare flavor that will double your love for your tea cup. Such fullness of flavor—such richness—yet withal such smoothness.
Your first cup will be a flavor revelation. You'll want to tell all your friends about it. And—Perhaps you had better tear this out as a reminder to get some King Cole Tea Quickly
YOU'LL LIKE THE FLAVOR.

conservative investors wanted

As a rule our clients get the benefit of all the "Certainties" we control. To-day we are making use of "An Absolute Certainty" for the purpose of extending our clientele. Here's the proposition in a nutshell—

—a 7 per cent profit-sharing preference stock on which dividends are paid twcie a year—a stock issued by a concern with a record of 25 years' successful and progressive business experience---a concern at present controlling Natural Resources which are bound to double the value of its securities before long.

We guarantee 7 per cent. on this investment. We are practically certain that this stock will pay higher profits. Its the best industrial stock, at par, on the market.

Furthermore, we guarantee to buy it back, at par, plus 7 per cent, in one year from date of investment.

NATIONAL SECURITIES CORPORATION, LIMITED

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THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

The 3 H's--HEALTH, HAPPINESS, HOME

That is what Domestic or Household Science deals with—and its object "THE SECURING OF THE MAXIMUM NOURISHMENT AT THE LOWEST COST AND WITH THE GREATEST EASE OF PREPARATION."

Now this applies not only to food values but to the STOVE on which the food is cooked, and the fact that the---

Enterprise Monarch Steel Range

as shown, is used by so many Domestic Science teachers throughout the Maritime Provinces and Quebec, is good evidence that this range is recognized as the one most suitable for the purpose.

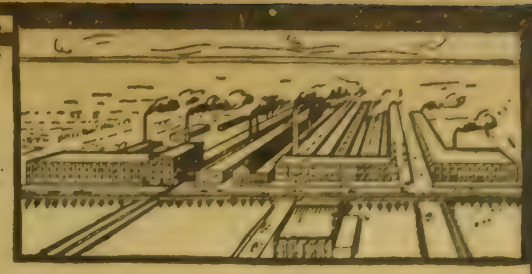
In addition to this it is in use in hundreds of homes and hotels and giving perfect satisfaction.

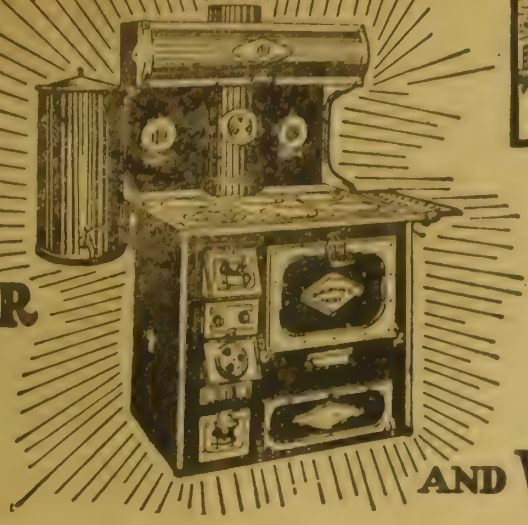
Then too its large fire-box for wood burning makes it the ideal range for farm kitchens.

Sold by Leading Stove Dealers Everywhere. **Descriptive Circular on Request.**

The Enterprise Foundry Co., Manufacturers, Sackville, N. B.

DIRECT FROM FACTORY TO KITCHEN





SAVE OVER $25 WHEN BUYING YOUR RANGE THIS FALL.

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You can buy DOMINION PRIDE RANGE at Factory Price

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THE price which the Dealer quotes you on a Range is made up like this — Manufacturing Cost + Manufacturer's Profit + Jobber's Expense of Handling and Selling + Jobber's Profit + Retailer's Expense of Handling and Selling + Retailer's Profit + Freight.

By our direct "Factory to Kitchen" selling plan all these charges are cut out except the actual manufacturing cost, a small profit, and freight. The difference to you is the difference between the $41 to $49 which you pay for a "DOMINION PRIDE" Range and the $69 to $78 which you would have to pay the Dealer for a Range which cost as much to make.

Are you anxious to contribute $25 or $30 to the middlemen?

In the—

"DOMINION PRIDE RANGE"

you get a full dollar's worth of actual stove value for every dollar you pay.

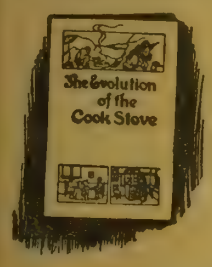
The "DOMINION PRIDE" is made of tough, strong malleable iron and the best blue polished steel—materials that will neither warp, crack nor break, so that it will last a lifetime. It is made in the largest Malleable Iron Range Works in Canada, and each range is backed by our unconditional guarantee.

The "DOMINION PRIDE" looks well, cooks well, saves fuel and is easily cleaned. You'll be proud of its neat, handsome appearance in your kitchen, and of the appetizing food it will cook to perfection for you. You'll appreciate the ease of keeping its blue polished steel surface and the bright polished top spick and span with a few rubs of a cloth. Your husband will be more than pleased with the reduction in the coal or wood bill—for the "DOMINION PRIDE" saves, by actual tests, 30% of the fuel.

A "DOMINION PRIDE" Range, with High Closet Shelf and Elevated Tank or Flush Reservoir, with Zinc Sheet to go under range, 8 sections Blue Polished Steel Pipe and 2 Elbows, will be delivered to any Station in Ontario, Quebec or the Maritime Provinces for $41, or to any Station in the Four Western Provinces for $49—$5 to be sent with order and balance to be paid when Range is delivered at your Station. If not convenient to pay cash we will arrange to accept your note.

Here is a Book Worth Having

IT tells about cooking from the time the Cave Dwellers used to put hot stones in the pot to boil it. The Book contains interesting information gathered from many sources and is illustrated profusely.



The "Evolution of the Cook Stove" also tells all about the "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy this book.

Write for free copy.

Canada Malleable & Steel Range Mfg. Co. Limited, Oshawa, Ontario.

When writing it will be a distinct favor to us if you will mention this paper. 6

one's friends' attentions—she asked me for the recipe. Now it was the ordinary "family brown cake," and I said truthfully that I made it from the fundamental recipe of all cakes, and that I seasoned it according to my own taste, and made it richer or plainer according to the occasion for which it was required. Rather to my surprise she did not catch on the meaning of "fundamental recipe." She seemed to think, although a housewife of long standing, that each cake must have a separate "recipe." I think there are tens of thousands of excellent, practical housewives and cooks who do not think clearly and exactly about their own processes. We all, in practice, work from fundamental principles of cookery, and from a few general recipes.

She insisted upon copying to my dictation into a fat manuscript cookery book, and then read out to me a number of recipes she had begged from other friends, after one or two of which I remarked, "That is practically the same as mine; the differences are merely in detail. How can you find time to test all these recipes even once?" An over-multiplication of recipes is a useless possession. Don't you find it so? The chief end to be sought is to master thoroughly the principles of cooking meat, vegetables, sweet dishes, cakes, &c., and after that we can pretty much make our own recipes.

What Baby Should Weigh.

The baby of normal weight tips the scales down at birth at the 7 lb. mark. If he or she is much heavier or much lighter, he or she is at odds with the average. A peculiar feature of baby weight is that during the first days of its life the youngster—that is, the perfectly normal youngster—loses 1 lb. Thus, examination made on the second and fourth day will show a weight of 6 lb. only. But after the first week, at the end of which time the lost pound should be regained, there is a steady advance. Ten pounds should have been reached by the time the baby is eight weeks old, and when it is twenty weeks old the weight should be 14 lb. At seven months the figure should be 16 lb., and the year old baby should have a mark of 21 lb. to its credit. And so the future citizen or citixens goes on building up, until, at the age of two years, it is able to point with pride to a record of 27 lbs.

SIMPLE

EFFICIENT

Here's the Power You Need

to pump your water, grind your feed, run your churn and separator—all with the

STICKNEY
Gasoline Engines

So simple that anyone can learn to run them in 10 minutes—so inexpensive that no farm should be without one. Write for Catalogue No. 57 full of engine facts you ought to know. Sent free, if you'll send your address.

Ontario Wind Engine & Pump Co., Ltd.
Winnipeg. TORONTO. Calgary.

Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St. St. John, New Brunswick.

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FALL AND WINTER CATALOGUE No. 190
5 COATS EXCELLING IN STYLE ANY PREVIOUS OFFER
FOUR STYLISH COATS SPECIALLY PRICED AT
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FALL AND WINTER 1911-12

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SAMPLES OF OUR FULL VALUE GIVING

SEND US YOUR NAME AND WE WILL MAIL YOU OUR WALL PAPER SAMPLE BOOK

THE T. EATON CO LIMITED
TORONTO CANADA

Some fertilisers may appear, judged only by the figures, yielded by analysis, to be rich in the fertilising elements required by plants, and yet the available portion of the plant food contained in them is in such a slowly acting form that it is not of any real value to the farmer for immediate effect on his crops. It is true that the insoluble materials in the fertiliser will prove of benefit in the future, after they have remained in the soil sufficiently long for the processes of natural disintegration to convert them into a condition suitable for plant food; but the farmer who buys fertilisers does not expect them to remain dormant for a time in his fields' he wants them to act on the crops during the same season they are applied. Therefore, he should select fertilisers which contain their nitrogen, phosphate, and potash in forms which are more or less quickly available, so that the greatest benefit may be derived from their application.

FLORICULTURE.

I have received some Daffodils, Tulips, Hyacinths, two Lillium Candidums and Easter Lillies, Fuesias and two Lillium Auratims, the latter will come in November. I have planted the Fuesias, the Easter Lillies and two each of Tulips, Daffodills and Hyacinths, in pots, in a mixture of well rotted manure, sand and rich earth and am keeping them in a cool cellar with the earth damp.

Will you please tell how long I should keep them there and what to do to get the most bloom from them this winter? What shall I do with the bulbs after they are done blooming?

The rest of the Tulips, Daffodills, Hyacinths and the two Lillium Candidums I set out of doors about 4 or 5 inches deep. Was that all right and will they need extra protection this winter?

Please tell me what to do about the bulbs next summer. If it will do, I would prefer leaving them undisturbed but do not know if it will affect their blooming the second year or not. I know nothing from experience about flowers from bulbs, so trust you can give me the necessary information as I think they may be less trouble than annuals.

The bulbs are correctly planted and the pots should be left in a dark place until sprouts are two inches high. After being brought to the light, keep moist and in a sunny window. An occasional application of liquid cow manure water will improve size and color of flowers.

The out-of-doors bulbs should be covered with brush or several inches of strawy manure. Let the bulbs alone next summer, simply planting between them.

A light topdressing of well-rotted composted manure is a good thing for lawns at this season of the year. Even green manure will make an improvement in the looks, in the spring but is apt to be offset by the foul weeds thus sown.

H. S. writes:—Are Bermuda Oxalis good for hanging plants? Yes they make beauties for winter bloom and produce a marvellous quantity of bright yellow blossoms, nearly twice as large as the old-fashioned Oxalis. It has the advantage of being a very rapid grower and blooms steady from November until April. The foliage is large for the Oxalis family, and very glossy and ornamental.

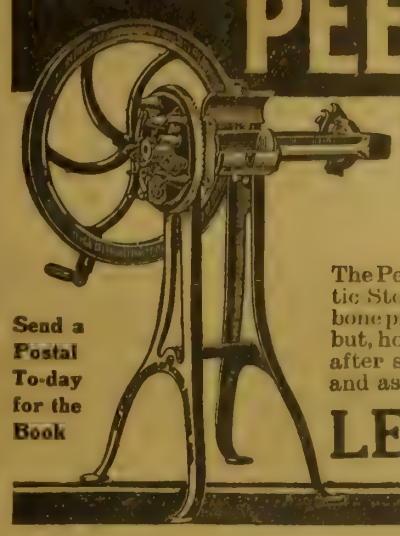
Fertilizers For Potatoes.

Does it pay to use fertilizers for potatoes, and if so, how much and what analysis? The above questions are frequently asked, and the answer is more easily given by learning what is used in the great potato growing districts.

On Long Island there is a co-operative association of farmers who buy about 6,000 tons of fertilizer, and analysis they demand is 5-8-8; the fact that they grow very largely early potatoes accounts for the high per cent. of nitrogen in this mixture. This is also true of the truckers of the Norfolk district, who grow potatoes for the early New York market, and who use as a standard a 7-7-7—seven of nitrogen, seven of phosphoric acid, and seven of potash.

The Ohio Experiment Station in some recent fertilizer experiments obtained the largest yield from an application of 160 pounds of acid phosphate, 100 pounds muriate of potash and 80 pounds of nitrate of soda. This material would be equal to about 340 pounds of a 4n.-6½p.-15k. goods, which is about the same analysis as Mr. T. E. Martin, West Rush, used, 1,800 pounds to the acre, to produce his yield of an average of 418 bushels on 18 acres—a yield which has probably never been equalled.

PEERLESS GREEN BONE CUTTER



Send a Postal To-day for the Book

For half the cost of wheat, you can feed your flock succulent green bone—the most perfect egg-producing food known. A pound of green bone, costing but a single cent, will feed 16 hens for a day. Per hen, that is only

1/16c. PER DAY

The Peerless Positive Feed and Automatic Stop Green Bone Cutter cuts green bone properly; it does not grind the bone but, holding it endwise, cuts off shaving after shaving—as bone should be cut, and as it is most easily digested and assimilated. Write for our book—sent FREE telling all about how to feed green bone to your flock, about its economy, its muscle-forming values and its wonderful egg producing properties. A postal will bring it to you. 101

LEE Manufacturing Co., Limited
103 Pembroke Road
PEMBROKE ONTARIO CANADA

VALUE $325.00

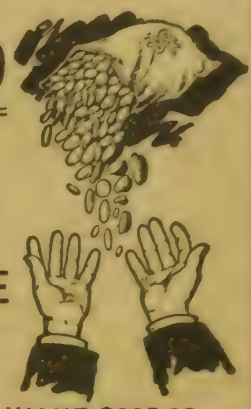
MAGNIFICENT PIANO

—AND—

$100.00 in Cash

GIVEN AWAY ABSOLUTELY FREE

FOR CORRECT ANSWERS IN THIS PUZZLE CONTEST.



1st PRIZE.— MAGNIFICENT UPRIGHT PIANO AND STOOL TO MATCH. VALUE $325.00.
Finest action and tone, beautiful hand polished Spanish mahogany case. Fit for the home of a King and the greatest prize ever offered in a contest of this kind. (It is on view any business day from 9 to 5 at our factory.)

2nd Prize	$25.00 cash
3rd Prize	$15.00 cash
4th Prize	$10.00 cash
5th to 9th, 5 Prizes of $5.00 each	$25.00 in cash
and 25 prizes of $1.00 each	$25.00 in cash
TOTAL CASH PRIZES	$100.00

THE PUZZLE.

GEPNINIW ORTONOT
NOTRAELM XFAILAH

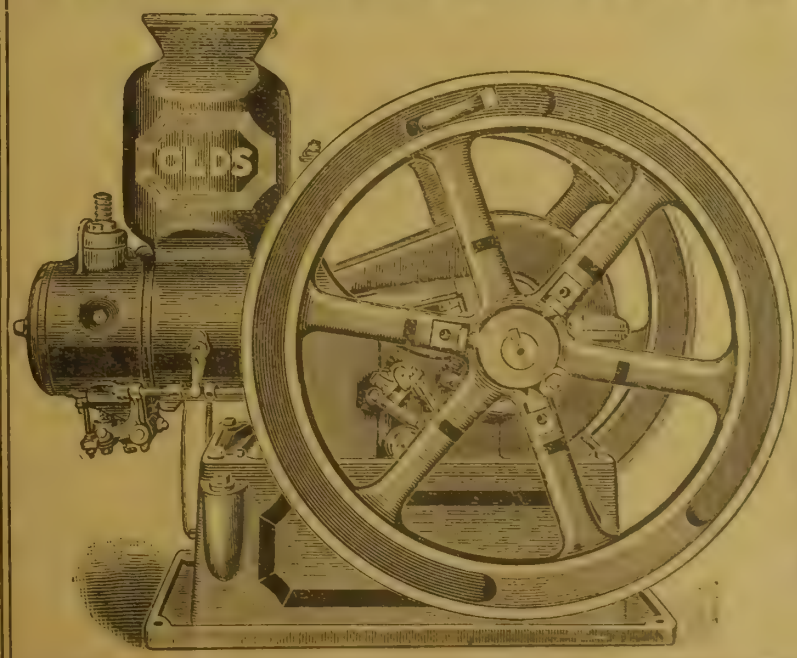
The jumbled letters given above represent the names of 4 well-known Canadian Cities. To help you solve them we have underlined the first letter in each name.

The first is Winnipeg, now guess the rest and send us in your solution of all four names in your very neatest and best handwriting.

CONDITIONS:
1. This contest is absolutely free. No one is asked to spend a cent to enter.
2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in the contest are awarded according to handwriting and general neatness. Be neat and you may win a good prize.
5. Judging will be done by three gentlemen having absolutely no connection with this firm. Their decision is to be accepted as final.
6. There is a simple condition to be fulfilled which we ask of all contestants. As soon as your answer is received we will write advising you if it is correct and telling you of this condition.

Address INTERNATIONAL MANUFACTURING COMPANY, Dept. 90 TORONTO, ONT.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Special Value of Green Food.

A contributor writing in "American Farm Poultry," says:—In the first place I had all my houses put into good winter condition in September, before autumn rains came; all old litter removed; fresh sand put in; broken glass set; and every crack about the roosts closed, in readiness for cold weather, let it come early or late. By October all the fowls were in permanent winter quarters, although the houses were not closed until the nights were quite cool.

For morning meal all winter I gave mixed grains—two parts, by measure, of oats and corn, and one of wheat, occasionally one part of barley, in all about one half handful for each fowl, fed in 6 in. of litter. At noon a few handfuls of unthreshed oats were thrown in each pen for them to pick out. At night all the mash they could eat clean in ten minutes was given them, followed by half-a-dozen handfuls of mixed grain, for each pen in litter. On very cold nights whole corn was substituted for the other grains. The mash was composed of two parts, by measure, of bran, ground oats, and corn meal, and one each of middlings and meat, and one-half measure of linseed meal, with one-third of the entire mixture steamed cut clover. All food was fed warm, the grain set in stove oven for two hours before feeding.

Shells and grit were always before them, and warm water furnished fresh three times a day. Until into February a cabbage was hung up in each pen all the time, and after these were gone for the season, other green meat. I have found this green food of great importance in a good egg yield. In the winter of '97 and '98, my fowls had plenty of it, and from 66 pullets I obtained more eggs than from 50 hens and 110 pullets the following winter when they had some food without the cabbage. Last winter 110 hens and 25 pullets gave me twelve per cent. more eggs than 50 hens and 110 pullets did the previous winter; which, allowing for number and the difference in eggs yield between hens and pullets would make at least twenty-five per cent. increase from green food.

Vomiting in Cattle.

This is a symptom of an overloaded stomach, one that is not in normal condition, consequently is unable to care for and digest the feed that is taken into it.

The result of this weakened condition of the digestive organ is indicated by the expulsion of the semi-liquid contents passing out through the nostrils, as well as large quantities of chewed up feed being expelled through the mouth.

The moment a milch cow is afflicted in this manner she is very apt to drop off on the regular flow of milk, not owing entirely to the fact that the cow is distressed, but rather to the fact that the food is not being digested, consequently not being converted and assimilated and transformed into blood, and later secreted in the form of milk.

When a cow is thus afflicted it is very important not to give it any more feed until she is given such medicines as will have a tendency to stimulate the digestive organs, thereby aiding digestion and assimilation of the food that has already been taken in.

As soon as this is brought about the animal of its own accord will show a desire for food and if the feed is held back until this desire is indicated, it is then time to give it a reasonable quantity of feed, but if the animal be given an abnormal quantity or an over supply, the same trouble will again return, namely, indigestion, irritation and expulsion of the food, as above described.

Rabies in Cattle.

Rabies is a germ disease, usually attacking dogs, but all warm blooded animals, including man, are susceptible to the malady, which is always communicated through bites from a preceding case.

The disease first manifests itself in cattle by a loss of appetite, a rumination and stopping of the secretion of milk, great restlessness, anxiety, manifestation of fear, in fact the entire disposition of the animal is changed.

This stage is followed in a day or two by the stage of excitement and madness which is indicated by increased restlessness, bellowing in a peculiar manner, owing to the partial paralysis of the throat, violent bunting, pawing the ground, and a great tendency to attack other animals, although the desire is not so marked in cattle as in other animals.

A constant symptom is the increased secretion of saliva or froth at the mouth. Constipation is usually present, owing to a partial paralysis of the bowels and there is a continual desire to defecate, but the animal is usually unable owing to the paralysis mentioned.

If an animal is permitted to live, about the fourth day it becomes more quiet. They get stiff, unsteady and a swaying gait, owing to the general partial paralysis of the body. The loss of flesh is extremely noticeable owing to the fact that the animal does not eat or drink to speak of. This is due to an inability to swallow. If the disease is permitted to run its course, the animal usually dies from the fourth to the sixth day and as there is no treatment which can successfully control this disease. it is advisable to destroy the animal in the early stages ol the disease, but it is exceedingly important to be positive that it is rabies as some of these symptoms may appear in other ailments, such as lead poisoning.

Eye Disease.

Sore eyes may be due to various causes such as injury or catarrhal infection, and when due to the latter the entire herd is apt to become affected.

It is advisable to keep animals thus affected in a dark stable during the day, allowing them to pasture at night.

The eyes should be bathed several times daily in an antiseptic solution, after which time an eye lotion should br injected into the eye. Give animals access to medicated salt.

A Winter Fair Prize List Correction.

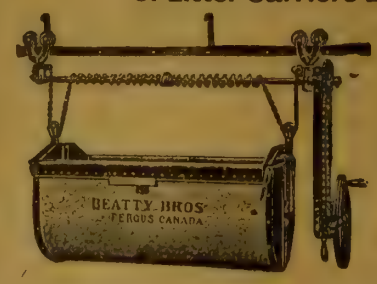
Mr. F. L. Fuller, manager of the Maritime Winter Fair, wishes to correct a mistake that inadvertedly crept into the 1911 prize list. Class 135, page 35 should read "Donated by the Maritime Poultry Supply Co., J. Vernon Jackson, manager, Moncton, N. B. For the best Cock, Hen, Cockerel and Pullet in the Barred Plymouth Classes—1st, 1 bag Purity Chick Food; 2nd, 1 bag of Esso Chicken Charcoal."

Valley's Record Apple Crop.

It is now generally conceded that the apple crop in the Valley will this year reach, if not exceed, 1,500,000 barrels. The problem at present is the barrel question. Barrels are hard to get at 40 cents each, and even then the farmer must content himself with a very few at a time. Many are picking and storing apples in bins until barrels can be had, in some cases, having to wait several weeks. Such a crop has never before been known in the history of apple growing in the Annapolis Valley.

It Will Pay You to Investigate

Carefully the Merits of Different Makes of Litter Carriers Before Buying an Outfit



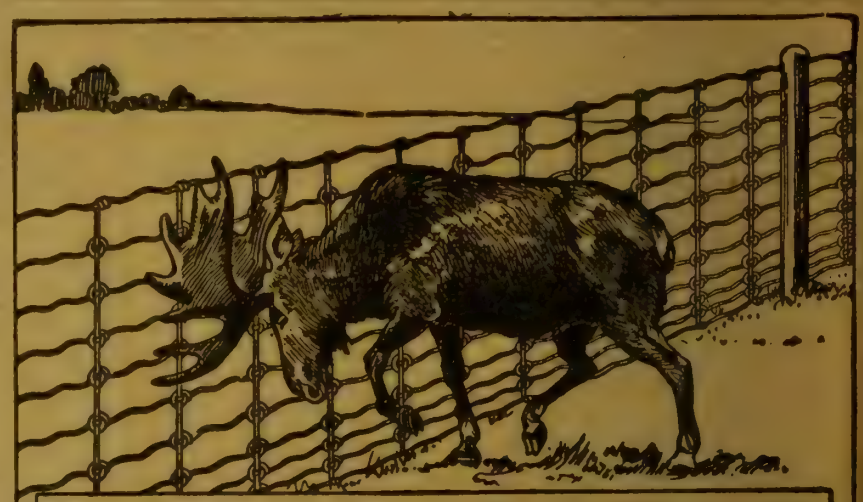
DON'T be satisfied with any style of litter carrier that is offered to you. If possible see different makes in operation and compare them. Should you be unable to do this, we will be pleased to send you our new catalogue, which describes and illustrates the BT. Litter Carrier. by reading this carefully you will get complete information and we know you will be pleased with our outfit.

The BT. LITTER CARRIER will stand your most careful inspection. It is simple in construction and is built to last a lifetime. We use double-purchase in lifting and have a straight sprocket-chain connection for lifting, with which it is possible to attain an efficiency of from 70 p. c. to 80 p. c. Most firms use a worm gear lift, and with them from 50 p. c. to 60 p. c. of the energy of the operator is lost in friction. Is it any wonder that the BT. Litter Carrier elevates easier and quicker than others ?

Send us a sketch showing the layout of your stables, with measurements thereon and let us know where you want the litter carrier to run. We will then be pleased to give you an estimate as to the cost of installing and send complete information.

Now is the time when a litter carrier is most useful and you should get information and prices at once. Our Catalogue is free and will be mailed to anyone interested on request. Write us to-day.

BEATTY BROS., Fergus, Canada. We also manufacture Steel Stalls, Stanchions, and Hay Tools.



This Fence Has Vast Strength

For a fourth less than the price we pay, we could get hard-drawn steel wire. But that kind, though used in most other wire fence, hasn't the *life*, the springiness, the strength we insist on for Maritime Wire Fence.

• • • •

So we make this fence of extra-heavy hard drawn steel wire of nine-gauge. Constantly we test it for quality. And so we *know* this fence has *more* strength than it probably will ever need.

• • • •

Yet the price of Maritime Wire Fence is no higher than you must pay for ordinary fence. But the life of the Maritime Fence is far longer—and the fence surely reliable.

• • • •

On this extra-quality wire we put a smooth, even heavy coat of galvanizing. We put on more than enough — that's our way. You gain by the longer life of this better fence. And we lock laterals and upright wire rigidly, yet springily, with a cross-leverage lock that simply CANNOT let go under the hardest strain.

• • • •

You can bank on the strength of this fence Make the test for yourself and your neighbors. Then get the agency—it will pay you well. Address

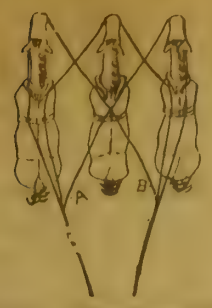
NEW BRUNSWICK WIRE FENCE CO., Ltd., Moncton, N.B.

MARITIME WIRE FENCE

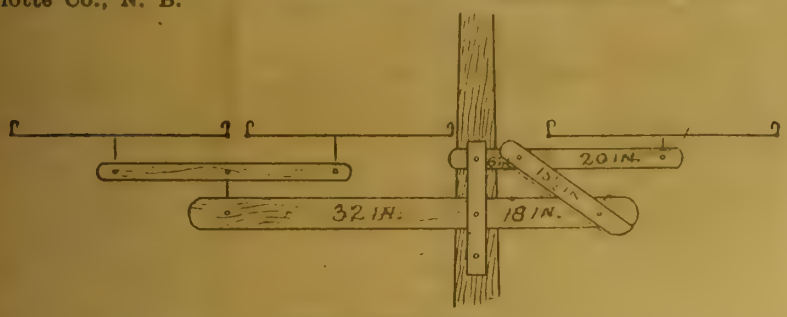
Be Sure to address your correspondence to the Maritime Farmer's New Home, Clarance St., St. John, N. B.

Three Horse Evener.

Editor Maritime Farmer:—
Will you please inform me through the columns of the Maritime Farmer how a Three Horse Evener can be made to be used on a wagon with a pole, with two horses on one side and one on the other so as to give an equal draught to each horse, also please explain how it could be arranged to give one horse (a smaller one, for instance) an advantage on either, or both sides.—W. S. Poole, Charlotte Co., N. B.



Running a Three-Horse Hitch



A Three-Horse Evener

The accompanying cut shows a three horse evener that is very commonly used. You can arrange to to give a smaller or weaker horse an equal advantage with a larger or stronger horse by hanging your double-tree so that the smaller horse will have the longer end thus giving him more leverage and consequently more power.

Prize Essays on Agricultural Subjects.

Editor Maritime Farmer:—
It gives me a great deal of pleasure to commend the management of the Port Elgin, New Brunswick Exhibition in awarding prizes for the best essays on agricultural subjects entered for competition at their fall Exhibition. These essays are forwarded to me at Truro, and I have just completed reading and awarding prizes upon them. This feature of the Exhibition Prize List was, I believe, inaugurated last year. At any rate, I examined a similar series of papers a year ago. I am pleased to notice that, this year, there are not only more competitors, but the quality of the essays written is quite superior. I will be very much surprised if tangible results do not follow this effort to interest the younger people of New Brunswick in writing essays upon suggestive agricultural topics.

In this year's competition, there were three separate sections, prizes being awarded for the best essay in section 1.—"How to keep the boy's on the farm." Section 2—"Agriculture as a profession; How best to prepare for it." Section 3—"A kitchen garden on every farm; What to grow in it and how to cultivate it."

It was my only regret, in examining these essays, that I had only nine prizes to award and could not award merited prizes to the number of extra essays over and above those provided for.

I thoroughly believe that it would pay other Exhibition Commissions to follow the example of the managment at Port Elgin and adopt this commendatory feature. Those who are interested in doing all they can to awaken the interests, especially of the young people, in matters agriculturally, would do well to correspond in regard to this competition with Mr. J. R. Taylor, Secretary Port Elgin Exhibition, Little Shemogue, Westmorland Co., N. B.—M. Cumming, Truro N. S.

The New Brunswick Potato Crop.

Mr. F. De L. Clements, estimates that this year's marketable potato crop in New Brunswick amounts to 700,000 barrels two-thirds of which is now out of the farmers' hands at averaging $1.50 per barrel F. O. B. car. About 250,000 barrels have been marketed in the Provinces of Ontario and Quebec, while 50,000 barrels have been shipped South.

I. C. R. Booklets as I. O. O. F. Souvenirs.

At the recent session of the Sovereign Grand Lodge of I. O. O. F., heid at Indianapolis, Indiana, and attended by delegates representing practically every Grand Lodge of Odd Fellows in Canada and the United States, the representatives fron the Maritime Provinces used as a Souvenir gift to other, visiting delegates, a set of the publications of the Intercolonial Railway.

The publications selected for distribution were the principal I. C. R. descriptive book, "Forest, Stream and Seashore," and the three booklets, "Storied Halifax," "The City of the Loyalists," and "The Garden of the Gulf." The first of these was enclosed in a specially prepared envelope, showing by whom presented, and bearing the names of the Maritime Province delegates. The three smaller booklets were encased in a smaller envelope similarly inscribed.

As a Souvenir this proved to be a happy departure from the usual method of exchanging badges, buttons, etc., and proved most acceptable, especially to the delegates from the far West, and from the Southern States. The Maritime Province men were warmly congratulated upon the success of their plan to thus place a lot of valuable descriptive matter concerning their country before such a gathering and give the same such wide distribution, for it means the books will be in the hands of a prominent member of this important fraternal organization in every state of the Union and from every Province in Canada.

Boston Markets.

The Boston Jobbers' price for Canadian hay ranges from $19 to $26 per ton, according to the grade, while the best price quoted at St. John is $10.50 to $11. Eggs show a differenc of fifteen cents a dozen.

On the other hand, the difference in the price of flour is in the other direction, a reduction being noted in the Boston markets.

The following is a comparative list of prices on staple products:

Oats, western—Boston, 55 to 55½ per bus.; St. John, 51 to 53 per. bus.

Potatoes—Boston, $1.75 to $1.85 per two bu. bag; St. John, $1.50 to $1.75 per bbl.

Butter, dairy—Boston, 27c to 28c. per lb.; St. John, 23c. to 24c. per lb.

Butter, creamery—Boston, 32½c. to 33½c. per lb.; St. John, 24c. to 27c. per lb.

Eggs, hennery—Boston, 44c. to 46c. per doz.; St. John, 28C. to 30c. per doz.

Eggs, case—Boston, 33c. to 35c. per doz.; St. John, 23c. to 24c. per doz.

Squash—Boston, 60c. to 75c. per bbl.; St. John, 1c. to 1½c. per lb.

Flour—Boston, $4.30 to $5.50 per bbl St. John, $5.50 to $6.45 per bbl.

Steel Oven
Heats Quicker—Saves Fuel

Pandora has a sheet steel oven, because steel is more sensitive to heat—absorbs it faster—than cast iron does. Pandora oven thus heats quicker—less time required to get oven ready for the baking—which also means less fuel-expense. ∴ ∴ ∴ ||

Make sure your new range has a steel oven, and "Pandora" name-plate on the door. Go, at once, to nearest McClary Agency and pick out size desired.

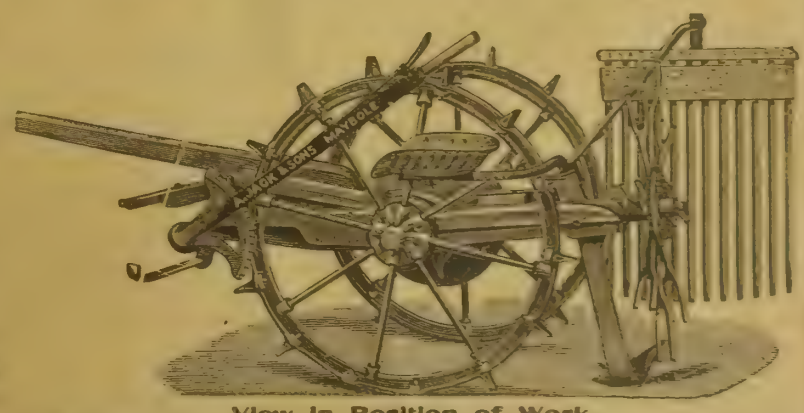
McClary's Pandora Range

The World's Best Potato Digger.

Jack's Royal First Prize New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.


View in Position of Work.

The New Patent Caledonian Potato Raiser holds the record as the most perfect Potato Raiser in the world. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, Canadian Agents Port Williams, N. S.

For regulating the bowels, invigorating the kidneys and stirring up the lazy liver

Dr. Morse's Indian Root Pills

have proved for over half a century, in every quarter of the world, absolutely safe and most effective.

25c. a box everywhere. 27

The Manure Spreader.

A most valuable implement that a farmer should get hold of as soon as he can afford it is a manure spreader. The advantages of a good supply of stock on a farm are thereby much increased, for not only does its presence impel one to utilise every particle of plant food available, but it puts the manure to the best advantage without any delay.

Spreading manure with a fork loses on the average half its value. In the first place it is not well and evenly spread, an important matter. Then the clods remain unbroken, and their contents remain unused for perhaps a season or two, during which a great deal of it is wasted. (The total amount of plant food utterly wasted is colossal.)

The use of a manure spreader will very soon justify its purchase. It breaks up every clod, and distributes the manure evenly on the soil, thinly or heavily as may be wished. This latter point is very advantageous. Few farmers have enough manure for all their land, and a dozen loads spread over two acres are far more effective than the same quantity devoted to one. This is because the material not only gives plant food but fresh life to the land. The effect of the manure spreader is felt all over the entire area the first year, for it enables the plant food to get to work at once, and plant life thrives.

The cost af the spreader is substantial, but an investment so certain of returning its own cost and a great deal more should not frighten any farmer with a business head and the money at command. Only farmers without the latter qualification should hesitate to purchase so eminent a drudgery-saver.

Knowing the Cost.

The practical results which are being obtained from the work of the cow-testing associations are to be found in many cases in the difference between profit and loss in the product of the cows of a dairy or farm herd, and these results simply show in a definite sort of way the benefits to be derived from knowing just what one is doing in the way of making a profit out of his business, and knowing just what the operation of his business is costing him.

One of the most difficult things to do in the direction of encouraging the adoption of more systematical business methods is to convince men that there is actual value in dollars and cents in knowing just exactly what is the cost and the profit of a particular feature of their business. This value does not lie of course simply in knowing how much profit was made on the cows of the dairy, or upon some other product of the farm; it is to be found practically in the knowledge of just what enters into the making of the cost, the cost, for instance, of the week's or the month's product of milk from a certain cow.

That knowledge will demonstrate one of two things, and in that demonstration will point the way for the future—the way to a larger profit or the way to the elimination of a loss. If there is a loss, the knowledge of the cost will point the way either to an improvement by a change in feeding, or to the necessity of getting rid of the cow.

Some cows, sad to relate, cannot be made to pay a profit. Some cows which cannot make a profit in the production of cream or butter might make a profit in the sale of milk, if it would get by the fat test as required by law. Some cows which could not be made to pay a profit if one were selling whole milk might be profitable for butter making in skillful hands, but it is very likely that any cow which could not make a profit in either of these directions would better be made into beef.

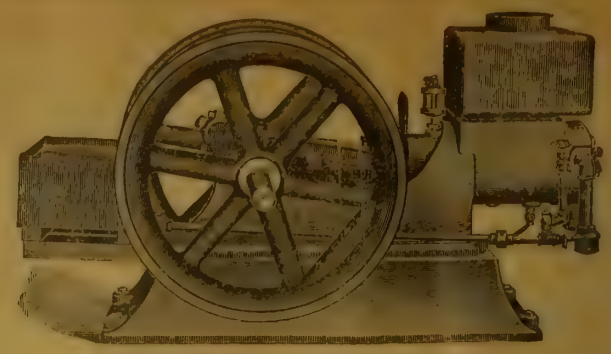
It was not so very long ago that dairy cows were bought and sold largely on their looks, and it was only on occasions that a cow was judged by the amount or quality of her milk product. The practice of keeping records of the production of individual cows, together with a record of the cost of their feed and making a comparison of this cost with the total income for the purpose of learning the ultimate profit, has placed the dairy business of those who have taken up this practice on a sound business basis.

Some dairymen have learned some surprising facts by the practical operation of this system, which is a foundation principle of the cow-testing association. I have heard men declare that the figures of the official tester of the cow-testing association have shown them that they were making milk, or cream, or butter, as the case may be, at a loss, and this because of the abnormal cost; that by following the suggestions of the tester they were able in a short time to reduce the cost to the level of the income, and that a little later they were able to make a profit. I have heard men explain that the figures showed them that a cow which they thought was the best in the herd was one of the poorest, and ought not to be retained; also that cows which they thought were only ordinary were among the best and worthy of extra care and encouragement.

The cow-testing association is the opportunity of the dairy stock beeeders for the greatest improvement in dairy animals that has ever been made.

Determining Age.

The calf is usually born with two fore or cutting teeth, and in one month the entire eight are out. The age then is estimated by the wearing down of these teeth until the calf is eight months old, when the teeth begin to grow narrower and smaller. At eight months the two center teeth have become smaller than the rest, and from that time until eighteen months old the others gradually lessen in size and stand apart from each other. At two years old the two middle teeth are pushed out and succeeded by two permanent ones; at three years of age there are four permanent teeth; at four years of age there are six; and all the rest at five years of age, when the animal is said



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is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will develop more power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

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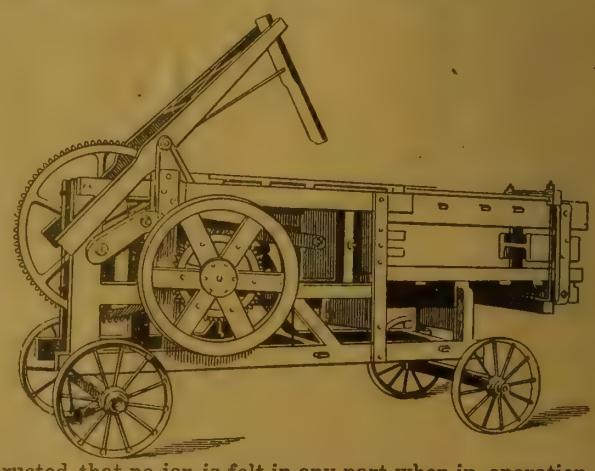
J. D. FRIER, Sussex, N. B., Eastern Representative.

Improved Trenholm Gear Hay press

Operated With Gasoline Engine or Tread Power.
The More Power The More Work.



Note the strong, heavy frame built of the best quality of well seasoned hardwood. The heavy balance wheel weighing over 500 lbs. The heavy cog wheel weighing over 500 lbs. The side springs made of the best quality of spring steel. The bale box is steel lined and the whole machine so powerfully constructed that no jar is felt in any part when in operation.

This is now the season for Wood Cutters, we manufacture them in three different sizes; Long Swing, Short Swing and Flat Roller Table.

In Farmer's Feed Boilers we make the Star with steel frame and cast culdron in three sizes and the All Cast in two sizes.

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THE SUSSEX MANUFACTURING CO. LTD., SUSSEX, N. B.

to be "full mouthed," but really this is not correct; the animal is not so until six years of age, when all of the eight teeth are level.

A good judge of cows will usually -udge the correct age after that. From six to nine years one can be guided by the wearing down of the teeth, and after that by the diminution in their bulk, as in the milk teeth. At nine the two middle fore teeth are smaller and narrower than the rest; at ten, the next two are so, and so on until twelve years of age, when, as in the animal of two years old, the teeth again begin to stand apart from each other.

The surface of the horn continues nearly smooth until the expiration of of the second year, when a wrinkle or circle of thicker horn begins to be formed around the base. This is fully completed in twelve months and another ring begins to appear, so that if the perfect rings or circles are counted, and two added to them, the age of the cow is supposed to be known. These rings are not, however, clear and entirely distinct and it is very easy to remove one or two of them with a rasp and deceive, at least to an unpractised eye, when a cow begins to be unmarkedly old.

In addition to this, it is a well-known fact that if a heifer takes the bull at two years old the first ring is found at twelve months before its usual time, and consequently, she would always appear to be, reckoning by her horns, twelve months older than she really is. After all, the age, as shown by the horn, can only be calculated in the cow. These "rings" do not appear in the ox or bull until the animal is five years old and then they are usually too mixed or confused to be counted with any degree of accuracy.

Cows Before Freshening.

Having had several disastrous experiences with fat cows at freshening time we are decidedly averse to feeding a fattening ration. Cows on pasture may become in good flesh and come to no harm, as the laxative and cooling nature of the green feed and the perfectly natural conditions under which she freshens will keep her in good health, but with the cow confined in the stable eating dry hay and getting little or no erercise it is a different matter. One cow that we purchased only a week or two before freshening was fat enough for beef. She had not been out of the barn all winter until moved here. This was in March. She had no heavy feed after we got her, but within 24 hours after freshening was down with apoplexy in its worst form and died, as we could get no help that understood the disease.

A year or two later our best cow went dry quite a length of time, and wishing her to be in as good condition as possible for the coming season we fed her pretty liberally and she took on considerable fat. Her food constipated her somewhat, otherwise she seemed well. She was down and unconscious before we could get a veterinary to her and I would not have given 2 cents for her. However we got a good man and he brought her out of it, but it cost me $5, some loss of milk and the cow lost her flesh. One other case at a neighbor's resisted all treatment, although she had the best. This cow was very fat and was apparently struck with death when it was found that she was sick.

We feed our cows two quarts coarse bran night and morning while dry. They get all the hay they care for and we turn them into the yard for a time every pleasant day. If there is constipation we feed potatoes or other vegetables enough to correct it. We like to have our cows make a big bag before coming in and never milk them except in extreme cases, believing it better not to. Do not milk the cow dry for the first few milkings, but let the 'calf suck her dry. This is a great preventive of apoplexy. If the bag is caked, bathe it in saltpeter water and rub well with the hand. A dose or two of aconite tincture, 20 drops to a dose, 12 hours apart, will allay all fever.

It is not flesh that the cow wants, but strength and vigor. This is not obtained from fat-forming foods but from bran, oats and good hay with clover in it. Fat weakens the power of resistance of the whole system. The heart and lungs are oppressed and the circulation impeded. Fat people are more subject to apoplexy than thin people. A thin cow is seldom attacked by this trouble; however, we do not wish our cows to be thin, but in good thrifty order. Concentrated foods like corn meal and cottonseed should be introduced gradually after freshening, and if feeding more than two quarts of each to a feed they should not receive the full ration under two weeks.

It has seemed to me that March is the worst month for freshening cows to go wrong. There are other evils besides apoplexy that are made worse if the cow is fat. Failure to deliver, failure to clean and blood poisoning are common. Many good cows die every year from these troubles. It pays to know where to find a good veterinary at short notice and it pays better to reduce the number of cases as much as possible by careful attention to the animal while she is dry and at time of labor and for some time afterward.

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

A Prize Contest open to the farmers of Canada

$3,600 in Cash Prizes for Farmers

READ the conditions of the Prize Contest we are conducting for the farmers of Canada. $400.00 in prizes will be awarded to each Province. These prizes will be divided into four groups, consisting of:

PRIZE "A"—$100.00 to be given to the farmer in each Province who will use during 1911 the greatest number of barrels of "CANADA" Cement. PRIZE "B"—$100.00 to be given to the farmer in each Province who uses "CANADA" Cement for the greatest number of purposes. PRIZE "C"—$100.00 to be given to the farmer in each Province who furnishes us with the photograph showing the best of any kind of work done on his farm during 1911 with "CANADA" Cement. PRIZE "D"—$100.00 to be given to the farmer in each Province who submits the best and most complete description of how any particular piece of work (shown by photograph sent in) was done.

Every farmer in Canada is eligible. Therefore, do not be deterred from entering by any feeling that you would have little chance against your neighbor. For remember, Prizes "C" and "D" have no bearing whatever upon the quantity of cement used.

As a matter of fact, your success in this contest will depend to a great extent on your careful reading of our 160-page book, "What the Farmer Can Do With Concrete." In this book—sent free on request to any farmer, full instructions are given as to the uses of concrete, and plans for every kind of farm buildings and farm utility. You'll see the need of this book, whether you are going to try for a prize or not. If you have not got your copy yet, write for it to-night. Simply cut off the attached coupon—or a postcard will do—sign your name and address thereto and mail it to-night.

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Canada Cement Company, Limited
MONTREAL

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If so, you no doubt have shaving troubles, as there isn't one man in fifty who knows how to strop his razor correctly, the almost invariable result is a rounded edge instead of a keen, sharp edge so necessary to a clean satisfactory shave.

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BRANDT'S AUTOMATIC RAZOR STROPPER

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It automatically sharpens the ordinary old style razor any size or make, and all kinds of safety razor blades including the Gillette, Ever-Ready, Durham-Duplex, Keen-Kutter, Enders, etc. It sharpens them better than the most expert barber can do it. In using the Brandt Automatic Stropper, you do not hold the razor while stropping. You cannot round your edge or cut your strop. The Brandt Automatic Stropper strops the razor for you. It requires no skill or experience. We invite any man who shaves himself to call at our store, and examine this celebrated stropper, and see how it does away with all stropping troubles

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REMEMBER! Reeves Munroe, Consulting Electrical Engineer, Taymouth, N. S.

FOR SALE—Shorthorn bulls. WALTER EATON, Upper Canard, Kings Co., N. S.

WANTED—A good girl for general housework. Apply, Mrs. A. L. FOWLER, 12 Mecklenburg St., St. John, N. B.

FOR SALE—White Chester pigs, three dollars ($3.00) each. ARTHUR E. FERGUSON, Gowan Brae Farm, Bathurst Village, N. B.

FOR SALE—Pure Bred Hereford Bull, 11 months old. LYMAN A. WHITMAN. New Albany, Annap. Co., Nova Scotia.

FOR SALE—Registered Cotswolds, 2 Shearling Rams, 10 ram lambs fit for service, 10 ewe lambs. Could sell a few ewes DONALD INNIS, Tobique River, N. B.

FIFTY DOLLARS WEEKLY, to energetic, ambitious, reputable men, with real estate or insurance experience. Permanent, congenial employment. BRUCE SCOTT, Toronto.

WANTED—Will exchange the get of BlueBlood, Bramptom Financier and Imp Fereor, both sexes all ages, from 3 months to aged cows for cash; Write H. S. PIPES & SONS, Amherst N. S.

FEATHERS WANTED—We pay highest prices for all kinds, feathers, furs, hides, wool, beeswax, tallow, etc. Prompt returns. Send for price list. THE CANADIAN FUR & FEATHER CO., Department 10, 605 Ontario St. East, Montreal.

LADIES to do plain and light sewing at home, whole or spare time, good pay; work sent any distance, charges prepaid; send stamp for full particulars. National Manufacturing Company, Montreal.

FOR SALE—Two Purebred Yorkshire boars—eight months old, one Berkshire boar six months old, Berkshire sows ready to breed, all prize winners. Apply to STEWART BROS., Alliston, P. E. I.

REPRESENTATIVE WANTED at once for work in your locality. Will guarantee $2.00 to $3.00 per day. Opportunity to advance rapidly. Will pay liberally for spare time. Work not difficult. Experience not required. INTERNATIONAL BIBLE PRESS, Toronto.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

AGENTS WANTED—"Boy and Girl Agents—Sell 24 Coronation pictures for us at 10c each and receive a beautiful pen free. Write to-day, FORBES SUPPLY CO., Dept 11, 50 Elm St. Toronto, Ont.

Send Us Only $1.00

Receive by return mail post paid two beautiful little dresses like cut in soft warm dress goods in dark red plaid patterns for little girls age 2 to 8, made with waist and skirt trimmed with braid in latest style. Age 10 to 12, 75c. Age 14 $1.25, add 14c for postage. **Standard Garment Co., 16 Standard Building, London, Canada.**

For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111, "Sunnyside Stock farm," Sussex, N. B.

MARKETS.

St. John Prices.

Dressed Meats—Beef, Retail 10c. to 20c. per lb; Mutton, by carcass, 6c. to 7c.; Veal, 8c. to 10c.; Lamb, 8c. to 10c.; Pork, hogs, 6½c.; Spring pigs 7c.

Butter, tubs, 23c. to 26c. per lb.; print butter, 25c. to 27c.; creamery butter, 27c. to 28c.; dairy butter, 25c. to 27c.

Eggs—fresh stock, 40c. to 45c. per doz; cased eggs, 28c. to 30c.

Fowl—per pair, 80c. to $1.25.
Chickens—75c. to $1.00.
Ducks—$1.00 to $1.40.
Geese—$1.25.
Turkeys—23c. to 25c. per lb.
Cheese—16c. per lb.
Carrots—per bbl. $1.25 to $1.30.
Potatoes—$2.00 to $2.25.
Turnips—80c. to 90c. per bbl.
Beets—$1.00 to $1.25 per bbl.
Wool—16c. to 21c. per pound.
Beef Hides—11c.
Sheep Skins—55c. each.
Lamb Skins—55c. to 60c. each.

The market for Thanksgiving week as a whole, was not supplied as good as last year, although prices ruled higher. The market has been stocked with country beef, good beef selling for 6c. to 7c. by the carcass. Beef is higher. Eggs are soaring high. Butter is going up in price. Potatoes for this time of year are high, good stock brings from $2.00 to $2.25 per bbl. There is a good demand for Poultry, good turkeys 25c. per lb. and quick sales, coming at this season of year. Prospects are bright for good markets until after the Christmas Season.

Charlottetown Prices.

Beef (quarter) per lb., 6c. to 8c.; Beef (small) per lb., 8c. to 16c.
Beets, per bunch, 4c. to 5c.
Butter, 25c. to 26c.
Lamb, per lb., 10c. to 12c.
Lard, per lb,, 14c. to 16c.
White Oats, 40c.
Black Oats, 42c.
Potatoes, per bushel, 35c.
Eggs per dozen, 22c. to 24c.
Hay, per ton, $12.50.
Straw, per ton, $5.
Calfskins, per lb., 15c.
Hides, 8c. to 9c.
Pelts, each, 45c. to 60c.
Ducks, $1.00 to $1.50.
Fowl, $1.00 to $1.50.
Chicken (pair) 80c. to $1.00.
Apples, bus., 40c. to 50c.
Pork, 6c. to 7c.
Geese (each) $1.00 to $1.50.

Bloomfield Stock Farm.

We have in stock and for sale at present:—

25 Prime Shropshire Ewes
10 Ewe Lambs
10 Ram Lambs—a superior lot registered—also one Ayrshire Bull—2 years, a prize winner, one Ayrshire Bull, 14 months, and several Bull Calves—all registered ann as good as the best. Prices right.

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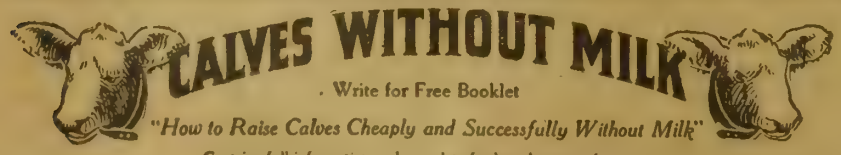
Shubenacadie, Hants Co., N. S.



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Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
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A. A. ARCHIBALD, - TRURO, N. S.

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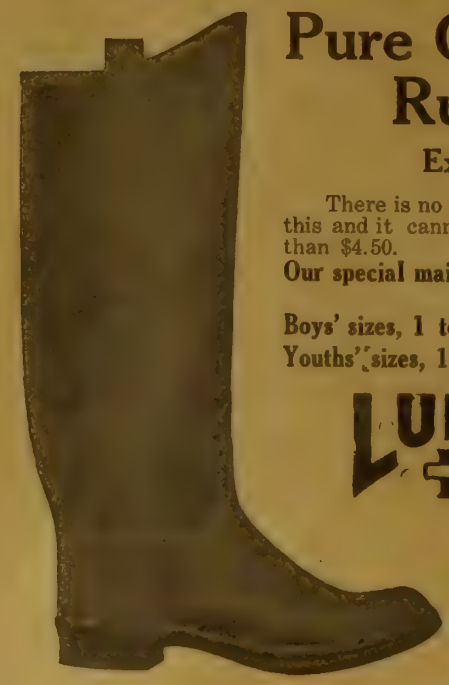

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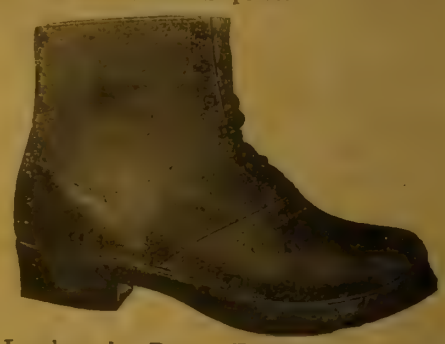
Our special mail order price, . . . $3.45
Sizes 6 to 11.
Boys' sizes, 1 to 5, for $2.65
Youths' sizes, 11, 12, 13 only, . $1.98

LUMBERSOLE BOOTS

Made of fine Grain Kip uppers lined with thick brown felt, as the name suggests the soles are made of wood, which keeps the feet dry and warm. FROST PROOF AND WATER PROOF.

For Farmers, Drivers, Fishermen, Builders, Dairymen, Sailors and all out door workmen, they are worth four times the price.



No. 2C. Men's 2 Buckle Lumbersole, Brown Felt Lining, sizes 5 to 11, at $1.75

No. 34 1-2C. Laced with one Buckle, unlined, Lumbersole, cut from selected Grain Kip skins $1.98

No. 12C Men's Grain Kip Laced Lumbersole Boot, Whith Felt Lining, sizes 5 to 11, at $2.25

No. 14C. Men's Leg Boots, Lumbersole, Brown Felt Lining. We guarantee all feet warm and dry with our Lumbersole Boots no matter how low the temperature. A great boot for deep snow . . $2.95

No. 4C Men's Grain Kip 3 Buckle, high cut Lumbersole, Brown felt lining, size 5 to 11, at $2.15

Shoe Packs.

Made from best quality Oil Tanned Beef Hides, Ballows Tongue.

No. 233 Men's, sizes 6 to 12, $1.75
No. 234 Boy's sizes 1 to 5 $1.35
No. 235 Youth's, sizes 12, 13, 1 $1.25
No. 236 Lads', sizes 8, 9, 10 98c

Sent to any address in Canada. Ask for our Catalogue of Bargains in Shoes and Clothing, and Free Premium Lists.

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We pay as we quote, grade honestly, charge no commissions or expressage, make quick returns and post you reliably. We have the best outlet for Lynx, Mink, Cross Fox, Red Fox, Marten, Wolf, Raccoon, Skunk, and Muskrat. We are specialists in Black and Silver Fox, and can pay from $300,00 to $1,500.00 for choice specimens. Let us examine your skins and submit offer. Write for free price list, tags, etc. Mention this paper.

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References: Banks or Commercial Agencies.

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Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. .B

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

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R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.S.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake NB. .
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W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

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220 Brown Leghorns, S.C. Cockerels, Both matings from $1.00 up. 15 Brown Leghorn S. C. Pullets from $1.00 up both matings. Single and Rose Comb R. I. Red Cockerels and pullets. 2 Brown Leghorns S. C. Cocks, both show birds. Price $2.00 and $3.00 each.

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Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

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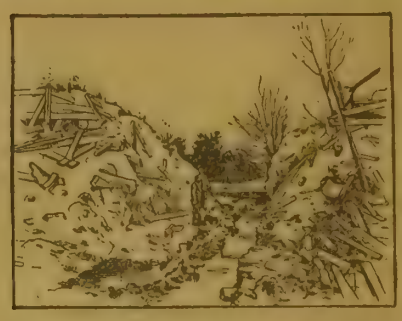

This picture is from a photo of a wash-out fourteen feet deep in the Township of Darlington, caused by use of cement tile for drainage purposes. The township authorities have replaced that with Pedlar Perfect Culvert, forty feet in length by three feet in diameter; strongest, easiest laid and most durable they could get.

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AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., NOVEMBER 14, 1911 No. 3

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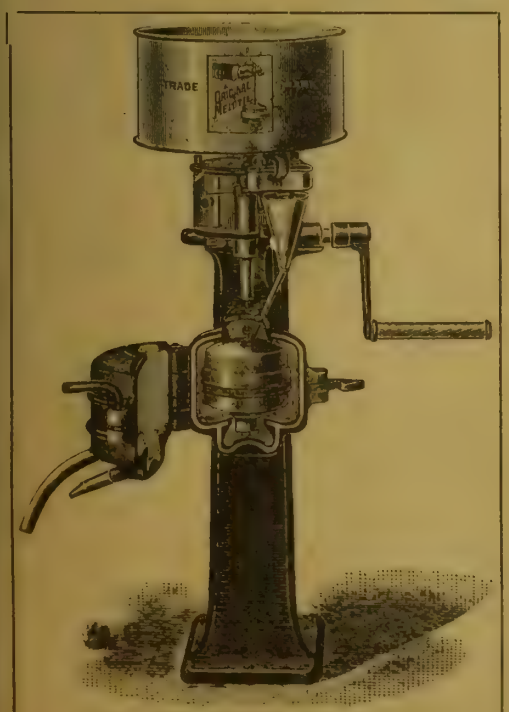

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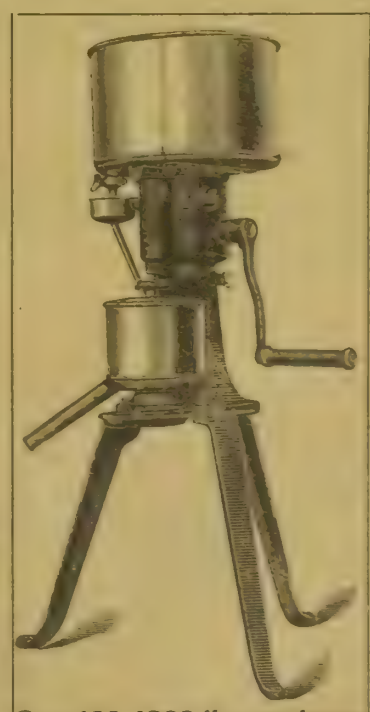

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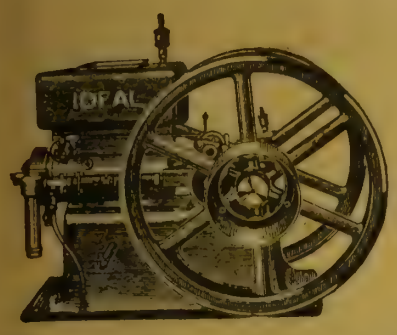

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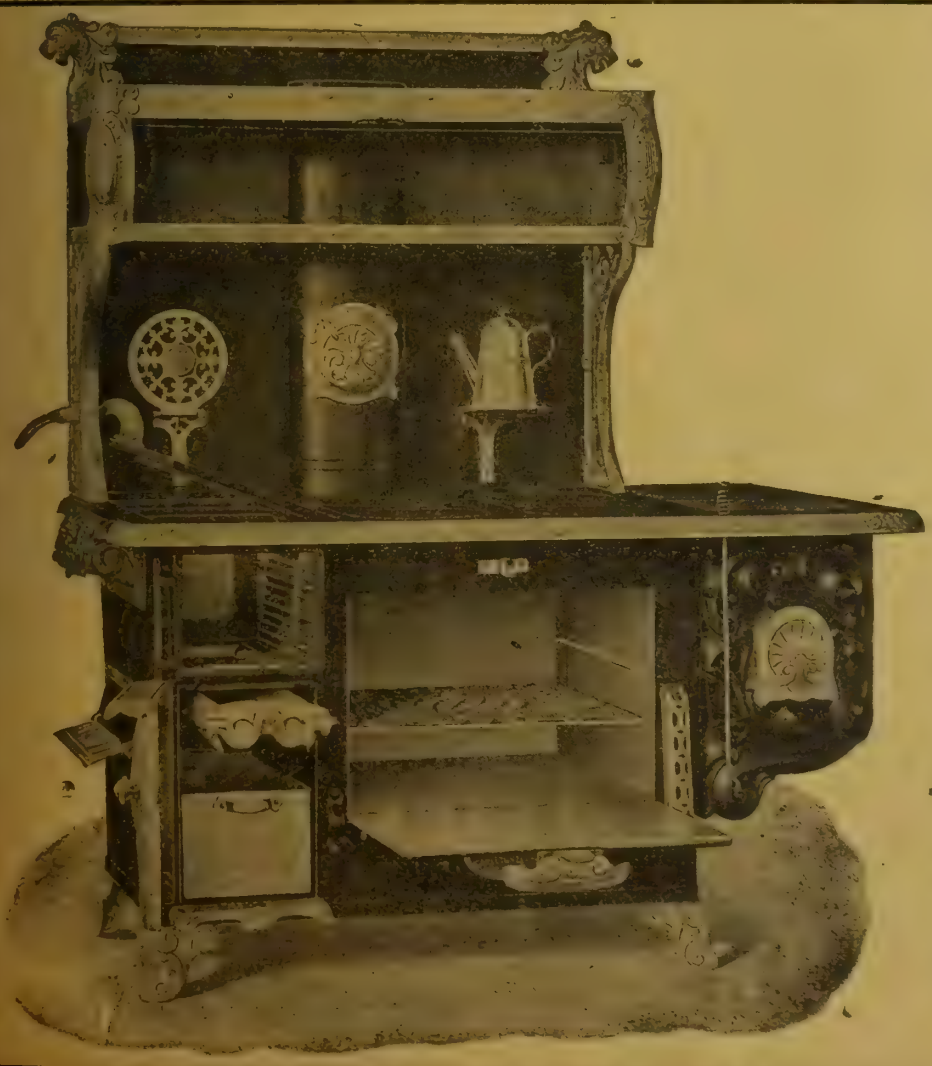

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THE UNIVERSAL FAVORITE is specially built to meet the requirements of farm homes. The top is large and roomy with six pot holes, the oven will bake sixteen loaves of bread in pans 4 1-2x10 inches at one time. The fire box for wood is 29 inches long, and will burn coarse wood of any kind

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The Universal Favorite is procurable from a dealer in your market town. Manufactured by,—

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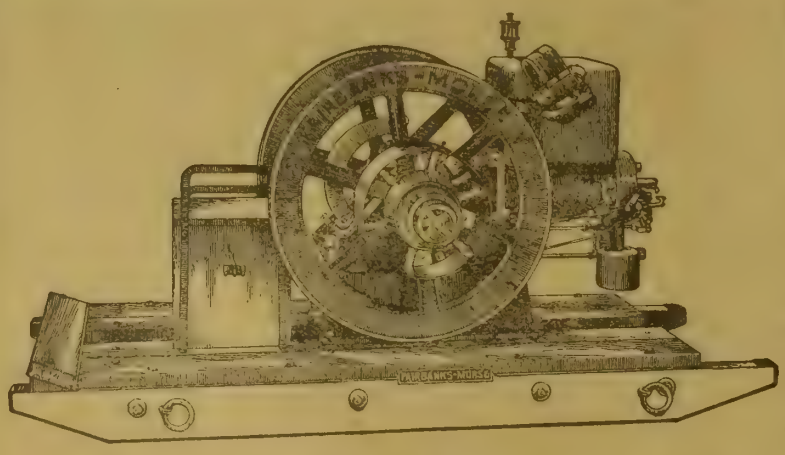

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The two great problems on the farm to-day are time and labor, especially at this time of year when you are gathering in your crops and preparing for the winter months. Wouldn't you welcome a machine that could work away all day, doing your tedious jobs, such as running a cream separator, threshing, cutting corn or pumping water and sawing wood. This is what a

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Volume 17. ST. JOHN, NEW BRUNSWICK, NOVEMBER 14, 1911. Number 3.

Cream Gathering System vs. Whole Milk.

Summer and Winter Dairying

By W. M. Lea, Victoria, P. E. I.

AS a patron of a Creamery both Summer and Winter for the past eighteen years, who has thoroughly tried both systems, I thought I would give our experience in this Province with both the Whole Milk and Cream Gathering Systems.

Just why the much abused Cream Gathering System is always so bitterly opposed is hard for me to understand, as it is inestimately superior to the old system from every standpoint, and the only excuse that can be offered for its retention, in some quarters is, that the people cannot realize how very much better it is in every way and the foolish prejudices raised against the hand separator by some Dairy Authorities who denounce it for its abuses instead of trying to correct them.

Now, Creameries do not need anything for the manufacture of butter but cream and good rich cream at that, so it is not any more reasonable to haul 100 lbs. of milk for miles to and from a factory for the sake of leaving 10 lbs. of cream than it would be for a man to haul his grain to the elevator in the sheaf to have it threshed and haul the straw and chaff back again. Only in the latter case he would not have the by-product destroyed for feeding as is often the case with skim milk.

Milk is never in as good condition to separate as just after it comes from the cow and anything that may have gotten into it is removed before it can cause much contamination. We have very much less of it to get cooled off and take care of, and most important of all, the calf gets the full benefit of its dam's milk. Now, I do not profess to be a scientist, and I cannot say whether it is the milk sugar dissolving, evaporating or turning to acid as other learned men can. All I go by is my own experience in calf raising, but there is a wonderful difference in the feeding qualities of skim milk right from the separator, and that turned from the Creamery, and while we follow the latter practice we continually lose calves or have them ruined in the early months of their existence through this foul milk.

Butter in the Nineties sold low, around 16 to 20 cents, and the cost of manufacturing and hauling under the old system, being about 5 1-2 cents, the excessive cost strangled the industry financially, while the stale milk stunted the future cows.

As winter butter invariably sold higher and for the reason that it divided our work better in the year, we gradually turned to winter dairying. We could then deliver our milk and save considerable in this way, but what of the result.

The Creameries operated only twice a week and instead of separating the milk when warm from the cow, where it was handy to be fed, we stored it in a fairly warm room or carried it around from one building to another as the temperature changed, until we had a load often more or less frozen when we broke the roads to the Creamery. There we bought fuel to again warm it up to separating heat, afterwards

BLIZZARD.

Champion Holstein Cow at the 1911 Halifax, Chatham and Fredericton Exhibitions. Bred in Ontario. Owned and exhibited by Harding Bros. Wish-ton-wish Farm, Welsford, N. B.

A QUARTETTE OF HEAVY DRAUGHTERS—A PROFITABLE CLASS OF HORSES FOR THE FARM.

The above cut shows a heavy draught mare and three of her progeny, first in their class at the 1911 Halifax Exhibition. Each and every one of the animals shown in the photo won first prize in their respective classes. Another colt, equally as good as any of the above, out of the dam in the photo and by the same sire as the colts herewith depicted was a first prize winner in his class, but was inadvertedly left out of the photo. The mare is by the Clydesdale Stallion, Merry Monarch, while her off-spring are by the Clydesdale Stallion, Baron Frederic. Bred, owned and exhibited by Messrs Sharp & MacNeil, Windsor Forks, N. S.

we hauled the skim milk home, put it away to keep cool, then before it was fed, carried it into the house and used more fuel to again warm it up, by which time it usually curdled and was a most unappetizing dish to offer the poor calf.

How can any man justify the Whole Milk System, it has many more evils not yet touched on, as all the milk in a district is mixed and tubercolosis has a most favorable means to spread.

There is a lot of unnecessary work for the butter makers, and another lot of heavy labour for the dairyman as well, and we found with a separator convenient to the milking stable we could separate, feed the calves at the same time, clean the machine and do all much quicker than to gather the night and morning's milk daily in summer, take it to the road, hitch a horse at noon to go after it again, as there was a hill to mount and then go and feed the poor calves. This also was a daily task.

Now, after four years with the Cream Gathering System, summer and winter, without a break and taking some $1000.00 in a year for cream from 13 cows, besides raising almost all the calves and making prize winning calves of them too, thoroughly testing our cows from year to year, as well as many separators, handling different conditions of milk and cream, I will give what I csnsider the chief objections to the general use of the hand separators on the farm.

I noticed sometime ago a writer, who was criticising this system, made this statement: "Theoretically this is the correct method, practically it is a failure." In some instances he may be correct, and why, because of the abuses of the system which might be easily corrected. Chief of which is, neglecting to thoroughly wash the separator, failing to keep the cream at a sufficiently low temperature, skimming too thin cream and not delivering often enough.

Now, none of these are serious difficulties and any butter maker with the right back bone can correct every one of them in his factories, as some one has rightly said in this regard: "If we would all do as well as we know," it would be all right, as about all the directions necessary in the care of cream is summed up in "keep it clean" and "keep it cold."

In the vicinity in which I am dairying four Creameries, four years ago, yes, and three years ago, were altogether Whole Milk Gathering. Last summer only one took a little milk, one has sold out to the others, and the others are doing a much better paying business.

This will give an idea how farmers, who may be bitterly opposed to this system can so quickly change. Well, experience was the teacher, first one started and the others had to. Now, we make a better grade of butter, particularly in winter, than we ever did. Our maker keeps advocating the Heavy Cream Doctrine, we deliver four times a week in hot weather, three times in moderately cool and twice in cold weather. Our cream from the first average 30 p. c. fat (our own seldom gets below 35 p. c.) And here is where many patrons make a great mistake, thick cream is better for everybody, but the man who gets the butter milk, less cost to haul, less to handle at the Creamery, a better quality of cream, as pure is hard to spoil, and that much more skim milk for the patron at home. So many farmers have the mistaken idea, that when the cream is heavy and the stream is small the machine is not operating clean, perhaps some of them are not, but you can get them that can.

While the factory receives both Whole Milk and Cream, the cream prtrons receive about 11 cents per 100 lbs. more out of their milk, estimating that their milk tested as former years. The price of manufacturing the butter was cut from 3 1-2 cents to 3 cents per pound the first year, and will be further reduced this year to 2 3-4 cents or 2 1-2 cents.

I have taken many samples of skim milk for testing at different speeds, different temperatures of milk and speed, etc., and can say that the chief trouble with the separators not skimming clean is "not enough speed." If the milk is taken directly from the cow to the machine and it is a good one, one can get perfect skims up to 40 p.c. fat. Any good machine will skim down to that reading with cream at 35 p. c. fat, provided, a proper speed is maintained throughout the separation, the separator properly cleaned and the milk is warm and fresh. And to the buyer, I would say, above all things, get a good large separating machine, It is not how much per hour should influence you, but how much in ten minutes. This is the hardest thing to get beginners to believe and almost everywhere they start with too small a machine. A few dollars extra in this will save many hours, save msre on our machine and on your muscles and patience.

See that you get a machine "right down to date;" Manufacturers of those have made great improvements in the last few years, and in new districts often try to unload the out-of date make. A good machine well housed, cleaned and oiled, has many years of life, but get your butter maker to test your skim milk from time to time, to keep track of how it is working, as butter fat is a valuable product and slight losses throughout the year will soon pay for any repairs needed.

Jerseys Most Economic Dairy Cows.

Editor Maritime Farmer:—

The Jersey Breed originated on the Island of Jersey, situated in the English Channel. It is claimed that they have been bred pure for 500 years; no cattle being allowed to be imported to the Island except for slaughtering purposes. During that time the breed has been steadily improved, especially in prolonged milk giving and in milk rich in butter fat, until to-day they stand without a peer in these respects.

The first known importation of Jerseys to America was made in 1850.

DESCRIPTION OF THE BREED.

The Jersey is a medium sized breed, the average weight for cows being about 1000 pounds. She is very refined in form, fine in the bone with straight and graceful lines, face dished, eyes large and prominent, color grey or golden fawn with black points, altogether making a deer-like form, very pleasing to the eye.

POPULAR FALLICIES.

We wish next to deal with the popular fallicies regarding the Jerseys. The most popular of those fallicies, and the one with the least foundation of fact, is that they are delicate animals.

Now, there is nothing that is harder to kill or that people are more ready to believe than a wrong idea about anything, and many people no doubt, will go on holding this wrong idea of Jersey cattle during the remainder of their lives, and if they are dairymen who ought to possess herds of the most profitable breed known to man, they are all the time standing in their own light.

Sylvia of Maple Grove—C. J. C. C.. 1086.

This Jersey Cow shown in the above cut was bred and is owned by Wm. Clark & Sons, Maple Grove Farm, North Wiltshire, P. E. I. Mr. W. R. Clark, one of the junior members of this progressive firm is the author of the article on "The Jersey Cow," appearing on this page. Sylvia of Maple Grove is by Gem's Mirror—48396—A. J. C. C. out of Roselin of Maple Grove—153301—A. J. C. C. and her yearly official test record is as follows:—

Milk, 8757 pounds; butter fat 475 pounds. Value of butter fat and skim milk $160.50. Value of food consumed $73.59 leaving a profit of $86.91, besides a handsome bull calf which is offered for sale in this issue.

There is absolutely no foundation of fact that the Jersey is a delicate animal. It is true the breed did pass through a stage when on account of too much inbreeding the constitutions of a large number of animals became impaired, but nearly every other breed of live stock have passed through a like stage. The breeders see their mistake and immediately start to rectify it. The Jersey breed has suffered no more from this mistake than any other breed, and to-day, the Jersey breeders are breeding as healthy and as strong constitutionally cattle as any in the world.

We believe that the reason why many people holding this wrong idea is that the Jerseys with their natural refinement of form and especially the light delicate color which is so peculiar to the breed, suggests to the average mind a delicate constitution. But those who have had experience with this breed find that such is not he case. We have seen times without number, indeed too often, high grade and pure bred Jersey cows roughing it with a lot of mongrels, more hair than anything else, and the Jerseys were adapting themselves to their conditions, growing heavy coats of hair and resisting the inclement weather as well as the best of them. Of course no self-respecting dairyman would make his cows withstand conditions such as these. However. this shows that the Jersey cow can and does adapt herself to all conditions, and is as well suited to a cold climate as a warmer one. We are confident that any person who is fair mind-

ed enough to look at this will no longer hold the foolish idea that the Jersey is delicate.

Then there is the popular belief that the Jersey cow will not consume any amount of roughage or coarse fodder; this is also a mistake. We do not claim that she can consume as much coarse fodder as a larger cow but we do claim that she can consume as much in proportion to her size as do cows of other breeds, and what is more essential, will give a better account of it. At time of writing in our own heard we are feeding fodder corn, large, heavy stalks, without cutting and the cows clean up large quantities of it, while nearly every dairyman with herds of the larger breeds would never think of feeding without cutting. In our own stables we have never run a stalk through a cutting box. We find that they will also consume large quantities of hay and other roughage.

There is no need of anything being said as regards the quality of Jersey milk. The Jersey has proved beyond doubt, that her milk will produce more butter fat and more solids not fat than the milk of any other breed, and also that the quality of the butter and cheese manufactured from her milk cannot be equalled. As regards quantity here again we have the result of a mistaken idea. Because the Jersey cow, as a rnle, gives a small daily yeild of milk she is condemned as a poor milker. The fact that she is a persistant milker is altogather lost sight of. Happily, however, the advent of yearly tests are proving that the Jersey in proportion to her size, gives as large a yeild of milk during the year as does cows of other breeds. It might be of interest to the readers for us to give a few yearly records from a long list that lies before us ; we will give three of the largest and three of the smallest:

	MILK	BUTTER
Jacoba Irene,	17253 lbs	1121 lbs
Sophie 18th	14873 lbs	1005 lbs
Olga's 4th Pride	16275 lbs	1002 lbs
Ben Hur's Witch	11265 lbs	701 lbs
Alphea Elfath	13329 lbs	701 lbs
Spermfield Owl's Maid	10128 lbs	700 lbs

While no wonderful yields of milk, if it can be called milk, are claimed for the Jersey, she must not be considered a poor milker.

ECONOMIC PRODUCTION

Now we will take up the point that to our mind is by far the most important point for the consideration of any man who is making his living by dairying i. e. economic production or a minimum amount of feed to produce a maximum amount of dairy products.

Time and again has the Jersey cow proven that in this respect she stands without a peer. Our only regret is that the cost of production is not taken into consideration in all public tests and until this is done, the Jersey cow is not receiving fair play. The cost of production is more important than a large production of milk, as anyone will readily understand that a large amount of milk produced at the same or a lower profit than a smaller amount of milk involves a large waste of time and labor. Therefore we would urge upon all promoters of public tests the importance of taking into consideration the cost of production. However, there has been tests conducted on this line and we will now give a short summary of the results obtained in some of these.

In 1893 at the Chicago World's Fair, an official test was conducted, covering a period of 140 days, with the result that the Jersey herd gave the most milk, made the most cheese of the highest quality and the most butter of the highest quality and produced them at the least cost per pound. The six leading cows were Jerseys and the Jerseys won the sweepstakes award for the best five cows.

At the St. Louis Worlds Fair the dairy test lasted 120 days. There were seventy cows of all breeds entered. We will give a few of the results as regards the Jersey and her nearest competor, the Holstein. It cost $5.48 per cow less to feed the Jersey than it did to feed the Holsteins. In the production of butter the Jerseys made an average net profit per pound of 14 1-2 cents, Holsteins 11 1-2 cents. In the production of milk the Jerseys made $7.06 per cow more profit than did the Holsteins. In this test the leading cow was a Jersey; the best four were Jerseys ; fourteen of the best fifteen were Jerseys ; seventeen of the best twenty were Jerseys and the best herd was the Jersey herd. The full particulars of these tests, which would take up too much space to give here can be had from the Secretary of the A. J. C. C.,8 West 17th St., New York. These particulars show that the Jerseys made more cheese, more butter, gave more solids other than butter fat, required less milk to make a pound of cheese, required less milk to make a pound of butter, produced a pound of butter at less cost, made cheese of higher quality, made butter of higher quality and demonstrated their ability to profitably assimilate a greater quantity of feed and retain a net increased profit than did any other breed. The official test proves these to be facts and at the same time proves that the Jersey cow is the greatest dairy cow in all essentials, that the world has ever produced,

That you may not think that we are making an extravagant claim we wish you to note that word "essentials". What is the most essential point in a dairying cow ? Every dairyman has to admit that it is the ability to produce a maximum amount of dairy products from a minmum amount of feed, in other words "economic production." That the Jersey cow leads all others in this respect has been proved beyond a doubt.—W. R. Clark, North Wiltshire, P. E. I.

Growing the Montreal Melon for Market.

The Muskmelon, Cucumis melo, is well and favorably known, so well known is it that we seldom stop to think of its origin or evolution. There has been much word play concerning both ; but the truth is hard to arrive at.

It is quite certain however, that the melon is indigenous in India and Africa. Concerning the first the whole of British India and Beluchistan is their national area. The fruit varies from the size of a plum to that of a lemon. It is either striped or barred, or all one color, scented or odourless. According to Roxburgh the Indians gather and have a taste for the fruits though they do not cultivate them.

In Africa the melon has been found growing wild in the sands on the banks of the Niger. The natives eat the fruit, which is oval and about the size of a plum.

From India the fruit found its way to China in the eighth century of our era. The fruit was insipid and small and had little to recommend it. Since the Renaissance improved cultivation and relations with the East have introduced better varieites into the European gardens; but it was not until our own day that really excellent varieties have been established.

Montreal was founced 1642. I have been unable to find out just how long after that, that French priests brought Melon seeds to the Island or Montreal. That they brought them is quite certain. Just what the fruit was like when first grown here, perhaps will never be known, as it would seem that no records exist. Neither do we know whether there was any crossing with other sorts in attempting to improve it, or whether selection was the only agency employed ; but we do know that the Montreal Melon is an established fact.

Gorman. Montreal Melons Decarie.

Two men Decarie and Gorman, their children and their children's children have been mainly responsible for its improvement. Two types have gradually envolved, one of which is somewhat flatter than the other. This is the Decarie, and the other Gorman type.

These Melous obtain great size. One specimen in the writer's garden weighed 19½ lbs. and they often become larger. The largest is sometimes a little coarse and the flavor not so excellent as the medium sized ones. This does not always follow, however.

The flavor of this melon is what is the most sariking, and what has gained for it its renown. It is not so long ago when these melons brought on the Montreal Market 30c. a piece, but this was when the trade was local. When our American friends got a taste of the real thing, the demand from Boston and New York became so great that the price went up. This year at the beginning of the melon season it was not difficult to obtoin $18.00 per dozen for medium sized specimens and some sold retail at the same time for $2.25 each. This is extraordinary in view of the fact that the Ontario melon sells normally at 30 or 40c.

The seed at MacDonald College was sown in flats on March 25. These were pricked out and placed in 4 inch pots on April 7th, one plant to the pot. If greenhouse is not available a hot bed may be used and equally good plants obtained. On May 13 the plants were taken to the field and transplanted in hot beds specially prepared for the purpose.

The frames are the same as the ordinary, and the soil should be light and of good quality. Through the centre a trench is dug usually about 18 inches wide and 9 inches deep. These measurements differ much with different growers. These trenches are filled with hot manure tramped down firmly to within four inches of the surface and covered with good soil. The plants are set directly over this manure, as soon as the soil has warmed up.

Eight plants are placed in each frame and covered carefully for cold

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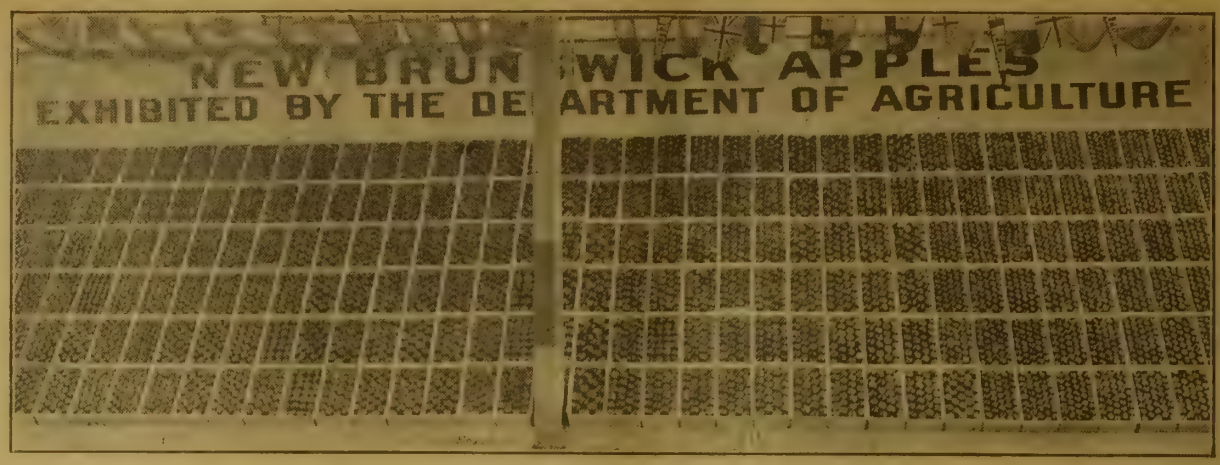
N. B. Fruit Growers' Annual Convention.

The annual meeting of the New Brunswick Fruit Growers' Association was held in St. Andrews Rink, St. John, N. B., on October 31st to November 2nd. That the various members of the Association felt greatly encouraged in their work owing to the magnificent fruit show which was being held simultaneously with their meeting can well be imagined. There was a record attenance and notes of optimism prevaded the lectures and discussions that followed.



New Brunswick Export Apples.
A section of the New Brunswick Government's Exhibit at the recent N. B. Fruit Show. There were 419 Boxes in the display

Mr. C. N. Vroom, president of the Association occupied the chair and read the following address :

To the members of the New Brunswick Fruit Grower's Association :

It is with pleasure that I greet you again in the annual convention of our Association. From the nature of his business a fruit grower is habitually of a cheerful countenance, but the result of the past season's work should adorn his face with beams of gladness. The year has been a prosperous one. The cheery smile of the fragrant Spring blossoms was in due course of time replaced by the radiant glow of the maturing fruit, until the laden trees bent their heads in silent acknowledgement of the generous bounty of the Giver of all good gifts. It is fitting that the time of displaying our fruit should be fixed at the time of our national Thanksgiving, and that animate and inanimate creatures should unite in their paeans of praise.

While our fruit fair in St. John last season was somewhat in the nature of an experiment, we had occasion to congratulate ourselves on its eminent success. Attention was drawn to the capabilities of this province for fruit growing as it never had been before and it resulted in greater interest in our apples both on the part of those who were already in the business of growing them and also on the part of those seeking a profitable investment of capital. We are desirous of new settlers for our abundant farm lands, and nothing perhaps will do more toward attracting them, than the proper setting forth of the advantages our province offers for the growth of good fruit. First we must convince our own people that we can raise apples that the world cannot beat, and this I believe our annual exhibitions are doing, then let the gospel of good apples go abroad. We have the soil and the climate for raising apples which will take first rank in every respect, and the number of growers who are seeking for the best methods in raising and handling the crops is annually increasing. But while there has been a good crop of fruit generally, it has been demonstrated to us again as it is being demonstrated in each succeeding year that the man who takes the pains is the man whe reaps the gains. While fruit has been singularly free from fungus growths, and in our section it has not been a bad year for the Codling Moth, other insects have been somewhat plentiful. The Orchard Tent Caterpillar was present in great abundance and the Forest Tent Caterpillar in some cases entirely denuded the trees of both fruit and foliage, while the Fall Web Worm seems to increase its depredations from year to year. The orchardist who has used the means for combating these enemies, which science has placed within the reach of all is the man who now rejoices that he had the courage to take a step forward in the march of progress.

There are two points in the work of an up-to-date orchardist which cannot be too strongly emphasized. I refer to the spraying of the trees and packing the fruit. Perfect spraying will give us perfect fruit and control the insect enemies. I am inclined to believe that a little preventive work is the best in the case of the Orchard Tent Caterpillar as it may almost entirely kept away by destroying the egg mass. A careful examination of the fruit trees at any time between the fall of the leaf and the coming of the new leaf, will reveal the rings of eggs encircling the twigs, and when they are within reach they may be easily removed with the finger nail, and when above reach with the hand, this twig may be cut off with a pruner. In the case of spraying, no man who intends to do any business in fruit growing can afford to neglect it. It is an essential to success. The best results in orcharding of course call for cultivation, fertilizing and pruning, but much of the labor along these lines is thrown away if spraying is neglected. It is in the nature of an insurance against the spread of fungus diseases and the inroads of insects. If a man sets out a few trees for the fun of the thing, he may afford to let them go and bear or not as they choose, but if he purposes to do any business in fruit and reap a benefit from it, he must spray. Without spraying he will gather a small crop of inferior apples, in some seasons 75% of them being No. 2 or poorer, while with proper spraying the trees will yield a much larger crop with 75 p. c. of No. 1 fruit.

Then when the fruit is grown and carefully gathered comes the marketing, and to market for best returns the fruit must be properly packed. We may as well acknowledge that we are in our infancy in this business, and the worst of it is that many do not seem to have awakened to the fact that they have anything to learn. The very meagre attendance of the members at the meetings of the convention last year would indicate this. These meetings were, to the fruit grower, equal to a short course at one of our agricultural colleges, as the program was rich in addresses by some of the best talent in the Dominion in the line of fruit growing, and yet when the teachers come to our very doors, many of the members of the Assocsation apparently cared too little for the teaching to give their time to attend. There are many orchards in the province of considerable size, where the owner has little knowledge of the proper methods of packing, either in barrels or boxes. While spraying is a necessity in the growing of good fruit, proper packing is a necessity for the obtaining of the best prices for it. A slouchy, hit or miss pack, either in barrels or boxes, will not do in the present day, Apples must be graded to size and quality and packed scientifically. The style of package, whether box or barrel, will depend largely on the variety and quality of the fruit. For fancy fruit the grower will get better returns and better please his customer, by packing in either the standard box or a basket of lesser capacity.

Speaking of varieties, leads me to the suggestion that every grower should conduct an experimenral orchard to a limited extent. It is unsafe to plant largely of any one variety on the recommendation of any Western fruit grower or nurseryman, or even on the recommendation of some one in another part of the province. As an illustration of this let me instance the Red Astrachan, which grows to perfection in my district, but scions from the best bearing trees there, grafted in an orchard 30 miles distant, where Kings and other varieties do well, yield an inferior fruit. While it may be true that for a commercial orchard, only a few varieties should be planted, I believe that a man can never rest quite satisfied that he has the best varieties obtainable for his own locality. The number of varieties must depend largely on the market. If a man aims to supply the local market or a city market and holds his customers, he wants varieties following one another all through the season, and of the new varieties constantly coming to the front there may be something that will better suit the local conditions of soil and climate than anything he may be raising. The quickest test of these varieties is of course by grafting into bearing trees, and one tree will hold a number of varieties until they come to fruiting. Many of our orchardists planted quite largely of Ben Davis a few years ago, as it was boomed by a Western nursery concern. While a western grown Ben Davis is a fair apple, I think a man makes a mistake by giving it orchard room here. I have been met with the statement that the apple was a good seller in the spring when other apples were scarce, but I have only to say that a better apple grown on the same tree would sell better and give the orchard and incidentally the orchardist a better name. I have also been told that this apple is a great keeper, but so is any other piece of wood if given the same chance. I have seen these apples thrown out of an ordinary cellar when two years old, to make room for better fruit. So long as there was anything else in the apple line to use, these remained untouched. Then again I doubt if we should raise American Baldwins when New England can raise them of a better flavor. Let us get down to those varieties in which we can excel or at least match any other section of this continent. With such varieties as the Yellow Transparent, New Brunswicker, Red Astrichan and Williams Red among early fruit; Wealthy, Femeuse and McIntosh Red in later season; and Golden Russet, Bishop Pippin, King with many other excellent varieties, we have no lack of choice fruit, and can afford to leave to any other part of the country any varieties in which they can beat us either in size, color flavor or keeping qualities

Before closing, I would like to say a word to such as may hear me, who do not make a specialty of raising

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The Nova Scotia Horticultural Show.

In writing us re the recent Nova Scotia Horticultural Show, Mr. I. B. Oakes, its painstaking secretary, says:—"The exhibition was a great success. It produced the finest display of fruit ever seen in the Maritime Provinces. The weather conditions were favorable. The rink accomodations are the best outside of Halifax and the financial outcome is very satisfactory, there being a substantial surplus of several hundred dollars after all expenses are paid."

While fruit was the main feature of the Show, several other branches of industry were well represented, and judged as follows:—

Apples on plates and in barrels and boxes—G. H. Vroom; Pears and Plums—S. C. Parker and Prof. Shaw; Ornamental Plants and Flowers—T. A. Smith and A. J. Woodman; Roots and Vegetables—G. B. Magill; Industrial and Educational—Profs. Sutherland, Haycock and Perry; Domestic—Mrs. W. L. Archibald and Mrs. Harriett Starr; Dairy Products—J. R. Starr; Grains and Seeds—S. J. Moore Horses—Sherriff J. S. Harris.

Following is a list of the Prize Winners in the Fruit division:—

APPLES.

Best and most valuable collection, not to exceed 20 varieties 5 specimens each—Mrs. William Sangster, Falmouth; Benjamin Lawrence, Falmouth; J. A. Magee, Port Williams; Arthur C. Johnson, Wolfville; B. F. Chesley, Clarence.

Best collection, 10 commercial or export varieties, 5 specimens each—H. E. Bent, Tupperville; Millie Sangster, Falmouth; H. D'Almaine, Wolfville; Benjamin Lawrence; Emerson F. Johnson, Greenwich.

Best collection, 5 commercial or export varieties, 5 specimens each—Fred L. Johnson, Greenwich; B. F. Chesley; Mrs. Arch Curry, Falmouth; W. R. S. Gow, Grand Pre; Arthur C. Johnson.

Best plate of 5 Apples of following 10 varieties.

Prizes in order named:

Gravensteins—G. E. Magee, Church St.; Arthur Gravatt, Berwick; H. D. Johnson, Wolfville; H. A. D'Almaine; J. A. Magee; Arthur C. Johnson; Mrs L. C. Hutchinson, Wolfville; H. Loomer, Falmouth.

Ribston—J. A. Magee; H. D. Johnson; A. N. Griffin, New Minas; A. C. Johnson; Fred Fielding, Kentville; Joseph Boyd, Falmouth; A. C. Murphy, Port Williams; H. E. Bent.

Blenheim—Arthur C. Johnson; Thomas H. Morse, Berwick; B. F. Chesley; H. Loomer; A. H. Westcott, Melanson; Laurie E. Healy, Church St.; H. E. Bent; G. E. Magee.

King—James R. Gow, Grand Pre; Arthur W. Smith, Waterville; H. A. D'Almaine; Fred L. Johnson; H. E. Bent; B. F. Chesley; H. L. Chipman, Chipman Corner; Edward C. Johnson, Wolfville.

Golden Russett—G. E. Magee; C. A. Patriquin, Wolfville; S. A. Bowser, Grand Pre; B. F. Chesley; Geo. B. Woodworth; H. E. Bent; H. D. Johnson; J. A. Magee.

Baldwin—J. D. Sherwood, Wolfville; Victor W. Alward, Falmouth; A. C. Johnson; Arthur Gravatt; A. H. Westcott; H. D'Almaine; G. E. Magee; L. E. Healy.

Spy—L. E. Healy; Ross W. Collins, Port Williams; H. Loomer; Aubrey J. Smith, Falmouth; R. S. Palmer, Windsor Forks; C. C. Brown, Greenwich; Joseph Boyd, Falmouth; H. D. Johnson.

Fallawater—L. A. Healy; A. N. Griffin; Mrs. A. C. Chesley, Grand Pre; R. S. Palmer; B. F. Chesley; Alfred S. McRae, Grand Pre; J. A. Magee; Asaph B. Robinson, Nicholsville.

Nonpareil—H. D' Almaine; A. H. Johnson; Z. O. Hardacker; H. D. Johnson; Mrs. William Sangster; B. F. Chesley; Creighton Wood, Port Williams; J. A. Magee.

Alexander—H. Loomer; E. J. Armstrong, Church St.; C. Wright, Middleton; L. E. Healy.

Banks Grav.—Benjamin Woodworth, Church St.; I. B. Oakes, Wolfville; H. E. Bent; Fred L. Johnson.

Ben Davis—Fred L. Johnson; J. O. Hardacker; B. F. Chesley; Thomas H. Jackson, Berwick.

Bishop Pippin—H. E. Bent; A. C. Johnson; B. F. Chesley; H. D. Johnson.

Boskoop—W. J. Chipman, Chipman Corner; H. L. Chipman; J. W. Selfridge, Wolfville; S. A. Bowser, Grand Pre.

Dudley or North Star—L. E. Healy; Fred L. Johnson; H. D. Johnson.

Gloria Mundi—J. A. Magee; H. D'Almaine; H. D. Johnson; H. Loomer

Hubbardston—Mrs. A. C. Chesley; S. Avery Bowser; W. W. Jacques, Church St.: H. L. Chipman.

McIntosh—J. A. Magee; H. Loomer; Percy G. Lawrence; C. F. Trenholm, Grand Pre.

Ontario—J. D. Sherwood; H. D'Almaine; A. C. Johnson; J. O. Hardacker.

R. I. Greening—H. E. Bent; C. F. Trenholm; D. D. Lyman, Wolfville; Emerson F. Johnson.

Seeks—Joseph Boyd; R. S. Palmer; J. D. Sherwood; A. C. Johnson.

Talman Sweet—Creighton Wood; G. E. Magee; J. D. Sherwood; Arthur C. Johnson.

Pomme Grise—Joseph Boyd; Benjamin Lawrence; Benjamin Woodworth; Thomas Aylward.

Wagner—L. E. Healy; Chas. H. Wright; C. A. Patriquin; Thomas H. Morse.

Wealthy—A. H. Johnson; E. F. Neily; H. D. Johnson; B. F. Chesley.

Cox's Orange—H. Loomer; R. S. Palmer; G. E. Magee; Benj. Woodworth.

Spitzenburgs—H. Loomer; Arthur Johnson; R. S. Palmer; H. E. Bent.

Wolf River—Thomas H. Jackson; J. A. Magee; L. E. Healy; Thomad H. Morse.

Arctic—Geo. P. Magee; Wm. Black, Wolfville.

Baxter—J. A. Magee; Joseph Boyd.

Brightheimer—Benjamin Woodworth, Sorey J. Stewart.

Bismark—Arthur Johnson; H. D'Almaine.

Black Ben Davis—W. S. R. Gow; T. E. Smith, Clarence.

Champions—W. S. R. Gow; W. M. Black.

Gano—Fred L. Johnson; Emerson F. Johnson.

Grimes Golden—C. F. Trenholm; R. S. Palmer.

Ingram—T. E. Smith.

Jonathan—Joseph Boyd; Miss M. Sangster.

Jewett's Red—E. T. Neily; C. E. Wright.

Lawver—H. D'Almaine; Arthur Johnson.

Maiden's Blush—Emerson Johnson; G. E. Magee.

Mann—F. J. Fielding; S. A. Bowser.

Manson Sweet—Arthur Johnson; H D. Johnson.

Ohio Nonpareil—H. D. Johnson; H. D'Almaine.

Peck's Pleasant—Ross W. Collins; T. E. Smith.

Pewaukee—H. E. Bent; C. A. Patriquin.

Red Russett—T. E. Smith; Mrs. Wm. Sangseer.

Victoria—H. D'Almaine; H. D. Johnson.

Wellington—C. C. Brown; G. E. Magee.

Senator—W. S. R. Gow; T. R. Wallace.

Fameuse—H. D. Johnson; Fred L. Johnson.

(Continued on page 88).

Who Said Apples?

A Section of the Plate Exhibits at the Nova Scotia Horticultural Exhibition, Wolfville, N. S.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers. and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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NOVEMBER 14, 1911.

DATES OF ISSUE.

November ..... 14—28

December ..... 12—26

OUR POPULATION.

The census returns for the past decade show that the Maritime Provinces have made some, though comparatively slight, progress in population. We think that the showing will be better in the industrial census and we may take more satisfaction in that, but for the present we can only deal with the population figures. Following are details :

	1911	1910	
Nova Scotia	461,847	459,574	2,273 Incr
New Brunswick	351,815	331,120	20,695 Incr
P. E. Island	93,722	103.259	9,537 Dec.
Total	907,804	893,953	13,431 Incr

The Census Bureau has given out details of changes in population in the case of a number of towns and cities. With the exception of Charlottetown (which declined 882), all have shown increases. In the returns of 1901, 16 places in Nova Scotia, 10 places in New Brunswick and 2 in Prince Edward Island had over 2,000 population, and in the returns before us there are given only 9 in N. S., 3 in N. B., and 1 in P. E. I., or 28 in all in 1901 and 13 in 1911, which is 15 less. We do not know whether the omission from the list of so many of these towns means that there have been declines there, or whether it is due to not having the returns in sufficiently good shape. We are rather disposed to think it is the latter, for such places as New Glasgow can hardly have decrcased with the well known prosperity they have been enjoying there. Amherst also must have had a very large increase.

Following are the towns and cities which have shown increases during the decade as published by the census returns :

PROVINCE OF NOVA SCOTIA.

	1011.	1901	Incr
Dartmouth	5,058	4.806	252
Glace? Bay	16,561	6,945	9,616
Halifax	46,081	50,832	5,249
North Sydney	5,418	4,646	772
Sydney Mines	7,464	3,191	4,273
Sydney	17,617	9,909	7,708
Truro	6,015	5,993	22
Yarmouth	9,571	6,430	141

PROVINCE OF NEW BRUNSWICK.

	1911.	1901.	Incr.
Fredericton	7,208	7,117	91
Moncton	11,329	9,026	2,303
St. John	42,363	40,711	1,652

The conspicuous increases according to the above tables have been in Cape Breton, where Sydney, North Sydney, Sydney Mines and Glace Bay, all in one district have increased 22,369 in the ten years. Halifax and Dartmouth, forming practically one community, have increased 5,501. Halifax and Dartmouth have a population of 51,139. Glace Bay and Sydney Mines have more than doubled and Sydney almost doubled in the ten years.

THE NOVA SCOTIA AGRICULTURAL COLLEGE.

We have the following article from Professor Cumming, Principal of the N. S. Agricultural college—it speaks for itself:—

"The Nova Scotia Agricultural College began its seventh annual session on November 1st last, with an initial enrollment of nearly 50 per cent. in advance of any previous enrollment. Owing to the labor required to handle the apple crop in Nova Scotia, a number of regular students are not able to enter the college until December and January. Consequently, in previous years the attendance at the regular course has usually increased 25 per cent. or more. The enrollment on the last of November last was 66, as compared with 43 a year ago and 17 six years ago. It is likely that the enrollment for this year will increase to about 90.

"Upper Canada readers of course understand that the constituency of the Nova Scotia Agricultural college is several times smaller than that of similar institutions in Canada and will, of course, judge the attendance accordingly. It is certainly most satisfactory to all interested in agriculturae in the East to record the steady growth which is being made at the Nova Scotia Agricultural College.

"Even more satisfactory to report than the increased attendance is the actual evidence of improvements in farming, due to the influences of the graduates of the college. Over 90 per cent. of the students who have thus far attended the N. S. A.C. are engaged in farming and it is significant that the larger proportion of the new students have come to the college from the localities where the earlier students have come from, being influenced by the improvements.

"One new creamery in Kings County, a second one now in course of erection in Yarmouth County, and a third one being organized in Cumberland County, all managed by Agricultural College graduates, are practital evidence of the influence the college is having in the development of the agricultural industry of the province. Many more evidences might be quoted, but enough is now apparent to make the people of Nova Scotia realize the wisdom of their investment in the Agricultural College.

"The College Management purposes adding several new features to their Short Course held during the first two weeks of January. Over 300 students attended the last session and everything points to a still larger attendance in January next. One of the new features will be a class in running of gasoline engines, with more especial reference to power spraying. It is also proposed to greatly strengthen the ladies' part of the Short Course and make this increasingly attractive.

"The people of Nova Scotia have responded so well to the efforts of the Agricultural College that the management feel thoroughly confident in making every preparation for increasing numbers of students in all courses."

While our average farmers can not take the full course, no one can afford not to take advantage of the opportunities offered by the Short Courses which will be held during the first two weeks in January. Give this matter your serious consideration and do your best to have some one of your family attend the Short Courses next January.

HARDWOODS.

Canada is dependent for its lumber supply on the soft woods of the forest much more than in the United States, as seen from the 1910 Forest Products report compiled by the Dominion Forestry Branch and shortly to be published. Of the 1910 Canadian lumber cut amounting to nearly five million feet, only one-twentieth consisted of hardwoods or broad-leafed trees, worth barely five million dollars; on the other hand almost one quarter of the lumber cut in the United States consists of hardwoods, which country had far greater hordwood forests than ever did Canada. Canada is already feeling a shortage of the hardwood supply and makes up the national deficiency by importing annually from the United States, hardwood lumber to the value of seven and a half million dollars. Thus the value of the hardwoods imported into Canada during 1910 cxceeded by 50 per cent the value of the hardwoods manufactured into lumber. Nearly all of these imports are from the United States and consists of the most valueable species such as Oak, Hickory, Tulip or Yellow Poplar. Chestnut, Gum, Walnut, Cherry and a large amount of hard pine which is so frequently used as a hardwood. From these above figures it is seen that we are becoming more and more dependent upon the United States whose available supply for export is surely and rapidly decreasing. Whatever can be done to improve the resources of Canada by the elimination of wood waste, and particularly by the development of the small wood lots of Ontario, Southern Quebec and the Maritime Provinces, should be done with all possible speed.

LEARN TO MAKE REPAIRS.

A boy we know who hopes some day to be a farmer will sit 15 minutes on a rake or mower and call for someone to tighten a nut or adjust another bit of mechanism. If he succeeds he will have to learn to do these things himself, for every farmer must be a machinist. The man who can put a reaper together after he has seen it done will do well, but the man who can do it without having seen it done will do better. Time on the farm, as anywhere else is money, and when a tongue breaks it is money in the pocket to be able to repair it without driving to the blacksmith.

Prize Winners at the New Brunswick Fruit Show.

Best Plate, 5 Apples.

McINTOSH RED:—1, J. W. Clark, Maugerville; 2, F. A. Hubbard, Burton; 3, J. C. Gilman & Son, Fredericton; 4, J. P. Jewett, Sheffield Academy; 5, Slipp Bros., Upper Hampstead; 6, C. N. Vroom, St. Stephen; 7, Geo. MacAlpine, Lower Gagetown; 8, G. W. Stephenson, Sheffield.

FAMEUSE:—1, John E. Holder, Lower Cambridge; 2, J. C. Gilman & Son, Fredericton; 3, W. P. & F. N. Fox, Lower Gagetown; 4, F. A. Hubbard, Burton.

DUDLEY:—1, H. Smith, Long Reach 2, G. E. Babit, Swan Creek; 3, I. W. Stephenson, Sheffield; 4, R. E. Flewelling, Oak Point.

WEALTHY:—1, H. Wilmot, Oromocto; 2, B. F. Peters, Queenstown; 3, F. A. Hubbard, Burton; 4, Mrs. E. W. Darcus, Fredericton.

BETHEL:—1, D. L. Martin, 2, F. W. Short, Brown's Flats; 3, R. E. Flewelling, Oak Point; 4, Frank W. Short, Glenwood.

NEW BRUNSWICKER:—1, T. Adney, Upper Woodstock; 2, J. C. Gilman & Son, Fredericton 3, J. W. Clark, Maugerville; 4, J. A. Jewett, Sheffield Academy.

DUCHESS:—1, J. W. Clark, Maugerville; 2, I. W. Stephenson, Sheffield; 3, J. C. Gilman & Son, Fredericton; 4, T. L. Alexander, Fredericton Junction.

BAXTER:—1, J. C. Gilman & Son, 2, J. E. Holder, Lower Cambridge; 3, Cossar Farm, Lower Gagetown; 4, St. John Valley Fruit Co.

ALEXANDER:—1, J. P. Jewett, Sheffield Academy; 2, Geo. MacAlpine Lower Gagetown; 3, B. F. Peters, Queenstown; 4, J. C. Gilman & Son, Fredericton.

WOLFE RIVER:—1, Slipp Bros., Upper Hampstead; 2, Geo. MacAlpine, Lower Gagetown; 3, F. A. Hubbard; 4, D. I. Williams, Long Reach.

Best Plate, 5 Apples.

GOLDEN RUSSET:—1, J. C. Gilman & Son, Fredericton; 2, Geo. MacAlpine, Lower Gagetown.

KING OF TOMPKINS:—1, E. Martin, Deer Island; 2, H. Smith, Long Reach; 3, Lester Wood, Carter's Point

NORTHERN SPY:—1, Geo. MacAlpine, Lower Gagetown; 2, R. E. Flewelling, Oak Point; 3, H. Smith, Long Reach.

RHODE ISLAND GREENING:—1, S. L. Peters, Queenstown 2, B. F. Peters, Queenstown; 3, C. E. Dixon, Hampton.

BISHOP PIPPIN:—1, Cossar Farm, Lower Gagetown; 2, W. P. & F. L. Fox, Lower Gagetown; 3, Slipp Bros, Hampstead.

MILWAUKEE:—1, J. C. Gilman & Son, Fredericton; 2, T. L. Alexander, Fredericton Jct.

BEN DAVIS:—1, W. P. & F. L. Fox, Lower Gagetown; 2, Cossar Farm, Lower Gagetown; 3, St. John Valley Fruit Co., Burton.

Best Plate, 5 Apples.

PRINCESS LOUISE:—1, I. W. Stephenson, Sheffield.

GRAVENSTEIN:—1, Geo. MacAlpine, Lower Gagetown; 2, B. F. Peters, Queenstown; 3, S. L. Peters, Queenstown.

RIBSTON:—1, Cossar Farm, Lower Gagetown; 2, T. L. Alexander, Fredericton Jct.

BLENHEIM PIPPIN:—1, Geo. Mac Alpine, Lower Gagetown; 2, R. E. Flewelling, Oak Point; 3, T. L. Alexander, Fredericton Junction.

GRIME'S GOLDEN:—1, T. L. Alexander, Fredericton Jct.; 2, I. W. Stephenson, Sheffield.
town; 3, I. W. Stephenson, Sheffield.

GANO:—1, W. A. Colpitts; 2, Geo. MacAlpine; 3, I. W. Stephenson.

Cove; 2, George McAlpin, Lower Gagetown; 3, B. Charters, Moncton.

TALMAN SWEET:—1, D. F. Martin; 2, J. C. Gilman & Son, Fredericton; 3, F. A. Hubbard, Burton.

WAGNER:—1, Ben Charters, Chartersville.

FALLOWATER:—1, Geo. McAlpin, Lower Gagetown; 2, Cossar Farm, Lower Gagetown.

[illegible] B. Charters, Chartersville; 2, Geo. MacAlpine, Lower Gagetown; 3, J. C. Gilman & Son, Fredericton.

SALOME:—1, I. W. Stephenson, Sheffield; 2, B. Charters, Chartersville; 3, F. A. Hubbard, Burton.

WINTER ST. LAWRENCE:—1, J. E. Holder, Lower Cambridge; 2, Slipp Bros., Upper Hampstead.

MILDING:—1, W. P. & F. L. Fox, Lower Gagetown; 2, J. C. Gilman & Son, Fredericton; 3, Lester Wood, Carters Point.

AMERICAN BALDWIN:—1, Frank Scott, Honeydale.

MacMAHON'S WHITE:—1, Geo. MacAlpine, Lower Gagetown; 2, D. I. Williams, Long Reach; 3, J. E. Holder, Lower Cambridge.

CANADIAN BALDWIN:—1, Geo. MacAlpine, Lower Gagetown; 2, W. P. & F. L. Fox, Lower Gagetown; 3, J. R. Daggett, Centerville.

SCOTT'S WINTER:—1, I. W. Stephenson, Sheffield; 2, J. C. Gilman & Son, Fredericton; 3, B. Charters, Chartersville.

N. W. GREENING:—1, C. E. Dixon, Hampton.

BLUE PEARMAIN:—1, W. P. & F. L. Fox, Lower Gagetown; 2, Geo. MacAlpine, Lower Gagetown; 3, Slipp Bros., Upper Hampstead.

ST. LAWRENCE:—1, D. I. Williams, Long Reach; 2, R. E. Flewelling, Oak Point 3, J. C. Gilman & Son, Fredericton.

LONGFIELD:—1, I. W. Stephenson, Sheffield.

ANY OTHER VARIETY:—1, Cossar Farm, Lower Gagetown; 2, R. E. Flewelling, Oak Point; 3, C. Vroom, St. Stephen.

CRAB APPLES.

TRANSCENDENT:—1, J. C. Gilman & Son, Fredericton.

HYSLOP:—1, E. L. Colpitts, Petitcodiac; 2, J. E. Holder, Lower Cambridge; 3, J. C. Gilman & Son, Fredericton.

ANY OTHER VARIETY:—1, W. A. Colpitts, Mapleton.

Best Plate, 5 Apples, grown in Sunbury, Queens, Kings and Albert Counties.

NORTHERN SPY:—1, Geo. MacAlpine, Lower Gagetown; 2, R. E. Flewelling, Oak Point; 3, Cossar Farm, Lower Gagetown.

KING OF TOMPKINS:—1, B. F. Peters, Queenstown; 2, H. Smith, Long Reach; 3, Lester Wood, Carters Point.

BISHOP PIPPIN:—1, Cossar Farm, Lower Gagetown; 2, R. E. Flewelling, Oak Point; 3, Slipp Bros., Upper Hampstead.

BEN DAVIS:—1, J. R. Dykeman, Upper Jemseg; 2, Lester Wood, Carters Point; 3, Slipp Bros., Upper Hampstead.

RIBSTON PIPPIN:—1, Geo. MacAlpine, Lower Gagetown; 2, Cossar Farm, Lower Gagetown; 3, S. L. Peters, Queenstown.

ANY OTHER VARIETY:—1, I. W. Stephenson, Sheffield; 2, H. Wilmot, Oromocto; 3, Lester Wood, Carters Point.

Best Plate, 5 Apples, grown in Carleton, York, Charlotte, Westmorland and Kent Counties.

ALEXANDER:—1, Mrs. E. W. Darcus, Fredericton; 2, J. C. Gilman & Son, Fredericton; 3, Frank Scott, Honeydale.

WOLFE RIVER:—1, J. B. Daggett, Centreville; 2, B. Charters, Chartersville.

FAMEUSE:—1, D. L. Martin & Son; 2, J. C. Gilman & Son, Fredericton; 3, Mrs. E. W. Darcus, Fredericton.

McINTOSH RED:—1, J. C. Gilman & Son, Fredericton; 2, C. N. Vroom, St. Stephen; 3, Mrs. E. W. Darcus, Fredericton.

WEALTHY:—1, J. C. Gilman & Son, Fredericton; 2, T. Adney, Upper Woodstock; 3, Mrs. E. W. Darcus, Fredericton.

BISHOP PIPPIN:—1, D. L. Martin & Son; 2, J. C. Gilman & Son, Fredericton; 3, Frank Scott, Honeydale.

ANY OTHER VARIETY:—1, E. Martin, Deer Island; 2, D. L. Martin & Son; 3, T. Adney, Woodstock.
Grove.

Best Plate, 5 Apples, grown in Madawaska, Restigouche, Gloucester, Northumberland, Victoria and St. John Counties.

DUCHESS:—1, W. R. McFate, Golden Grove.

WEALTHY:—1, B. J. Power, North Telagouche; 2, W. R. McFate, Golden

ALEXANDER:—1, B. J. Power, North Telagouche; 2, W. R. McFate, Golden Grove.

WOLFE RIVER:—1, W. R. McFate, Golden Grove.

FAMEUSE:—1, W. R. McFate, Golden Grove.

McINTOSH RED:—1, W. R. McFate Golden Grove.

ANY OTHER VARIETY:—1, J. B. Daggett, Centreville; 2, W. R. Mc Fate, Golden Grove.

CLASS 3.

COUNTY COLLECTIONS.

KINGS CO.:—1, A. R. Gorham, Grey's Mills; 2, H. Smith, Long Reach; 3, A. H. Fairweather, Hampton.

ST. JOHN CO.:—1, W. R. McFate, Golden Grove.

CHARLOTTE CO.:—1, C. N. Vroom St. Stephen; 2, E. Martin, Deer Island; 3, F. Scott, Honeydale.

QUEENS CO.:—1, S. L. Peters, Queenstown.

SUNBURY CO.:—1, T. L. Alexander, Fredericton Junction; 2, F. A. Hubbard, Burton; 3, I. W. Stephenson, Sheffield.

YORK CO.:—1, J. C. Gilman & Son Fredericton; 2, B. I. Whitehead, Upper Queensbury.

CARLETON CO.:—1, T. Adney, Upper Woodstock; 2, J. B. Daggett, Centreville.

GLOUCESTER CO.:—1, B. J. Power, North Telagouche.

WESTMORLAND CO.:—1, B. Charters, Chartersville.

ALBERT CO.:—1, W. A. Coluitts, Mapleton.

CLASS 4.

Best 10 Varieties grown in N. B.

1, J. C. Gilman & Son, Fredericton; 2, Geo. MacAlpine, Lower Gagetown; 3, St. John Valley Fruit Co., Burton; 4, B. Charters, Chartersville.

CLASS 5.

Best Collection grown on any one farm in N. B.

1, Geo. MacAlpine, Lower Gagetown; 2, J. C. Gilman & Son, Fredericton; 3, B. Charters, Chartersville; 4, I. W. Stephenson, Sheffield; 5, H. Orchard, White's Cove.

CLASS 6.

Best Box ready for shipment.

McINTOSH RED:—1, J. C. Gilman & Son, Fredericton; 2, A. H. Fairweather, Hampton; 3, A. R. Gorham, Grey's Mills.

FAMEUSE:—1, St. John Valley Fruit Co., Burton; 2, J. C. Gilman & Son, Fredericton; 3, B. Charters, Chartersville.

DUDLEY:—1, I. W. Stephenson, Sheffield; 2, St. John Valley Fruit Co., Burton.

BETHEL:—1, B. Charters, Chartersville.

WEALTHY:—1, St. John Valley Fruit Co., Burton; 2, W. P. & F. L. Fox, Lower Gagetown; 3, G. W. Clark, Maugerville.

BAXTER:—1, J. D. & M. McKiel, Browns Flats; 2, B. Charters, Chartersville; 3, Frank Short, Glenwood.

DUCHESS:—1, J. C. Gilman & Son, Fredericton.

NEW BRUNSWICKER:—1, J. C. Gilman & Son, Fredericton; 2, T. Adney, Upper Woodstock.

GOLDEN RUSSET:1, S. L. Peters, Queenstown.

ANY OTHER VARIETY:—1, A. R. Gorham, Grey's Mills; 2, St. John Valley Fruit Co., Burton; 3, B. F. Peters, Queenstown.

CLASS 7.

Best Barrel ready for shipment

ALEXANDER:—1, J. C. Gilman & Son, Fredericton; 2, S. L. Peters, Queenstown; 3, G. W. Clark, Maugerville.

WOLFE RIVER:—1, S. L. Peters, Queenstown.

BETHEL:—1, R. E. Flewelling, Oak Point.

FAMEUSE:—1, J. C. Gilman & Son, Fredericton; 2, St. John Valley Fruit Co., Burton; 3, W. P. & F. L. Fox, Lower Gagetown.

GOLDEN RUSSET:—1, S. L. Peters, Queenstown.

BEN DAVIS:—1, W. P. & F. L. Fox, Lower Gagetown.

DUDLEY:—1, St. John Valley Fruit Co., Burton.

ANY OTHER VARIETY:—1, J. C. Gilman & Son, Fredericton; 2, W. P. McFate, Golden Grove, 2, A. R. Gorham, Grey's Mills; 3, E. L. Colpitts, Petitcodiac.

RASPBERRIES:—1, A. R. Gorham, 2, F. L. Fox, Lower Gagetown; 3, A. R. Gorham, Grey's Mills.

CLASS 8.

Preserved Fruits in 1 quart glass jars of each.

STRAWBERRIES:—1, A.R.Gorham, Grey's Mills; 2, W. R. McFate, Golden Grove; 3, E. L. Colpitts, Petitcodiac.

CHERRIES:—W. R. McFate, Golden Grove.

CURRANTS:—1, E. L. Colpitts, Petitcodiac; 2, W. R. McFate, Golden Grove.

BLUEBERRIES:—1, E. L. Colpitts, Petitcodiac; 2, W. R. McFate, Gold-Grove; 3, A. R. Gorham, Grey's Mills.

GOOSEERRIES:—1, E. L. Colpitts, Petitcodiac; 2, W. R. McFate, Golden Grove;

PLUMS:—1, W. R. McFate, Golden Grove; 2, E. L. Colpitts, Petitcodiac; 3, A. R. Gorham, Grey's Mills.

BLACKBERRIES:—1, A. R. Gorham, Grey's Mills; 2, W. R. McFate, Golden Grove.

PEARS:—1. A. R. Gorham, Grey's Mills; 2, Domestic Science Dept., Kingston School; 3, W. R. McFate, Golden Grove.

CRAB APPLES:—1, W. R. McFate, Golden Grove; 2, Domestic Science Dept., Kingston School; 3, A. R. Gorham, Grey's Mills.

ANY OTHER VARIETY:—1, Domestic Dept., Kingston School; 2, E. L. Colpitts, Petitcodiac; 3, A. R. Gorham, Grey's Mills.

Best Collection Preserved Fruits, 8 Varieties, no more or less.

1, W. R. McFate, Golden Grove.

CLASS 9.

Fruit Jellies in glass Jelly Jars.

CURRANT:—1, W. R. McFate, Golden Grove; 2, J. C. Gilman & Son, Fredericton; 3, E. L. Colpitts, Petitcodiac.

CRAB APPLE:—1, W. R. McFate, Domestic Science Dept., Kingston School; 3, J. C. Gilman & Son, Fredericton.

APPLE:—1, Domestic Science Dept., Kingston School; 2, J. C. Gilman & Son, Fredericton; 3, W. R. McFate, Golden Grove.

PEAR:—1, W. R. McFate, Golden Grove; 2, J. C. Gilman & Son, Fredericton.

PLUMS:—1, J. C. Gilman & Son, Fredericton.

ANY OTHER VARIETY:—1, Domestic Science Dept., Kingston School; 2, J. C. Gilman & Son, Fredericton; 3, W. R. McFate, Golden Grove.

CLASS 10.

Best Collection of Fruits Bottled for Exhibition Purposes.

1, E. L. Colpitts, Petitcodiac; 2, A. R. Gorham, Grey's Mills.

CLASS 11.

BIGGEST APPLES:—1, I. W. Stephenson, Sheffield; 2, H. Orchard, White's Cove; 3, B. Charters, Chartersville.

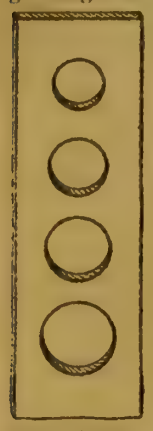
Silver Cup offered by St. John Board of Trade for Best Boxes of Dessert

(Continued on page 99).

HORTICULTURE.

Grading and Boxing Apples.

The first requisit in catering to the box trade in apples is to grade the fruit as to size and quality. In the margin is shown a drawing of a grading board which is used only at the start, because men and women soon train their eyes to recognize differences in sizes. The board is about 2 feet long, 6 inches wide, and the holes vary in diameter from 2 3-4 to 3 3-8 inches. The apples must not be small enough to drop through any of these holes, in order to meet the size of the various grades.

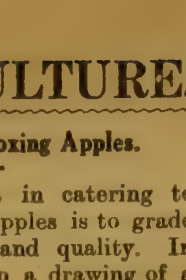


Grading Boards

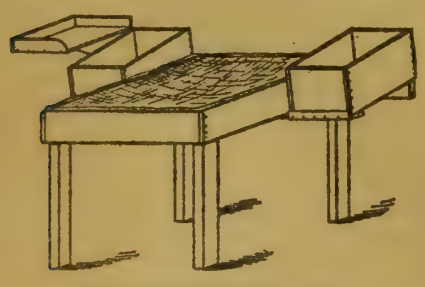
The packing table, found most useful, is illustrated in the large drawing shown herewith. It is about 3 feet high, 3 feet wide and three feet long. The legs are made of 2x4-inch material, and beveled off at their tops so as to leave no corners which would bruise

Too Full, Just Right, Not Full Enough.

the fruit. The sides are 6 inches high and 1 inch thick. The top is covered with canvas, which is allowed to sag rather loosely. In order to save bruising the fruit rubber hose is nailed around the top of the table. A board is nailed across the end and another at the side to serve as supporters for the boxes, which are placed at an angle, as shown. The tray shown at the left is for holding paper, which is wrapped about each individual apple. Apples of only one size are brought to the packing table at one time, so as to facilitate packing. The packer begins by first lining the box with paper a trifle smaller than the length of the box. The ends are rarely lined. Next a layering paper

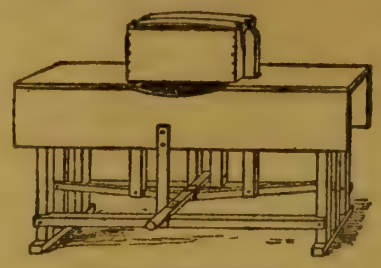


Diagonal Plan



Packing Table for Box Apples.

is placed on the bottom, and as layers of apples are packed other layers of paper are placed between them, and on the top before the lid is nailed on. The apples are placed in a variety of ways in the boxes. One of the best of these is shown herewith. As the boxes are nailed, the fruit must be slightly rounded toward the middle, so that when the top is nailed on there will be a slight bulge, as in the drawing which shows three boxes packed. The box at the left is too full, the one at the right not full enough and the one in the center just right.



Nailing Table and Press.

After the boxes have been filled, they are placed as shown on the nailing table. This table has a vacant space in the middle over which the box is laid. An upright clamp is applied to hold the top down by means of a lever operated with the foot. As soon as the nails are driven the lever is released and the box removed.

Cost of Producing Apples.

A correspondent of Rural New York, basing his estimate on the returns obtained from a six acre orchard containing 234 trees, half 36 years old and the other fifty, figures the cost of producing apples under normal conditions at $1 to $1.25 per barrel, depending on the crop. Taking the average of eight years he places it at $1.10 without allowing for manure. With 102 bbls. per acre it was 83c., with 35 bbls. per acre it was $1.73. In 1910 a crop of 55 bbls. per acre cost $1.20 per bbl.

In estimating the cost, this correspondent places the outlay on spraying material per acre for eight years at $2.28, the average cost of barrels per acre $21.76, interest $5.67, equipment charge $4.58, management, etc, 75c., labor cost $37.61, making a total of $72.95. This takes in everything except manure, which is put at 6c. per bbl. of fruit produced. In estimating the labor cost he puts $4.25 per day as the value of man and team.

Has any MARITIME FARMER apple grower made a similar calculation? We would be glad to hear of such.

Disgusted With Top-Working.

Nine years ago last fall I planted 600 No. 1 Baldwin trees which did very nicely. In the budding season of 1903, I decided to work the orchard over to other varieties. At this stage, the trees were all well established and had made a considerable growth. Accordingly, they were budded, some buds being placed in the lower limbs, others in the trunks. The following spring we found that a large per cent of the buds had not caught and those that did live, were so badly infested with bud moth and woolly aphis that this method of top-working was abandoned as a failure. Still anxious to top-work, we secured the service of a grafter and in 1904 had the grafting done with indifferent success in a great many instances. Where a large portion of the top was cut away to give the graft an opportunity to grow, sun-scald developed and ruined the trees. Other trees that lived made only a feeble growth, and while a small per cent lived and made a good growth, some of these were blown out by the wind, knocked out carelessly in some cases, even broken down by crows.

In the spring of 1909 we pulled the whole block out, thoroughly disgusted with top-working young trees. I think at the time we had about 100 good trees out of the 600 set. From my experience and observation, I believe the chances for top-working are far better on older established trees. It is an acknowledged fact that some varieties do better top-worked, but I prefer to grow the kinds that do well without. A great deal has been said about the influence of top-working on early bearing. In connection with this, I may say that a number of Baldwin trees which came to us in the same lot as those set nine years ago were planted in vaciencies in an old orchard, and not top-worked. Last season they bore nearly half a barrel of fruit. How I wish the 600 were as these few trees today.—WILLIAM FOSTER, IN N. E. HOMESTEAD.

Status of Dwarf Apple Trees.

The question is often asked whether it pays to to set dwarf apple trees in a commercial way. Reliable data in this connection are scarce. Probably Prof. A. G. Gulley of the Connecticut experiment station has had more experience in this line than anyone else in New England. He has a sizable block of dwarft trees of many varieties, in different stages of growth, from four to eight years. No attempt was made to obtain early results in bearing, the emphasis being on perfectly shaped trees.

Readers know a dwarf apple tree in any variety of apple budded on either paradise or doucin stocks. The paradise stock used for dwarf apples is simply a bush form of apple from Europe, and never attains much size. The doucin is another slow-growing, small, sweet, apple once very common and wild over central Europe. The stock grows larger and stronger than the paradise, getting in about half way between the latter and the natural scedling apple.

Descriptive of his methods, Prof. Gulley has the following to say: So far we have planted all trees on paradise stock 8 1-4 feet apart each way, 640 trees to the acre. Those on doucin stock are set 10 feet distant, making 435 per acre. In the latter plot, we placed 50 trees of McIntosh and Gravenstein, to see what they will do commercially. My early experience taught me that no long-armed branches are wanted, but short, stiff, stocky limbs with plenty of chances for fruit spurs.

The oldest trees on paradise stock began bearing three years ago. In 1910 about 30 varieties produced fruit, ranging from two specimens to a tree to a bushel; many had a half bushel or more. I think the early bearing qualification has been greatly over estimated, and from our experience judge the gain will not be more than one or two years. The cultivation was clean for four or five years, after that the orchard was allowed to grow up to grass, being mowed four or five times during the season. So far we have used very little fertilizer, as trees have grown fast enough. From now we will use a little potash and bone or basic slag on the trees as they come in bearing. Trees have been very healthy. Some varieties are better adapted to the practice than others, for instance, McIntosh, Wealthy, Delicious, Yellow Transparent and Grimes Golden.

The oldest trees stand about 5 feet high, and the same in breadth. They can be allowed to reach 7 feet, and those on doucin stock about 2 feet more. When so grown, all will be within easy reach of the ground, whether to prune, spray, thin or pick. I do not know just how much a crop they will produce, but that they can and will bear a bushel per tree is evident, which would be at the rate of over 200 barrels or 600 boxes per acre. Dwarf trees on doucin stock I think can readily double this amount per acre. Even a much less crop would make them very profitable, since the fruit should be practically all No. 1. I think there is no question but what they can be used satisfactorily for fillers.—N. E. H.

Peach Trees are Poor Fillers.

I object to peaches as fillers because I have to take out a whole lot of peach trees just when they are coming to the most profitable bearing, but had I peaches in solid blocks, I could hold them longer. Apples I can prune severely, and grow filler apple trees a number of years longer than any other kind of tree. On the other hand, if I attempt to grow filler trees two or three or more years longer I must prune heavily during that time, and must also fertilize liberally.—George T. Powell, New York.

Failure of Lime-Sulphur.

Sometimes the lime-sulphur mixture fails to kill the San Jose scale or hurts the tree, and the user wonders why. Professors Van Slyke and Parrott of the New York experiment station attribute it to the use of lime containing magnesia. They say that when magnesia lime is used to make the lime-sulpher wash some of the sulphur is set free entirely, throwing it into the sediment, while more of the sulphur combines with hydrogen from the water and forms the foul-smelling gas, sulphurated hydrogen, which is noticeable where such mixtures are used. Extensive tests have shown that magnesium lime is not only worse than useless for making lime-sulphur washes, but it is often a positive detriment.

Dominion Fruit Congress.

A Dominion Fruit Congress is to be held in Ottawa next December, at which representatives will be present from the various Provincial organizations.

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Profession or business.....

Residence.....

DAIRYING.

A Stayer.

Editor Maritime Farmer:—

I have not noticed anything in the Farmer in reference to Helbon DeKol, the last Holstein cow to break the Canadian 7 day and 30 day records. Thinking that the farmers and stock-breeders in the Maritime Provinces might like to know about her records and also that we have had her only son at the head of our herd for nearly three years. I have decided to write and give some of her records:—
Butter in 7 days, 31.54lbs. p.c. fat 4.5
Milk in 7 days, 558.39lbs.
Butter in 30 days 128.57lbs. p.c. fat 4.1
Milk in 30 days 2499.57lbs.

She gave 96½ lbs. milk in 1 day and 139 lbs. for her best 7 days milk, but the weather was so hot at times that she could not be held to her milk flow. She was officially tested during June and July of this year and it is generally conceded that it was the hottest summer for 20 years. She started her 30 day record 30 days after calving so it is easily seen that she is a stayer.

Helbon DeKol also holds the Canadian record for 1 year over all breeds as a three-year-old, making 16,346lbs. milk, 710.50 lbs. butter at three years and 4 months old. Her daughter Helbon DeKol 2nd, made 14889.5 lbs. milk and 657.96 lbs. butter in 1 year, at 3 years and 1 month old. Helbon DeKol 2nd, is a full sister to our bull Helbon DeKol's Prince.—Samuel Dickie, Truro, N. S.

Dairy By-Products.

There are two reasons why dairying is the most profitable line of farming. In the first place it provides a steady income and in the second place it furnishes by-products that are almost as important as the direct results of the work. In the successful management of any manufacture, the use of the by-products often spells success. Frequently the income that is derived from them is sufficient to carry on the overhead expenses of the plant. The fact that one man realizes on these by-products and another fails to, distinguishes between the successful and the unsuccessful manufacturer. Likewise on the farm the fact that one man appreciates the the importance of the industries that dairying makes possibe while his neighbor is blind to all of this great profit marks the difference between the successful and the unsuccessful dairy man. Everywhere we hear about the necessity of conserving natural resources. No line of farming makes it possible to foster these resources more sucressfully that dairying. Where a dairy herd is kept and only the butter-fat is sold from the farm, the land may be built up in productive capacity with every season. Experiments have shown that abandoned farms can be put into the profitable class merely by using the fertility provided by a dairy herd. The fertilizer then is one of the first by-products of importance. If men are going to hand down to posterity land that will yield a living for forth coming generations they must study how best to replace the elements of plant life that were taken out of the soil by each crop that is harvested. The dairy cow is the solution. This one by-product then makes it possible to take land that is depleted and restore its fertility or to retain the fertility with each crop that is harvested, always leaving a little more plant food in the soil than is taken out. In other states where it is necessary to buy commercial fertilizers the bills for these have eaten a big hole into the profits, sometimes leaving nothing for the man's work. This first by-product of dairying then is of sufficient importance to establish the industry regardless of any thing else. The second income that may be realized by the dairy farmer comes from the sale of young stock for breeding purposes. A man who has a registered herd of any of the dairy breeds can, if he will handle the business right, find a ready sale at long prices for anything that he wishes to dispose of. Even grade heifers and cows are bringing very flattering figures in every section where dairying is followed. With a herd of 10 or 20 good cows it will not be impossible to realize an income from the young stock that would be several times as large as the entire earning capacity of the average clerk or office employee. The third by-product of importance is skimmilk. A well managed dairy farm will keep practically all of this for home use. It makes it possible to raise and develop calves, pigs and chickens. The profit from the pigs needs little explanation at this time. Everyone who has had any experience in raising and marketing hogs knows the value of skim-milk and he also knows how useful the checks from the market hogs are. From this on down one may estimate the various possibilities of the farm. Poultry can be kept to better advantage and eggs are by no means an inconsiderate item on the average farm. By-products of the dairy then make it possible to raise better crops; to enlarge the earning capacity of the farm; to realize on side lines that would otherwise be out of the question. Dairy by-products are certainly worth consideration.

How I Built a Dairy Butter Trade.

The starting of our trade in dairy butter was so small that I scarcely know how it did start. My husband drives a market wagon into town twice a week, so it was an easy matter to dispose of the few pounds of butter we at first had to sell. A pound sold here and there among his customers soon brought the inquiry, "Have you any more of that nice butter?" Then they began to ask if we could supply them by the year. A neighbor would drop in to tea and leave an invitation for him to call at her house as she wanted some butter. We soon found the demand far in excess of the supply, and it became necessary to add to our herd of cows.

At that time we were using the round, half-pound print and no paper. When we substituted a handsome, square-pound print neatly wrapped in parchment paper our customers were all sure that the butter tasted better. And perhaps it did; I am not prepared to say; for pleasing the eye goes far towards satisfying the palate.

BUTTER MAKING AS A SCIENCE.

For a number of years we used creamers. Some 10 or 11 years ago we purchased a cream separator, and since then butter making has become a science with us. I have al ways been careful to read all the instructive articles on butter making I have found in the farm papers, and I do not hesitate to say that I can produce a uniform, clean, fine flavored butter, which when delivered to customers every Saturday morning, rain or shine, cannot fail to please the most fastidious.

We have never carried on a large trade in butter, but I think it may be considered successful in that we have never lost a customer through poor butter. Our custom has necessarily changed during the years, but never from discontent. One name stands on our list to-day that has seen there 18 or 19 years.

A CUSTOMER COMES BACK.

At one time when we advanced a few cents on our price one customer decided that he would not pay it. After some months he came back asking if we had any butter to spare, and when told it was still 25c., said, 'I can't help it; I have had enough 20c. butter." He has never found any fault with the price since. A lady customer after moving away instructed her friend who came to town to live to get her butter from Mrs. C., as she wanted her to have good impressions of Yarmouth.—Mrs. O. L. Churchill. Yarmouth Co., N. S.

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Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

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they can get not only the style and size separator they want, but also the one that nets the greatest return for the money invested for the longest term of years—the one that makes profits that STAY in their pockets.

Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

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Cream Cheese Made at Home.

The process of manufacturing cream cheese is inexpensive and simple, says Miss G. Bagnall, N.D.D., Instructor in Dairying, Macdonald College, P.Q., and the cheese is so profitable that farmers should encourage their wives and daughters to follow these instructions, so as to be able to furnish their tables with a good wholesome and nutritious article of diet. If made from fairly rich cream, it will contain from 40 to 50 per cent of butter-fat. Butter-fat is more easily digested than other fats, and should, therefore, prove most beneficial to invalids. With or without butter it is most palatable, and makes delicious sandwiches. During the three years that this cheese has been made at Macdonald College, the demand has increased from four dozen to 60 dozen a month. Here are a few reasons why the manufacture of cream cheese on our farms should be encouraged:

1. It is profitable. The cream from 100 pounds of average milk will make 25 cream cheese, which retails at 15c. each, or equal to $3.75 per 100 pounds of milk.

2. The return is quick, the cheese being marketable in three days, thus saving the expense of storage.

3. The initial cost of equipment is very small. A cream cheese mould, which may be bought for 50c., and a few yards of butter muslin are about the only extra needs in a well equipped farm house.

4. In a clean, airy room, with an even temperature, it is almost impossible to go wrong, and thus have a loss.

5. The demand is greatly on the increase and as soon as it becomes more universally known it will be extensive.

Detailed directions for the process of manufacture of these cream cheese are given in Bulletin No. 30, from the Dairy andCold Storage Branch, Ottawa. This bulletin can be had for the asking.

Buttermilk From Skimmilk.

W. S. of San Antonio, Tex., wishes to know the process of making buttermilk from skimmilk. The following paragraphs were written by Mr. John Michels, formerly Dairy Husbandman, for the North Carolina Experiment Station, and it will be noted that in order to make the skimmilk buttermilk of the same quality, as that made in the usual way, it is necessary to add some whole milk.

Souring the skimmilk.—As soon as the skimmilk leaves the separator, whole milk is added to it at the rate of one gallon to twenty gallons of skimmilk. This gives the mixture a fat content which approximates that of natural buttermilk. A large quantity of pure culture of lactic acid bacteria (starter) is next added and the temperature brought to 70 degrees F. Enough culture is added to curdle the skimmilk in about six hours at the temperature mentioned. When a temperature about 70 degrees is employed, there is a tendency for the skimmilk to "whey off" after it has curdled.

Churning—When thoroughly curdled, the skimmilk is placed in a churn and churned for forty minutes in the same way that cream is in making

butter. The churning process thoroughly breaks up the curd clots, resulting in a smooth, thick liquid which cannot be distinguished from ordinary good buttermilk.

Cooling—Immediately after the buttermilk leaves the churn, the temperature should be reduced below 50 degrees F. to prevent further development of acidity. Ordinary milk and cream coolers with enlarged holes in the distributing receptacle will answer very satisfactorily.

Straining and Bottling—After cooling, the buttermilk should be run through a strainer consisting of one thickness of cheese cloth to remove any unbroken curd clots. As soon as strained, the buttermilk is bottled or put in tin cans holding from one to five gallons, after which it is put into the refrigerator, where it should be held at a temperature of 40 degrees to 45 degrees F. until ready for delivery.

The Purpose of Butter.

If there is any kind of food that comes near to holding the importance of milk as a human food, that article is butter. Some people don't like butter, but they are too few in number to mention. Most of us find it difficult to get along without butter if compelled to do so, and when it is not on the table we feel that there is a big "something" lacking to make the meal complete.

The commonest food set on our table is bread and butter, and it is so common in fact, that we do not realize as we should its importance and value as a food. The greatest value of butter probably lies in its indirect value as a lubricator for the body. You may have never thought of it in that way before, but the writer feels that butter is one of the main necessities in maintaining a good healthy digestion. In fact, it seems as necessary to the human body as lubricating oil is to machinery. Of course too much butter can be eaten, with ill effects, but it is the same with any other food.

Many people sometimes "kick" on paying what they call high prices for butter, especially when the price goes up in the winter season of the year, and, of course, their objections may be legitimate if the quality is poor, but, considering the great care required in producing and keeping this delicate product, the highest market price set is not too high when the quality is the best. And particularly when people resort to buying oleomargarine, claiming that it is "cheaper," even the best quality of this latter product is high in price as compared with butter, when flavor and the difference between a natural product and an artificial product is considered.—Jersey Bulletin.

The Dairy Cow and the Hired Hand.

When the farmer is asked why he does not milk more cows, the answer almost invariably comes that hired help is too scarce, or that it is almost impossible to hire a man if he is expected to do the milking.

The hired man seems to have a hatred toward the dairy business. The question comes at once: "Why is this true?" Is milking harder than other work? I think that most hired men will agree that milking is not such hard work, but that the farmer figures on having the hand do a day's work in the field and then do the milking in the morning and evening besides, without any extra pay. Certainly if the dairy business is worth while, as I thoroughly believe that it is, the farmer should be willing to pay for the extra labor involved.

I have worked for several years as a hired hand on the farm and find that the work of milking the cows is not harder than other farm work, but that the tendency of the farmer is always to do the milking after a hard day's work has been done in the field. Often the milking was begun at five or earlier in the morning and in the evening when the milking was done, the milk separated, and the calves all fed, it was from eight to nine o'clock.

The demands of the hired man of today are not so much for higher wages as they are for shorter days. This is all right, and if the farmer will cut a few hours off the day's work in the field and use them in the dairy business he will make just as much money and enjoy life a great deal more. Cows, in order to do their best should be milked at equal intervals. If they are milked at five in the morning they should be milked at five in the evening. If this plan is followed I am sure that the hired man question will not be so difficult a one.

A hired man should be paid according to his ability and willingness to work. If he is a sluggard and still receives the same wages as the alert man, the man with higher ambition is discouraged because he does not receive pay in proportion to the amount of work he does. In many cases the farmer is condemning the hired man when the farmer himself is doing about all he can to discourage the man's ability.

Human interest and kindness are perhaps the best means of getting the most out of the hired man. If he is greeted in a cheerful way in the morning when he meets his boss at the barn and is treated as a man, he feels that there is something in this old world besides hard work and will feel more like trying to please his employer. On the other hand, If the man is greeted in a grouchy way in the morning or receives no greeting at all, he feels that the man for whom he is working is interested in him only so far as he wishes to get work out of him.

If some of the foregoing hints are carried out the dairy business will not be dreaded to so great an extent by the hired man and in the long run the farmer will be money ahead. The dairy business is certainly worth while. Why should not the farmer do his best to develop it on his farm? As land advances in value, dairy farming is sure to come, and the sooner the farmer gets onto the band wagon the better it will be for him.—G. E Frevert, Assistant Dairyman Idaho Experiment Station.

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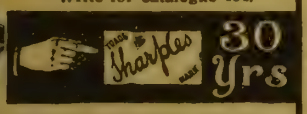

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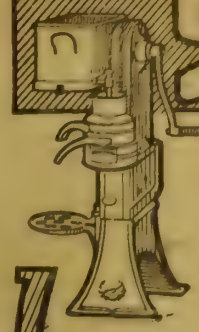

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Swine on Stubble.

On eastern farms the practice is quite common of turning outswine to glean in the grain fields after the grain has been reaped. In some localities this practice is or at least was quite universal. It was made easily possible by the fact that the fields were fenced. The swine thus given the liberty of the harvest fields made material gains, so material in some instances that a few weeks of fattening subsequently put them in fine condition for the market or for home consumption. The best gains were made by the swine when gleaning amid the pea or wheat stubbles. Grains that had long and stiff beards as barley and speltz were less suitable, and oats were encased in too large a proportion of hull.

In thase days, the after harvest season was looked forward to as the season when relatively quick gains would be made by the swine, who in those days were as a rule carried over the winter. The grain fields then formed only a part of the land that was devoted to crop production. Much of it was devoted to the growing of grass and some other products. On the farms of the northwest a very large proportion of the land is in grain, and yet the gleanings are in a great measure lost. If swine could have access to them after harvest, they would find enough grain in the fields to carry them almost to the point of being ready for shipment.

BOARS BOUGHT BY MAIL.

The question is sometimes asked as to whether it is advisable to purchase boars by mail order. Some people would assert for instance that sending an order by mail for a boar to any breeder is as near to the proverbial buying a pig in a poke as one could imagine. But it is not so. A professional breeder of repute has his reputation to keep up, and is pretty certain to send value for money, to induce you not only to deal with him in the future, but also to recommend him to others in want of stock. Only unreasonable buyers, who expect to get champion prize winners when they are paying a few dollars above the market price for pork, are likely to be dissatisned.

When ordering, write a clear description of the kind of animal you want, laying stress on the qualities your sows are deficient in. If your sows have not very good hams, for example, ask for a boar likely to remedy this defect in future progeny. A description of the kind you are looking for might be sent to several breeders till you get a satisfactory offer.

It is a good thing too, to get the boar several weeks before he is wanted for service, for the six or eight weeks' care and feed apparently wasted are really more than made up for in the increased efficiency of the boar.

Cots or House for Hogs.

This is a question with considerable room for personal opinion. Both have their advantages. It is true that the large house centralizes the work and makes it easier to the feeding, but there are so many other points in favor of the cot, that it appears to be best for this section of the country.

Let us notice a number of ways in which the hog cot is superior to the large house. We find that it is healthier, cheaper, easier to keep clean, better for the sow at farrowing time, and better for fighting hog cholera when it makes its appearance.

First. The large hog house is not as healthful, because experience shows it hard to keep in a clean and dry condition, a granitoid, brick or plank floor in a large hog house. Then, too when the one location is used year after year, it tends to become the lodging and breeding place for the bacteria that cause our fatal swine diseases. When the conditions around a cot become bad, the cot can be moved to a new site where it can have the advantage of all the sun and pure air.

Second. With regard to cost we find that the cot is very much cheaper. A very good cot can be built for $10 or $12. Now one can build a large number of these and still not be out as much as he would in case he built a large house. As the large house is used only a few months in the year, the money invested in it is idle too much of the time.

Third. It is easier to keep the sleeping quarters clean. If the cot is built on skids, we can hitch a team to it and drag it to a new spot when the old place becomes filthy. If the cot is built without a floor the labor of keeping things clean is lessened still more.

Fourth. As to the individual house being better for the sow at farrowing time, this is true because in the large hog house she is likely to be disturbed and made savage or restless by other hogs near by. Something may happen to excite or anger a sow in one part of the large house. She will give the signal of alarm or battle and immediately every sow in the house will jump up and see what the cause of the trouble is. Contrast this state of affairs with the conditions surrounding a sow in a cot and you will see the advantage of the latter.

Fifth. Last but not least, the advantage of this cot system when cholera breaks out in the herd. Suppose we have twenty sows, all sleeping in the same house. Every one is exposed to disease if one should happen to take it, whereas if the sows are separated into pens with three or four to each pen, the chances of wholesale infection is greatly reduced. Then, if it comes to the point where it is necessary to destroy a badly infected house, the expense will be far less where the cot system is used.

The objection may be raised that the cot will not be warm enough in the coldest weather for a sow and young pigs. Now if the cot is lined with common building paper or tar paper with an inner lining of rough boards to protect it and keep it in place we have a cot that will be warm enough in all but the severest weather. In that case a lantern hung from the room will generate enough heat to make the cot comfortable.

After considering all these advantages we must conclude that in most cases the cot system is by far the best for average conditions.—Missouri Agricultural College Farmer.

Fine Points of Sheep Raising.

When we came to this rocky farm, people said we would be unable to make a living. However, I find sheep as profitable stock as can be tried under such conditions. We bought a flock of sheep five years ago consisting of 18 ewes and two bucks, all of which were grades. I think a beginner can start with grades and make practically as much money as though he started with thoroughbreds and do so on a smaller investment.

For his grades he should secure a fine ram. In making a selection pick out one with broad hips and shoulders, and one that is not too leggy. As to breed, I prefer the Dorset as ewes will breed earlier in the season, and the early lamb is the one that brings the money. So far as shelter is concerned there are hundreds of old barns on Eastern farms thgt are just right for sheep, and yet, cows would freeze to death in them. The principal thing is to keep them dry and you will find they will stand almost any amount of cold. I prefer cool quarters for them as warm ones bring on colds and snuffles. A woven wire fence is desirable. Have it 3 feet high. It is a popular thing for farmers to say they cannot keep sheep on account of dogs. I believe if they would buy a good Scotch collie and train him properly, taking him right in among the sheep so they will get acquainted with him, there will be no trouble.

We figure on eight sheep to one cow or four sheep to a ton of hay. This is not timothy but is redtop, June grass and a small mixture of clover. If one has no second grade hay, he had better sell his choice and buy the poorer stuff as it seems to be just what the sheep want. Somehow they like to eat brakes that grow on rocky places, and I have known them to take such stuff in preference to good hay during the winter.—N. E. H.

Roots Good for Sheep.

One should aim to have a good supply of roots, such as turnips, mangels and small potatoes. I feed about a bushel of turnips daily to 28 sheep. I do not cut them. They are the common white egg variety. If turnips are too large sheep will bite off chunks. We also had a lot of cattle pumpkins which were frozen before they were fed, and when they thawed out a bit they were given to sheep, which seemed to relish them.

A Modern View of the Roofing Question

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On a painted roof, the paint is what gives the real protection. The rest of it has no function except to provide a smooth unbroken surface with no seams or cracks, to which the paint can be applied. Anything which has strength enough to keep the wind from blowing it away or the rain from beating it in, will be waterproof if you use paint enough.

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I aim to begin feeding grain a month before ewes are due to lamb. Thr grain mixture is two parts bran, two parts corn meal and one part ground oats. Of this we feed about one pint a day to each sheep. After the lamb is dropped increase the amount until each sheep is getting a quart daily. I have tried some years to get along without the grain, but find it much more profitable to use it. In this way the ewe has milk as soon as she lambs, and there will be no trouble about her owning it.

As soon as lambs are about a week old I have a trough where they can go and eat at any time and get some grain of the following mixture: Two parts bran, two parts corn meal, two parts ground oats and one part linseed meal. The old sheep cannot reach this trough. By feeding grain to both sheep and lambs I do not lose as many and get larger and better lambs that are ready for market sooner.

Before we fed grain we used to save 15 to 18 lambs from 25 ewes. Since graining, we have raised as high as 23 lambs from 24 ewes. Some of these are ready for market the first week in June. We dress and sell in local markets largely. This gives better returns and we have a demand for more than we can supply. In the real cold weather I have a box about 3 by 5 feet and high enough so sheep cannot jump out, and the ewe and lamb are placed in it as soon as lamb is dropped. By putting a blanket over the top it gets real warm inside. This is a good plan when a sheep is inclined not to own her lamb, as she is in such close quarters that the lamb has a good chance to get his meals, and after a day or two he will take care of himself.

A day or two after the sheep are sheared I find that the ticks get onto the lambs. I use a dip of tobacco stems with good results. You can get a common sack full for 25 cents, and half that amount is enough for 25 lambs. We steep it in water and when dipping sheep be careful not to get the stuff in their eyes or mouth.

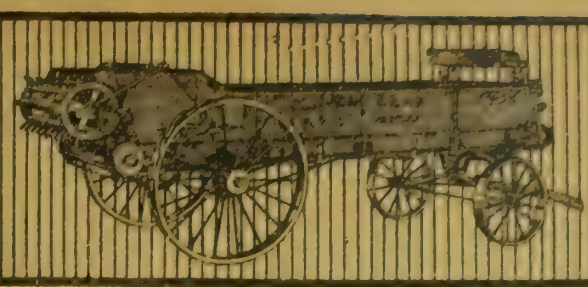
Our experience is that it pays to keep old ewes as long as their teeth are good. They make better mothers and are not inclined to be so wild, and I think they give more milk than yearlings or two-year-olds. I always aim to keep sheep tame so we can go among them without their running away.

A fair valuation for a flock of grade sheep would be $100. As for cost of keeping I figure on six tons hay at $10 a ton, which is $60, and $1 a head for the grain for both sheep and lambs, which would be a total of $85. The fertilizer is worth about all the labor that is required. There is always enough unsalable turnips in a piece to more than pay for the labor of raising them so you have this crop practically free.

My returns for 1910 were as follows: $130 for lambs sold, $20 for increase of flock, $23 for wool, making a total income of $173. The cost was $85, leaving net proceeds of $88. The wool last year was sold for the least I ever received. If there were more farmers in the business they would find a better market, as manufacturers do not like to bother with small lots. I can make $2 off sheep where I cannot make $1 from cows, and it is done with less labor and less investment.

Housing the Calves.

When all the live stock is brought in from the pastures, it is often found that the stable room is a little inadequate to accomodate comfortably all the animals. Very often this results in the calves being tied in small, dark corners here and there throughout the stable, where they receive very little attention, and where sanitary conditions are not well suited to the promotion of health and vigor in the stock. The housing of the calves is one of the most important phases of cattle-breeding. The calves compose the future breeding herd, and no breeder can afford to deprive them of anything which makes for their general health and rapid growth. Where possible, they should have box stalls to run in, where they can exercise at will. Plenty of light is essential, and good ventilation imperative. Each calf should have sufficient manger room; in fact, it is often advisable to have stanchions or chains arranged so that the calves can be tied during the feeding hour. This insures that each calf gets his allowance, and as no two calves will have the same appetite, the feeder is permitted to gauge the amount given to each to suit its condition, age and appetite. Where loose boxes are not available, the calves should be let out each day for exercise; in fact, this is often good practice, even where they are run in loose stalls. Do not crowd the calves into small, cramped, poorly-ventilated, dark stalls. The best stall in the stable is none too good for the future herd-header or the young heifers which are the making of the heaviest producers and the best breeders in the herd of a few years hence.



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The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizers, etc., write to the I H C Service Bureau, and learn what our experts and others have found out concerning these subjects.

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THE HORSE.

Looking Horses Over When Buying.

Horse selling is a shrewd trade. In a city or country the inexperienced purchaser is at the mercy of the professional seller. If the latter be at all unscrupulous, the chan ces are that the deal will be to the disadvantage of the buyer unless he knows a good deal about horses and how to examine them himself. And no casual examination will do. It must be made in detail and carefully done at that.

After taking a general look over the horse you are ready to examine him in detail. Begin with the head. Is the eye dull or weak, showing little animation? If so, be on your guard. A good eye is bright, intelligent and free from specksf By placing the hand over it for a few moments you will be able to detect its sensitiveness to light. Do you find any discharge of any kind from the eye? If so, some inflammation may be present. Try to ascertain the cause. A large, open nostril is desirable. Observe the color of the lining; to be just right and healthy looking, it should be of a bright, rose-pink color, and moist. A healthy nostril is free from sores, ulcers, pimples and any unpleasant odor. You must be on your guard at this point. An unscrupulous dealer can very easily remove discharges and odors by sponging and washing and you may be deceived. Always look in the mouth; you have the tongue, teeth, jaws and glands to observe. Naturally, you consider the teeth first; you want to be certain of the age. But give the tongue a second !f your time. If it is scarred and shows rough treatment, a harsh bit is likely the cause, due to its need in driving and handling. Enlarged glands may indicate some scrofulous or glanderous condition of the system, so a careful examination here will be worth while. A beautiful neck and throat is an absolute beauty in the horse. The skin should be thin, mellow and soft, and the hair not overthick or coarse. Look for poll evil at the top of the neck and head. See if swellings, lumps or hard places are to be found at the sides of the neck, or underneath joining the throat.

Passing to the side, look over the withers for galls or fistulae, the shoulders for tumors, collar puffs and swellings. Observe at the same time if there is any wasting of the muscles on the outside along the shoulder. Now the back. Is it right as to shape? Do you find any evidence of sores or tumors? Look fot these along the sides and belly. Now stoop a bit and look under; do you find anything different from what is natural? In males look for tumor or disease of the generative organs, and in case of geldings scrutinize carefully to see if they be ridgelings. Before leaving the body observe if the hips are equally developed, and the animal evenly balanced in this region. Both horses and cattle are liable to hip injury, one of the hips being frequently knocked down. Make sure that both are sound and natural.

Now step to the front again for a careful examination of the front legs and feet. Starting with the elbow, examine for capped elbow. Now the knee; it should be wide, long and deep, and at the same time free from any bony enlargements. The knees must stand strong too. Is the leg straight? Do you observe any tendency of the knee to lean forward out of line, showing or indicating a knee-sprung condition? Just below the knee, do you find any cuts, bunches or scars due to interference of the other foot in travel? Look here also for splints; follow along with the fingers to see if present, on the inside of the leg. Be particular about the cannon. The front should be smooth —you want no bunches or scars. Just above the fetlock feel for wind puffs; and note if about the fetlock and pastern joints there are any indications of e:ther ringbones, bunches or puffs. Now look for sidebones; if present, you will find them just at the top of the hoof. They may be on either side. Sidebones are objectionable and are the lateral cartilages changed into a bony structure. No defect is more serious than bone spavin. You can, as a rule, detect this by standing to the front of the horse just a little to the side.

In the region between the hock and the fetlock curb troubles are located. They appear at the lower part of the hock, directly behind. You can readily detect any enlargement if you will step back 5 or 6 feet. Lameness comes from many causes; maybe from soreness, from disease or from wounds. And lameness is hard to detect. Frequently it seems to be in the shoulder, when, in fact, it is a puncture in the foot. Again it may seem to be in the fetlock, but the trouble may be in the shoulder or fore leg. You must examine for lameness, both in the stable and out of the stable. If you find the horse standing squarely upon three feet and resting the fourth foot, you have a right to be suspicious. If you move the horse about and he assumes the same attitude again and still again, you can be certain that he is assuming that position because he wants to rest some part of that member.

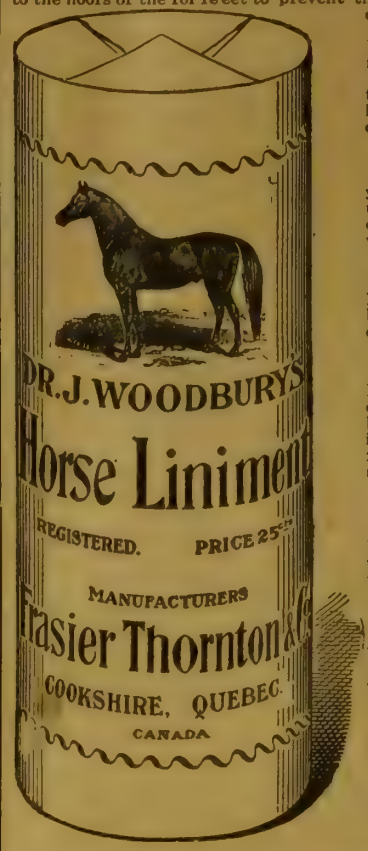
In testing out the horse for lameness, let no excitement prevail. Under such excitement the horse forgets his lameness or soreness for the time being, and you do not note the trouble. A quiet, slow walk or trot on as hard a road as possible is a desirable sost of examination to give. The free breathing of a horse may be interferred with, and for two reasons. Roaring or whirling, one of these troubles, is a serious disease. The second disease is heaves or bellows, and is also a most serious disease, because it also is incurable. By the use of drugs relief may be given temporarily, but no permenent cure follows. Unscrupulous dealers will resort to dosing lor the time being, or almost any other of the many tricks of the trade familiar to experienced horse traders until sale is made.—Charles W. Burkett.

DR. J. WOODBURY'S Horse Liniment.

INFALLIBLY THE REMEDY.

For the removal of Splints, Bog Spavins, enlargements of any and every description it has no equal. Given internally, it will promptly relieve and remove any and every character of Cough, Enlargements of the Glands, Affections of the Kidneys. For distemper, Strangles and colic it is infallibly the remedy.

All horses that are stabled should have an application of Dr. Woodbury's Horse Liniment to the hoofs of the for fe eet to prevent their becoming feverish, dry, brittle. hard, contracted or otherwise injured.



Insist on having Dr. Woodbury's Horse Liniment. We warrant it to effect that for which it is recommended when used according to directions.

Its beneficial effects are so prompt and decided that it has excited the admiration of the leading horsemen of the Dominion and secured their highest confidence.

Bear River, N. S.

DEAR SIRS—We do not hesitate in recommending your Dr. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumbermen should be without it. Yours truly, CLARKE BROS.

Hubbard's Cove, N. S.

DEAR SIRS:—I have used Dr. J. Woodbury's Horse Liniment in my stable for years and consider it the best liniment on the market for both internal and external use Yours truly, C. C. McLEAN.

Truro, N. S.

This is to certify that I have used Dr. J. Woodbury's Horse Liniment with the very best results for colds, coughs, distemper, and all lung diseases. It is the best thing to give horses in the spring to keep them in condition It purifies the blood, cleanses the lungs from impurities, which may exist, and gives the system healthy action.

NEWTON LEE, Owner "All Right" 5817.
Elmsdale, N. S.

DEAR SIRS:—Kindly send me 6 dozen bottles Dr. J. Woodoury's Horse Liniment. I have not a bottle in the store and it is the only kind my customers will take.

Yours truly,
ELMSDALE MERCANTILE Co.,
Elmsdale, N. S.

DEAR SIRS:—I cured my horse with Dr. J. Woodbury's Liniment. It was a bad case of distemper. I always recommend this liniment to my friends as the best for all diseases of the horse. Yours truly,
H. R. WHITEHEAD.

DEAR SIRS:—One of my horses had a bad cough and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months standing. In my large experience with horses, I consider this liniment to be the best made for all diseases in the horse, and I recommend it to my friends.

E. J. ANDERSON, Truro, N. S.

Manufacturers:

Fraser Thornton & Co., Cookshire, Que,, Can.

Care of the Farm Horse.

The farm horse is an important factor in agricultural pursuits. We would npt get far without the patient quadruped who draws our loads and carries our burdens. He is so closely interwoven in our industrial and business life that were we called upon to adjust our farming operations to the use of some other motive power, our plans would be demoralized and our prosperity receive a serious check. In view, therefore, of the mportance of the place filled by the farm horse, it behooves us to care for him in a manner that will conserve his energy and enhance his usefulness.

The farm horse needs a stable, a comfortable stall in which to rest when the day's work is done. Don't put him in a dungeon, with no light or ventilation and expect him to be in good trim for the next day. Neither should he be compelled to stand under a leaky shed where the water drips through for tgree days after each shower. A good bed is as essential to the comfort of the horse as of the man. As to feed, the best is none too good, clean, bright hay, with oats that are not smutty nor dirty. Decide the quantity for yourself, but don't be stingy. A man who can't tell what amount of feed is required by a horse after he has worked him for a few weeks hasn't sense enough to farm anyway. All horses do not require the same amount of food any more than all men. Study your horse. Feed him enough to enable him to do his work. And pay some attention to his likes and dislikes if possible. He works for his keep alone and surely he is entitled to something better than a forkful of musty hay under his feet and a quart of screenings in a dirty feed box.

The horse at work should be well combed and brushed every morning, and a few strokes at night would not hurt him. If any of you enjoy going without washing your face and combing your hair possibly you would be consistent in letting your horse do without grooming.

The harness, too, should receive attention. There is neither humanity, economy nor common sense in having your horse's shoulders peeled and raw, his back sore, and his mouth torn with the bit. See that the collar fits the horse, better to buy a new collar than use one that does got fit. Then keep it clean and smooth. If the collar becomes coated wash it off at night with a rag and some warm water, and in the morning it will be clean and smooth collars fit and keep them clean you will seldom need a pad, and the horse collar, with the pull so adjusted that it will bear evenly on the shoulder, and keep in one position. A little attention to other parts of the harness will prevent galls, bruises, rubs and the like.

will have better shoulders and be more comfortable at work without a pad. The hames, too, should fit the

Kindness is appreciated by a horse as well as by a man. The owners of the world's famous race-horses will not allow a groom about the stables who swears at horses, neither will they permit harsh treatment of any kind. The farm horse may not be so finely bred as his brother of the turf, but he will respond to kindly treatment none the less.

From the standpoint of right the farm horse deserves kindness, care, and good feeling. It is his due. It

(Continued on page 87).

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

POULTRY.

Feeding Hens.

That the feeding of poultry is the most important factor of success in making the business profitable is no longer doubted by the majority of experienced poultry raisers. Yet, many of them still make this feeding question a complex one, mixed up with a conglomeration of formulas requiring a knowledge of chemisrty, organic and inorganic. They will tell you that hens must have a certain per cent of protein, fats, minerals, etc., and get all mixed up with a question which is so simple in all its details that a child can readily follow it.

In the beginning we will say that in feeding chickens one does not need to confine himself to any strict code of rules or any particular diet. We should be governed in a large way by the supply of feed at our command and also take into consideration whether our fowls have full range or are yarded. After a varied experience with dry mash feeding by the hopper method, we have discarded this method almost altogether for yarded fowls and are now using a method which seems to us simplicity itself and one that practically all farmers can easily follow because they have the feeds at their command. The feeds I refer to are oats, bran and milk. This feed is for laying hens. We feed the oats morning and night and the bran and milk in the form of a crumbly mash at noon. With the bran may be mixed 5 per cent of beef scraps, but as the milk itself is rich in protein, the beef scraps are not absolutely necessary. Oats, bran and milk will produce not only plenty of eggs, but strong, fertile eggs. However, the oats to be used should be of the best quality and should be full weight or above. We do not raise much good oats in this section, so I buy northern oats, which runs from 38 to 40 pounds to the measured bushel. Hens will eat other fattening foods such as corn in preference to eating oats, so it is often necessary to force foods.

Farmers should not be slow in taking advantage of the feeding value of grains for poultry to realize the greatest profit. They should feed corn only when they want to fatten for market. Oats is a much cheaper feed than corn and is productive of far greater results in egg production when fed in conjunction with bran and milk. If you want to use some hens for table use put them up for eight or ten days and feed corn, which as all farmers know, is a fattening feed and should be used only for such a purpose.

In cold weather and before eggs are used for incubation, hens may be fed corn once a day, at night, but we consider even that not essential. Feed good heavy oats and if fowls have range keep a box of bran before them and feed milk in clean vessels. If yarded feed heavy oats in litter during the winter, and onthe ground or spaded into loose soil in summer and mix bran with milk and feed all they will eat once a day. Fowls in addition to this should have green stuff, such as sprouted oats, cabbage or lawn grass, weeds or anything of a water. We have fed a good deal of succulent nature, also grit and pure mixed grain feed in the form of scratch feed, but have about discarded this feed, as it contains a large amount of corn and other grains that have a tendency to fatten. Such feeds as these have their uses and may be fed to growing stock and pullets up to the laying age.

While we believe that oats, bran and milk will produce more eggs than any other combination of feeds, we are doubly sure that this feed will produce the eggs at one-half the cost of most feeds. The farmer produces his own milk and in most cases raises his own oats, as well as wheat from which bran can be had. Wheat is also a very good feed, but far too expensive and not nearly so good as heavy oats. Corn, while a cheap feed for the purpose of fattening, is a dear one, indeed, for producing eggs. The amount to feed depends on the breed of fowls kept and whether yarded or on full range.

Having tried quite a number of breeds we find Houdans consume much less feed than any other variety we have tried. Having at present Houdans and Orpingtons, we find that Houdans consume less than one-half the feed of Orpingtons in many cases and at the same time Houdans produce more eggs. Why is this so?

The editor of this paper knows we are partial to Houdans and no doubt he, as well as many Guide readers, would like to know our reasons for the above assertion. Like our method of feeding for eggs, the reason seems very simple to us. Farmers generally, know that some kinds of stock are more easily fattened than others, some breeds of cattle and hogs more easily convert what they eat into fat and tissue while others keep poor and thin on the best of care, yet as a general rule make good breeders. We believe this also applies to fowls.

Take the larger breeds, Orpingtons, for instance, they take on fat easily; they consume a large amount of feed and while they are good layers they eat far more than is required for the purpose of egg production and the surplus goes largely to fat. On the other hand, Houdans, a medium sized breed, are moderate eaters and by actual test eat one-half the amount required by Orpingtons, but do not fatten easily. They remain thin and the most they eat goes to eggs.

At the present time we are experimenting along this line. We are feeding our Houdans and Orpingtons on exactly the same ration as given in this article except we feed the Orpingtons about twice the amount that we do the Houdans. We have been making this comparative test for about two months, partly to give a trial test to this method of feeding oats, bran and milk and also to test the comparative laying qualities of these two breeds or rather four breeds, as we have three varieties of Orpingtons. We have found under this test that Houdans lay more than twice as many eggs as the Orpingtons. However, many of the Orpingtons are broody and Houdans being non-sitters, have a little advantage in this respect. Now we are feeding the Houdans all they will eat, but not the Orpingtons, and although the latter get twice the feed, still they are not satisfied. As one of my customers said in a recent letter: "Houdans are very small eaters and do not eat over one-third the amount of other large breeds," and yet they lay more eggs.

Now it is not our attention to boom a breed in this article, but merely to give our method of feeding for eggs, and in saying what we have about these particular breeds we keep, we have given the facts brought out by comparative tests. We want all farmers to test this method of feeding and cut out all corn feed for laying hens. It is needless waste to feed corn to hens unless you want to sell them on the market. Especially to yarded fowls, feed heavy oats, bran and ilk. —The Farmers' Guide.

FEATHERS WANTED.

We pay highest prices for all kinds, feathers, furs, hides, wool, beeswax, tallow, etc. Prompt returns. Send for price list.

THE CANADIAN FUR & FEATHER CO.
Department 10, 605 Ontario St. East, Montreal.

Broody Hens and How to Cure Them.

Broodiness after the hatching season is too often in excess of requirements, and the poultry keeper who has an eye to economy as a means of making profit is anxious to cure his hens of broodiness as rapidly as possible, so that they can be brought on to lay again.

Broody hens, if taken in hand and treated on showing the first symptoms, can be cured with far less trouble and more expeditiously than if they be allowed to take to the nest and sit. Symptoms are often detected by the hen clucking a little, and crying out if disturbed unduly when on the nest. Her eggs, too, become small. Such a hen should be taken away from the others and be confined in a pen alone, where she can not form a nest. After being confined there for a few days, she must not be allowed out, else she again betakes herself to her old nest and the broodiness goes on. Some hens become broody which will never make good sitters, and on the first appraach of anything unusual they fly off the nest making a great noise. Such hens are generally of the non-sitting breeds, and become broody only through the bad example of others. These hens, too, will keep up this so-called broodiness for weeks if not dealt with. If captured at once and put under control, the fit soon passes off and laying is shortly after resumed.

The pen for brood hens is of special construction; the floor is of wooden bars devoid of bedding. Many hens will sit anywhere, even in the roadway, and if put into an ordinary pen by themselves they will proceed to make a nest in the corner and sit here for several days with or without eggs. Such hens can be dealt with successfully only in a special pen for "putting off." Food and water are then supplied in abundance. A mistake, too often made, is to keep broody hens without food, and that for a lengthened period, whereas hens well fed in such a condition will come out none the worse for incarceration, and will at once begin laying regularly when the broodiness passes off.

Various other methods are often adopted of putting hens off when broody. Tethering them by a rope by the leg is objectionable, as the limb may get dislocated in the hen's struggles to get free. Then, again, another practice is, in some districts, believed to be an effective cure, namely, dipping the broody hens bodily in cold water. This treatment, although not at the time apparent, proves fatal to the fowls, and tends to bring on rheumatic troubles or to cause inflammation of the lungs.

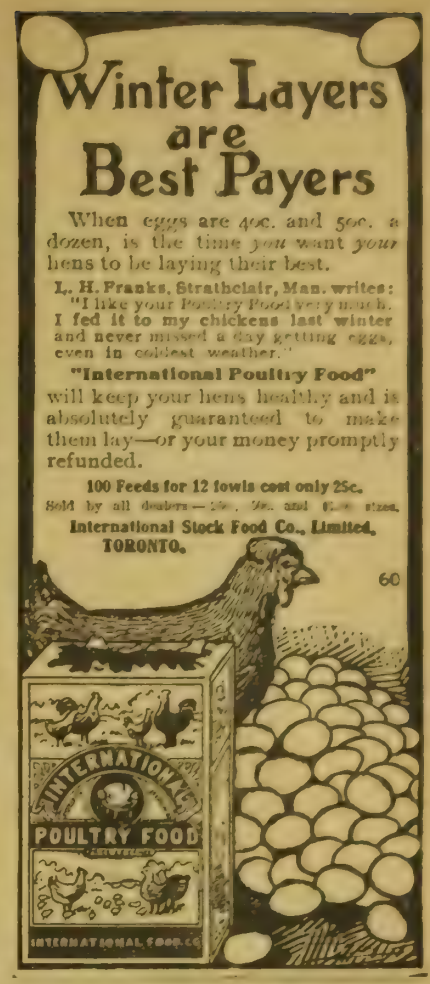
The only satisfactory way is to confine them under such conditions as will make it impossible for them to settle down comfortably. There they must be kept till the symptoms of broodiness have entirely passed off, when they can be let out again with the ohers. Laying will then commenee again in the course of two or three weeks, if not earlier.—S. W.

Finishing Fowls For Market.

A gain of 25 to 50 cents per head can frequently be made by two or three weeks' judicious feeding. The easiest method is to shut the fowls in a small pen and feed them all they will eat three times a day. They should not be fed anything for the first 24 hours after confinement, and then lightly for two or three days until they become thoroughly accustomed to it and get onto their feed.

A ration which has proved very successful with New England feeders is composed of about three parts yellow corn meal and three-fourths part of red dog flour, mixed with boiled pumpkins and milk. The pumpkins help to give the yellow skin, so much desired in American markets, but it generally takes from four to six weeks to get much benefit from them. As fowls will hardly stand the forced feeding for this length of time, pumpkins can be added to their ration for a few weeks belore they are taken up

Mix the feed rather soft and put it in V-shaped troughs and throw out any feed that may be left. It is a mistake to keep feed before them all the time. If the fowls have been running on free range and have had a hard grain diet they may not take readily to this feed if it is given them as soon as they are confined. But withholding all feed for 24 hours will make them hungry enough to take hold at once.


Winter Layers are Best Payers
When eggs are 40c. and 50c. a dozen, is the time you want your hens to be laying their best.
L. H. Franks, Strathclair, Man. writes: "I like your Poultry Food very much. I fed it to my chickens last winter and never missed a day getting eggs, even in coldest weather."
"International Poultry Food"
will keep your hens healthy and is absolutely guaranteed to make them lay—or your money promptly refunded.
100 Feeds for 12 fowls cost only 25c.
Sold by all dealers—25c., 50c. and $1.00 sizes.
International Stock Food Co., Limited, TORONTO.
60
INTERNATIONAL
POULTRY FOOD
INTERNATIONAL FOOD CO.

Early Perching.

Chickens should not be allowed to perch until they are at least fourteen to sixteen weeks old. A large proportion of the chickens offered for sale in shops have their value very considerably reduced by reason of their breastbones being bent. In ninety-nine cases out of a hundred this is due to their having been allowed to roost upon a narrow perch when too young. Until a chicken is several months old its breast merely consists of gristle and if this comes into contact night after night with a hard, narrow perch, the weight of the body resting thereupon, it is bound to be put out of shape. The chickens should sleep upon the ground on clean straw, dried leaves or peat-moss litter. Should there be a fear of dampness or a danger from rats, a shelf 1 inches or 4 inches wide should be provided raised a foot or so from the ground.

Shrinkage in Weight of Eggs.

There is considerable shrinkage in the weight of eggs as they become stale. When laid, tne air space in the end of the egg is scarcely visible; but as evaporation sets in the contents of the shel, shrink, and the space increases. Edward Brown, F.L. S., the leading poultry expert in Great Britain, has had observations made on tne evaporation of eggs. These were made during cool weather, yet they show that out of 120 eggs one egg contents disappeared in six days, two in 13 days, three in 21 days, four in 29 days, five in 36 days, six in 47 days and seven in 60 days.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Be a Booster.

Il you see some feller tryin'
For to make some project go
You can boost it up a trifle;
That's your cue to let him know
That you're not a-goin' to knock it,
Just because it ain't your "shout,"
But you're goin' to boost a little,
'Cause he's got the "best thing out"

If you know some feller's failin's
Just forget 'em; 'cause you know
That same feller's got some good points,
Them's the ones you want to show;
"Cast your loaves out on the waters,
They'll come back" is a saying true;
Mebbe they'll come back "buttered,"
When some feller boosts for you.—Exchange.

Love's Barrier.

(Continued from last issue).

CHAPTER XI.

SUNDAY MORNING.

Secretan left the church after early celebration, and took the path through the sparse yews to the Rectory garden. It was a bitterly cold morning; a few thin flakes of snow were filtering through the soundless air. He turned up the collar of his coat and walked sharply, trying to restore the warmth he had lost in the cold church. The atmosphere had been almost intolerable, through Isaac Howorth's sheer inability to grasp the fundamental principle of the new heating apparatus, which Mr. Hayes at his own expense had lately installed. The thought of a cheerful fire and a warm breakfast allured Secretan, as he made haste to the house. There had been an unusually large number of communicants, and he had been detained after the service conferring with the verger about the furnace, so that now it was close on nine o'clock. If any had attended in the hope of seeing the Rector's new wife they had been disappointed. Miss Jane had never missed the early service. Summer and winter her quiet kneeling figure had been in its accustomed place. To-day they were doubly bereft, for the Court Farm was far away, and she was not now mistress of her own time. Through the bare boughs of the wintry trees, the curious-eyed women could discern that the blinds at the window of the Rector's room were not yet drawn up.

"Il the new wife's to be a lie-abed, Ann," observed Lydia Rash, as she drew her skinny rabbit fur more closely about her neck, "ut'll be a bad thing fur th' parish."

Gie th' puir thing a chance, Lyddy. It's 'er furst mornin'. Shoo'll turn oot a'a reet by-and-by, nivver fear."

Secretan passed eagerly into the house, where he had been accustomed to find his every material want ministered to, even anticipated. Sunday had ever been Jane's busiest, most important day. She had been in the habit of rising at six o'clock, and setting the household machinery going before she went out. In winter mornings it had been her own particular care to see that the fire burned strong and clear in the study, and Hannah always got the breakfast forward, so that a few moments' sufficed for Jane herself to put the finishing touches on her return. Secretan found Hannah struggling with damp wood and a smoky chimney in the study, and the dust lying thick on his desk, which she had forgotten to cover up with the dust-sheet. The dining-room fire had decided to kindle, but there was no sign of breakfast; anh everywhere there was discomfort and a cold atmosphere. The expression of Hannah's face was helpless, even sullen. She had never been accustomed to think or act for herself; she was now like a rudderless boat on a strange sea. Secretan was conscious of a sharp dismay. He hung up his coat and hat, and after a moment's hesitation, ascended the stairs. But the bedroom door was locked.

"Coming, dear, called Helen's voice, "I am just ready."

"Hannah wants some seeing to," he suggested through the closed door. "We are supposed to breakfast at nine punctually."

He heard Helen laugh, and after a moment she opened the door, looking perfectly radiant from her cold bath.

"Oh, how cold you look, Claude! Surely it can't be necessary to begin the day so early in winter. I must see whether I can't alter that. I'm sorry I was late, but I fell asleep after you went down, and the bell awakened me. What a sepulchral note it has! I take nearly an hour to dress, but I'm coming now."

She patted his arm, smiled upon him, and his quickly raised ire melted like a cloud before the sun.

She passed him by at a run, discerning in his eye the desire to kiss her, and in a few moments she had Hannah under weigh, and created order out of chaos, comfort out of the raw material lying to her hand. She shut the windows and the doors, coaxed the chimney to a better frame of mind, and finally descended to the kitchen to see what was to be had to eat.

Her quickness was incredible. By a quarter-past nine the hot meal was on the table, and Helen, a little breathless, her cheeks rosy, and her eyes sparkling, had summoned him to eat.

"I feel convicted like a hireling that hasn't risen to the bond," she said demurely. "Wait till next Sunday! It shan't come in very cold and very cross, and find nothing to eat."

Secretan laughed, and with adoration in his eyes, drew his chair a little further up the table to be near her.

"No, sir," she called out, shaking a warning finger at him. "Don't destroy the symmetry of things. That's your way, walk ye in it!"

He laughed back and disobeyed.

"I had forty-three communicants this morning; Isaac counted them. Mostly women—come to see you."

"It did them good to be disappointed, then, if they came from such a mundane motive," she answered soberly. "When is the next service?"

"Eleven o'clock."

"Well, I think I'll go for a walk across the moor. I've been longing to ever since I came, and it's a nice crisp morning. It will do me good."

"If you will come to the service, I'll take you as far as the Grey Tor before dinner, dear," said Secretan, with a furtive anxiety in his eye.

She shook her head, poising a morsel of fish on the end of her fork.

"I don't want to go, dear. I told you I was not keen on churches. I haven't been in one since we were in Paris, and then I only crept to matins at a little chapel in the Rue d'Essau, where the priest had the loveliest face, and a way of saying 'My daughter,' which made one feel that there was no sorrow he couldn't heal."

Secretan gave her a little startled look.

"You mean a Roman Catholic chapel, do you?"

"Yes, of course. I shouldn't mind belonging to that communion. It gives one so little to do."

"That's where you are quite mistaken," he said, a little coldly, for his faith was precious to him, and her careless, flippant words wounded him in his dearest part. "It is ordered to allure the unwary. Once they are inside the net they discover that it is a net, that they have precious little liberty of conscience or action."

"Why, how bitterly you talk! Where is your Christian tolerance, Claude?" she asked amusedly.

"I don't like to hear you speak like that, Helen. I hope you won't to anybody but me."

"Oh, I must have my liberty since I'm not inside any net," she said with a mischievous glance. "How many services are there?"

"Four every Sunday, and once a month I have to go down to the Midcar Union at Longleat to take the service for the inmates."

"You do work hard, and I shall be deserted on Sunday."

"No, for you are going to share my work, I hope," he said a little quickly. "You will go out at eleven this morning? They—they will expect it."

"I can't help that," she answered calmly. "Why should I go to a service in which I have no interest, in which I am not even sure that I believe, because they want it? I would very much rather go for a walk on the moor."

"It—it will occasion remark, Helen. Go this one day, just to please me, and I promise you I shan't insist afterwards, if you find it intolerable."

She did not make any answer for a few moments.

"I warned you, Claude, did I not, that I should not be a proper clergyman's wife."

"I did not take you seriously, Helen, and you must see that this means a great deal to me. Only this one morning!" he pleaded more earnestly when she gave him no answer. "And I promise that if you find it intolerable you shall not be asked again."

"Will Jane come in to church today?" she asked after a moment, in which she appeared to ponder the thing in her mind.

"Most likely. Courtney hasn't been a church-goer of late, but unless she finds her duties more absorbing than she expects, she will certainly be there."

Then we shall have her to dinner afterwards, shan't we?"

"That is for you to say," he answered.

"Then, of course, we shall have her. Claude, you won't mind if I transplant Bates from Colchester, will you? Hannah seems to want some help, and her hands are very red, and her feet very heavy, when she is clearing at meals. I taught Jimmy myself, and he is a dear little chap. I promised to think of it, and as his mind is made up not to stay with Mrs. Revell, we may as well have the benefit of his services."

"You must manage the house as seems good in your sight, dear," answered Secretan, a trifle dully, for she had not yet satisfied him regarding the eleven o'clock service.

"Of course, I shouldn't expect you to pay him! His salary is not very princely, only four shillings a week and his uniform. But I shall charge myself with it, as I am bringing him primarily for my own use and benefit."

Secretan laughed.

"The income will be all yours, to

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lay out as you will. I only want a few shillings occasionally for books, and I should not presume to interfere with any of your domestic plans. Jane will tell you I never have done that."

"Admirable person!" said Helen with a little move. "I begin to think I have secured the only model husband extant."

"But he will want his own way in a few little things," he suggested anxiously. "The service, for instance. You will go, won't you? It's a matter of moment to you."

She shook her head.

"Not to-day, dear. I really don't feel like it. Now, won't you have any more? What can I do for you? Let me go and see whether the study fire is behaving itself; and don't look so glum. Jane will uphold the credit of the family, and I am sure you will preach all the better if the disturbing element is not in the church—to say nothing of your hearers, who would only be able to give you a divided attention. I won't be pilloried to-day, thank you. Some day, when I get to know the people, I may drop in."

She spoke with such complete decision that Secretan was made aware that it was final. He was bitterly chagrined, however; but realising that it would be unseemly and unwise to wrangle over the matter, which, though important to him, was very small in her eyes, he said no more. He was also quite well aware—and the certainty gave him a curous pang—that it was his self-esteem and his pride that were hurt more than his actual spiritual sense. He had all an Englishman's horror and shrinking from the unusual, and he knew that the whole of Midcar would turn out to see the new wife, and expect to behold her in her proper place. If she would only consent to appear there to satisfy the conventional ideas, the somewhat unusual circumstances of his marriage would be forgotten. But Helen would not be coerced. Her frank, clear eyes had neither doubt, shrinking, nor indecision in them. She would be a law to herself.

She left him the study to address himself as best he could to his sermon, and retired to her household duties, to the capture and subjugation of Hannah, who, bereft of her shield and buckler, was in a limp and decidedly unpromising state.

Helen undoubtedly had the housekeeping sense developed to an extraordinary degree. She was absolutely mistress of the small and overwhelming detail necessary to the successful management even of a small house, and she despised nothing. Helping Hannah to clear the table, she gently suggested rather by her manner and example than her speech, that there was a right and a wrong way of doing things. And she was so gentle and considerate that Hannah found herself melting in spite of herself.

"Now, Hannah, I want you to go to the service this morning. I'll see to things. You have been in the habit of going, haven't you?"

"Oh, yus, ma'am, ivvery Soonday marnin'. Miss Jane, shoo wur varry partickler. Ivverything's getten ready, and whenivver I cooms in, A'a pops on th' petaters——"

"Well, I want things to go on like that. Come now, and I'll help you with the beds before you wash up."

They worked very amicably together for the next hour, and by half-past ten Hannah had retired as usual to her own room, to get into her Sunday best. She had no doubt that her mistress was engaged in the like manner.

But Helen merely threw herself into the old arm chair in the dining-room and opened a book. The bells were now ringing a more alert and joyous peal, a little jangled it is true, offending Helen's musical ear; but the sound was pleasant enough,

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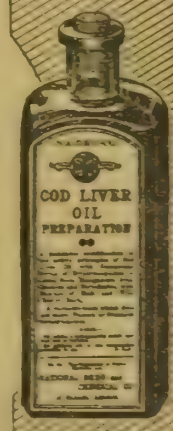

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TELEPHONE 1905.

and suggestive of country ways. Her book had fallen, and she was leaning back looking vaguely into space, when Secretan sought her. She jumped up.

"Are you going, dear? Can I brush your coat or do anything for you? I've had quite a busy morning, and you will be glad to hear that Hannah is nearly ready."

He came in and shut the door.

"You really won't go, then, dear?"

She looked surprised.

"Not to-day. You'll find me here when you come back. I hope you will have a nice service, and that the people will appreciate it."

Secretan went out rather quickly and closed the door. His temper was of the fiery order, and he thought Helen was not treating him fairly. She smiled a little, comprehending him perfectly, and liking him none the less for it. She had not expected the perfect man, and she was, on the whole, rather glad than otherwise to find him so very human. She let him go, and presently from her bedroom window watched his tall figure wending its way between the yew trees towards the church.

By this time all the approaches to the church were thronged, and the sound of wheels as the different vehicles of the country people began to arrive, filled the air. Just on the stroke of eleven a very smart carriage with a pair of magnificent bay horses drove up, and Mr. Hayes got out. Conscious of a quickened interest she watched for the descent of his women-folk. Dismissing the stout, commonplace, expensively dressed mistress of High Ridges at a glance, her eyes were riveted by the exquisite beauty of Audrey's face. The simplicity of her dress set off the lissom, girlish lines of her figure, and the sweet joyousness of her looks, the perfect purity seemed to Helen exquisite. She wondered how such plain people could have become parents of so fine a creature.

Behind them, having alighted from a high dog-cart in which a bony horse of sixteen hands was with difficulty restrained, came Jane, leading two little boys in sailor suits by the hand. She saw them exchange greetings with the Hayes at the church porch, which presently swallowed them. Helen wondered whether Jane would be disappointed. Well, she had promised her nothing except that she would do her best. The best, as yet, did not include sitting through a service in which she had no interest, and in which she did not believe. But it might be included by and by. She could easily imagine herself being influenced by Jane.

When the bell had rung itself out and the doors were closed and the first notes of the organ came stealing out upon the soundless air, Helen hastily put on her hat and jacket, drew a pair of loose gloves on her hands, and taking a stick from the hall stand, slipped out and locked the door.

The moor beckoned her, with the grey mist lying heavily upon it, its sombre colouring so representative of the web of life. It was a strange desolate region to which she had come, and as she stood a moment on the edge of the moorland road looking down the steep slope towards the valley, where the smoke of factory towns partially obscured the vista, she wondered what the end would be. Last Sunday she was a free woman, though not a happy one. Was she happier to-day? she wondered, and could find no answer to the question. Seeking a greater freedom, she had bound herself anew; that was her inwatd and insistent conviction. She stepped across the ever-widening spaces and felt her foot sink in the moss and the heather, while the cool wind, unhindered in its course, played upon her cheek. She came presently to a little dell where the streams dipped and fell into a deep pool, about which the boulders stood like sentinels. There was great growth of underbush in that sheltered spot, and she could imagine it a delightful spot in the heat of summer, when one could throw oneself on the bank under shade of the bending trees and forget the world which lay outside. It was cool and desolate now, but the place seemed to have a sort of spell over her, for she came back again a few steps after she had passed on, to look back once more.

It was made for a trysting place, surely; and she had no doubt that Midcar lovers had long since made it their own. The walk did her good, the wideness of the prospect, the cool clear of the air, the bending skies so near, and yet so far, seemed to enter into her being and give a sense of largeness and peace. Here, surely, there was room to live away from the sordid and petty tragedy of things. People who lived near these solitudes, within call of the wild, must, of necessity, be a simpler, kindlier, purer folk.

Although Helen did not profess to be a religious woman, she had a reverent mind, and it was in a very soft, pliant mood she returned to her home, trying to choose the moment opportunely, so as not to encounter any of the church-going folk. She succeeded only partially. The flock of she was, and surprised that she little groups. They stood still gaping at her curiously, knowing who had scattered, and at the edge of the moor she had to pass by several should be wandering on the moor,

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IHC Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizer, etc., write to the I H C Service Bureau, and learn what our experts and others have found out concerning these subjects.

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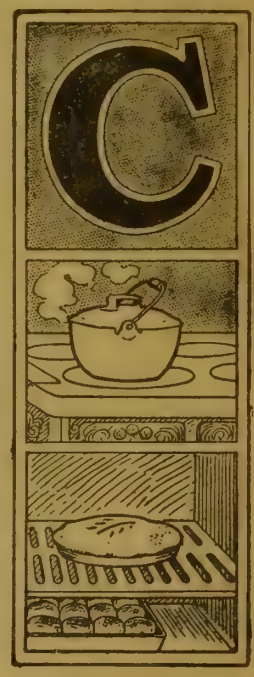

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McClary's Pandora Range

instead of being in the parson's pew. Some of the men awkwardly touched their hats, and when she smiled upon them they looked at one another sheepishly, aware that they had not seen anything so sweet in Midcar for many a day.

When she got within the Rectory grounds she heard the shrill voices of children, and presently saw the two little boys playing with the old spaniel who had been about the Rectory for many years. When they saw her they hung back a little; but she stretched out her hands, and when they ran to her she knelt down and folded an arm round each. Secretan and Jane, looking out over the study blind, gravely discussing her action of the morning, saw that her eyes were full of tears.

(Continued in next issue).

Household Hints.

To renew the elasticity of rubber rings that have become hardened, soak five to thirty minutes in ane part ammonia and two parts water.

In cleansing oil stoves use a small whisk broom. It removes dust and dirt from corners and saves the hands.

Nut butter is a pretty good substitute for meat now that the latter brings such high prices. Run walnuts or shellbarks through a food-chopper, and rub into them about one-third as much good fresh butter. Spread on crackers or bread.

Our housekeeper puts a little vanilla in griddle cakes, waffles, fritters and muffins.

An alarm clock in the kitchen is useful to warn the cook of needed attention to roast, cake, etc.

Why fill the gouse with the odor of burning fat and watch it carefully for hours to prevent it burning, when frying out lard? Use a double boiler (two kettles in the wash-boiler will do very well for large quantities); place it on the back of the stove and the lard will come out snow-white with no watching at all.

Ink which stands some time is liable to grow thick in the bottom of the bottle and clog the pen. Strain the ink through a thin cloth, remove the thick part and thoroughly wash the bottle before putting the ink back.

Sour cream makes a first-rate salad dressing. Stir together salt, mustard and pepper with lemon juice and beat in the sour cream, pouring it over the salad at the moment of sending to table.

Farmer Ads. Bring Results.

Editor Maritime Farmer:—

Please witgdraw Holman Advertisement "Sheep for Sale". The ad, did its work and sheep go to S. I. P., Hampton.

H. D. BUCHANNAN.
Sussex, N. B.

Some Good Shorthorns.

Walter E. Eaton, Upper Canard, N. S., writes:

"The enquiries for Shorthorns are coming in now for the fall trade, and I have just sold three splendid young bulls to Malagash Agricultural Society, Lunnenburg Co., N. S., also a grand heifer to C. C. H. Eaton for New Brunswick parties and a young cow for himself. Among the bulls on hand now are some of the best I ever offered for sale.

'Five P's.

There is a five pointed star that will lead us to success. On its points are push, patience, pluck perseverance and prudence. These are just as necessary in the home as in the business world.

Analyzing Fertilizers.

Robert Gamblin, Victoria Co., N. B.—Where can I send a gample of fertilizer to be analyzed? Please send me full particulars.

Ans.—Any purchaser of a registered fertilizer may obtain from the Minister of Inland Revenue an analysis of the fertilizer as delivered to him on payment of a fee of one dollar, and making application for such analysis accompanied by a sample of the fertilizer of at least one pound weight, and taken in accordance with the following directions:

Samples of fertilizer submitted by a purchaser for analysis must be inclosed in glass jars or bottles, and properly sealed. The sample must be taken in the presence ol the vendor or of his representative. In lots of five tons, or less, portions shall be drawn from each separate package, and from at least ten packages; or if less than ten packages are present all should be sampled. In lots of over five tons, at least ten per cent of the packages shall be sampled. The portions so taken shall be thoroughly mixed in the presence of the parties interested, and from this mixture the sample sent to the Minister is to be taken; and must bear the signature of vendor and purchaser; and at the same time a duplicate sample is to be left with the party whose goods are inspected, subject to the call of the manufacturer or agent.

Address the sample, fee, and application to the Deputy Minister, Inland Revenue, Ottawa.

Have You Ripe Clean Timothy Hay?

Editor Maritime Farmer:—

We take the liberty of writing you for information regarding the Hay crop in the Maritime Provinces. We heard that it has been a good crop. You are probably aware that Timothy seed is scarce this year, as it was last year. We have been informed that considerable of the hay in parts of the provinces could not be cut until quite late, on account of the wet weather. Because of the lateness of the cutting we are under the impression that considerable of it could be threshed easily, if the farmers know about it and are so disposed. We thought perhaps you, with your intimate knowledge of the country, might know where such Timothy is grown and the chances for having it threshed. If you care to give us any information on this matter, we shall appreciate it very much. A prompt reply will greatly oblige.—George Keith & Sons, Toronto, Ont.

Editor's Note:—For the information of any of our readers who may have a crop of Timothy hay suitable for threshing for seed we are publishing the foregoing letter and would advise all those who are interested to communicate with Messrs. Keith.

The In-Calf Cow.

Ice-cold or impure water and improper grain and roughage are detrimentals that must be avoided in handling the pregnant cow. Never allow her to drink ice-cold water, as it has a most deteriorating effect on her whole system, and, while it is very liable to cause abortion, it cannot fail to injure the calf. Water drawn or pumped directly from the depths of a well is at about the correct temperature for her to drink; otherwise, it should have the chill removed from it before the cow takes it into her body. Impure or filthy water is even more dangerous than the ice-cold water, and will cause all sorts of serious derangements among the digestive, assimilative, and generative organs. For the same reasons, musty or unclean roughage and grain of all sorts should be rejected as rations for the pregnant cow.

Care of the Farm Horse.

(Continued from page 82).

is all he gets, and too often much more than he gets, for a lifetime of toil and service. I believe that we will some day render an account of our treatment of these creatures entrusted to our care to the Great Father who lends them to us.

But we owe it to ourselves as well. We do not invest in horseflesh, especially at present prices, as a matter of philanthropy. It is a business proposition. We buy horses because we expect a profit on our investment. The better care we bestow upon our horses the better service they will render and the longer they will last, hence it pays in dollars and cents. I drove the trail recently with a man whose team weighed 700 pounds more than mine. Our loads were the same 3,000 pounds, yet my team handled their load much more easily than the heavy team, simply because they were in shape to work. The prudent man will conserve his capital by a proper care of the horses that till his soil.—Bulman's Magazine.

Aberdeen-Angus Herd Book.

We have recently received from Mr. John W. Brant, Accountant, National Live Stock Records, Ottawa, a copy of Vol. II. of the Canadian Aberdeen Angus Herd Book. Copies of this herd book are supplied free to all members of the Association.

The Gaspereaux River Near Where The Nova Scotia Power Company Proposes to Obtain 18000 Horse Power.

African Geese.

Geo. N. Clark, Kent Co., N. B.—Can you advise me when I can buy a pair of African Geese? I have searched your columns in vain for an advertisement that would give me this information.

Ans.—A word to the wise is sufficient. Maritime Breeders of African Geese or any other variety of live stock would find it to their best interest to let their light shine through these columns and tell the public when they have surplus breeding stock for sale. The only African Geese that we saw out at the fall fairs were shown by: The Hartland Poultry Yards, Hartland, N. B.; Albert Boswall, jr.; French Fort, P. E. I. and A. Kenniston, Bangor, Main.

Dates to Be Remembered.

Maritime Winter Fair, Amherst, N. S.—December 4, 5, 6 and 7, 1911.

St. John Exhibition, St. John, N. B.—September 7 to 9, 1912.

"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used," writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactary." For sale by All Dealers.

HAD VERY BAD COUGH

And Tickling Sensation in Throat.

Dr. Wood's Norway Pine Syrup Cured It.

Miss C. Danielson, Bowsman River, Man., writes:—"Last fall I had a very bad cough and a tickling sensation in my throat. It was so bad I could not sleep at night, so I went to a druggist and told him I wanted something for my cold, and he advised me to try Dr. Wood's Norway Pine Syrup which I did, and after taking one bottle I was completely cured. Let me recommend Dr. Wood's Norway Pine Syrup to anyone who suffers from a cough or throat irritation."

Dr. Wood's Norway Pine Syrup is without a doubt one of the greatest cough and cold remedies on the market to-day, and so great has been its success there are numerous preparations put up to imitate it. Do not be imposed upon by taking one of these substitutes, but insist on being given "Dr. Wood's" when you ask for it. Price, 25 cents a bottle; put up in a yellow wrapper; three pine trees the trade mark; manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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The Nova Scotia Horticultural Show.

(Continued from page 73).

Charles Ross—Wm. Black; H. D. Johnson.
Hublon—H. D. Johnson; Wm Black.
Newton Wonder—H. D'Almaine; H. D. Johnson.
Arlington Pippin—H. D'Almaine; H. D. Johnson.
Bramley—Wm. Black.
Mammoth Black Twig—Guy Caldwell; T. R. Wallace.
Vandivere—Ralph Duncanson; J. O. Hardacker.
Cooper's Market—W. J. Duncanson; C. F. Trenholm.
St. Lawrence—Benj. Lawrence; Arthur Johnson.
Lanes Prince Albert—H. D'Almaine.
Fall Janetting—H. D. Johnson; F. J. Fielding.

CRAB APPLES.

Transcendent—H. D'Almaine; H. D. Johnson.
Hyslop—B. F. Chesley; J. A. Magee; Emerson Johnson.
Montreal Beauty—T. B. Jacques; H. D'Almaine; H. D. Johnson.
Large Red—G. E. McGee; Havelock Neily; B. Woodworth.
Any other Variety—J. O. Hardacker, Freemason's Home; F. J. Fielding.

PEARS.

Best Collection of 10 Varieties—Andrew H. Johnson; H. E. Bent; Arthur Johnson.
Best Collection of 5 Varieties—Arthur Johnson; H. E. Bent; B. F. Chesley.

BEST PLATE.

Bartlett—B. F. Chesley; H. D. Johnson; H. E. Bent.
Boussock—H. E. Bent; Arthur Johnson; R. W. Starr.
Bosc—Percy Woodworth; Andrew H. Johnson; Mrs. G. C. Chesley.
Clairgeau—Arthur C. Johnson; B. F. Chesley; H. E. Bent.
Commice—H. D'Almaine.
D'Anjou—S. Avery Bowser; C. C. Brown; Andrew H. Johnson.
Duchess—J. D. Sherwood' H D. Johnson; Arthur C. Johnson.
Flemish Beauty—L. C. Hutchinson; H. D'Almaine; H. D. Johnson.
Howell—A. C. Johnson; H. D'Almaine; H. D. Johnson.
Hardy—C. C. Brown.
Louise Bonne—C. C. Brown; Arthur C. Johnson; H. D. Johnson.
Onondago—H. D. Johnson; H. D'Almaine; Andrew H. Johnson.
Sheldon—H. E. Bent; F. J. Fielding H. D. Johnson.
Genesee—Andrew H. Johnson; H. D. Johnson; H. A. D'Almaine.
Vermont Beauty—R. W. Starr; H. A. D'Almaine; H. D. Johnson.
Winter Nellis—H. D. Johnson.
Congress—B. F. Chesley; H. A. D'Almaine.
Vicar of Wakefield—H. E. Bent; H. D. Johnson; H. A. D'Almaine.

PLUMS.

Damson—A. H. Johnson.
Damson Shropshire—A. H. Johnson; W. H. Evans.
Grand Duke—W. H. Evans.
Monarch—W. H. Evans.
Reine Claude de Bovay—W. H. Evans; J. O. Hardacker.

QUINCES.

BEST PLATE.

Orange—B. F. Chesley; H. A. D'Almaine; Mrs. A. C. Chesley.
Rea's Mammoth—R. W. Starr; B. F. Chesley; H. A. D'Almaine.
Meaches Prolific—Andrew H. Johnson; R. W. Starr; H. E. Bent.
Champion—Mrs. Joseph Bezanson; B. F. Chesley; H. E. Bent.

THE SPECIAL PRIZES WITH WINNERS.

Best collection, 1 box each, Gravenstein, Ribston, Kings, Spy, Golden Russet—Prizes offered by Sir Frederick Borden—E. T. Neily, Tupperville; H. D. Johnson, Wolfville.

Best barrel Ribston, grown in Nova

Vigorous Manhood.

Two "Health Belt Men." One 50 Years Old, the Other 30. Can You Pick Out the Younger?

I can show you how to restore your youth and how to keep it. A "Health Belt Man" CANNOT grow old; he must be young forever. Years count for nothing in this life, so long as you have great vitality. Weakness, Nervousness, Unmanliness are conditions to be laughed at by the intelligent user of my great appliance, it gives, in abundance, all that vim, vigor and nerve force which the weakened system craves—Worn every night and all night for two or three months, it sends a great, warm, glowing volume of electricity into your body through the nerve centres at small of back; from the first hour's use you experience a decided benefit; there is a great mysterious force which gets right to work. No drugs to be taken; no conditions imposed except that dissipation must cease. Help nature that much; the Belt will do the rest. It takes the weakness and kink out of your back; it drives rheumatic pains away from all parts of your body, you will feel and look young and strong again; woman and man noticing your physical change will be more attracted toward you on account of your new vitality and life; in two months you can experience the full vigor of perfect manhood, or you need not pay.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it doesn't do the work.

Let Me Send You These Two Books FREE

They fully describe my Health Belt and contain much valuable information. One is called "Health in Nature," and deals with various ailments common to both men and women, such as rheumatism, kidney, liver, stomach, bladder, disorders, etc. The other "Strength," is a private treatise for men only. Both sent upon application, free, sealed, by mail.

If in or near this city, take the time to drop in at my office that you may see, examine and try the Belt. No charge for advice, either at my office or by mail. If you cannot call, fill in the coupon and get the free booklets by return mail. They are better than a fortune for any one who needs new vigor.

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ADDRESS .....

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We pay as we quote, grade honestly, charge no commissions or expressage, make quick returns and post you reliably. We have the best outlet for Lynx, Mink, Cross Fox, Red Fox, Marten, Wolf, Raccoon, Skunk, and Muskrat. We are specialists in Black and Silver Fox, and can pay from $300.00 to $1,500.00 for choice specimens. Let us examine your skins and submit offer. Write for free price list, tags, etc. Mention this paper.

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References: Banks or Commercial Agencies.

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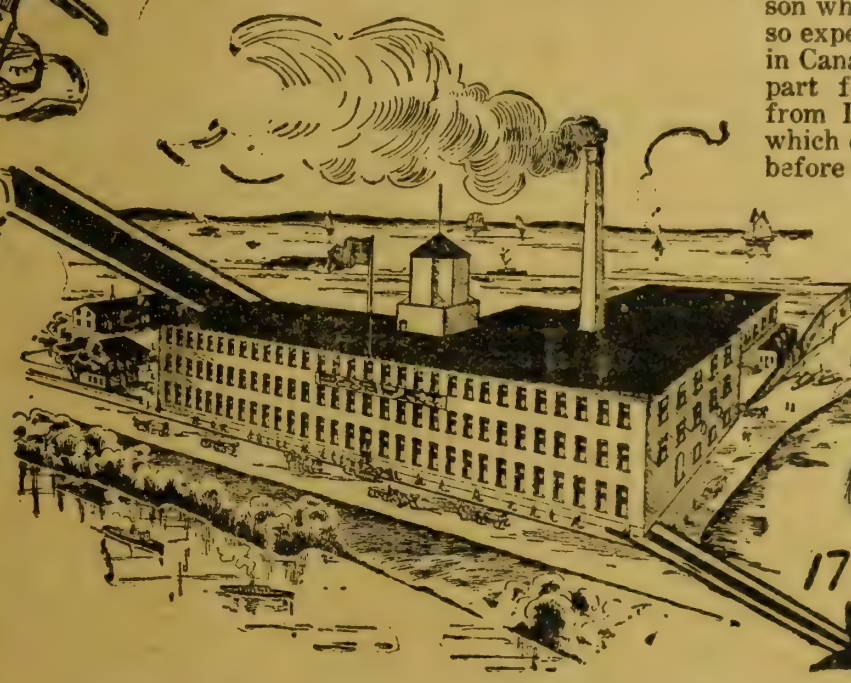
From the Trapper Direct to You

Through Canada's Greatest Fur Factory

THE steadily increasing demand for PAQUET FURS has been the direct cause of the adoption of this new method of selling Furs, from Trapper to YOU. Our new system will enable every man and woman in Canada to enjoy the comfort of rich and luxurious Furs at prices they can well afford to pay—prices which have never before been possible—the MANUFACTURER'S PRICES of Canada's Greatest Fur Factory. It will enable us to keep our immense Fur Factories running at full capacity all the year round, turning out Furs and Fur Garments of the most approved designs originating in the great fashion centres of Paris and New York. The main reason why Furs have heretofore been so expensive is that other Furs sold in Canada, are made up for the most part from finished skins, bought from Dressing and dyeing Houses which charge a profit on the skins before they are cut into at all.



THIS FACTORY which is by far the largest establishment of its kind in Canada, and one of the largest in the world, is the only Fur Factory in AMERICA where every process, such as dressing, tipping, dyeing and finishing of Furs, from the raw skins to the finished garment, is in operation under the one roof. Thus, in dealing direct with with this Factory, you save all the intermediary profits.

This Fur Catalogue containing 80 pages of beautiful half-tone engravings (some in colors), and thousands of prices on Furs and Fur Garments, will be sent you FREE. Write us a postcard NOW !

The Fur Set Illustrated $115.

No. 6025—Lady's "Noblesse" Stole in Genuine Mink, falling to the waist in back, trimmed with heads and tails, lining of finest quality plain satin, Special **$70.00**

No. 1762---Lady's Cushion Muff to match, Genuine Mink, finest satin lining, Special **$45.00**

THE PAQUET COMPANY LIMITED.

QUEBEC, CANADA

Scotia—offered by P. Gifkins—H. Loomer, Falmouth.

Best barrel Ribston, grown in West Hants—1st prize $5.00 offered by D. E. North—R. Duncanson, Falmouth.

Best barrel Ribston, grown in Kings Co.—1st prize $5.00 offered by Wm. Regan, Harness Manufacturer; 2nd prize, $4.00 offered by Prof. H. G. Perry, 1st, G. B. Woodworth, Church Street; 2nd, J. D. Sherwood, Wolfville.

Best barrel Spy, grown in Nova Scotia—1st prize $5.00, offered by Henry Lovitt; 2nd prize $4.00 offered by G. C. McDougall. 1st, H. Loomer; 2nd, J. D. Sherwood.

Best barrel Spy, grown in N. Kings—1st prize $5.00, offered by H. H. Wickwire, M. P. P. Ross Chipman, Chipman Corner.

Best barrel Spy, grown in W. Hants—1st prize $5.00, offered by Sheriff John D. Currie; 2nd prize, $4.00 offered by E. C. Shand. 1st R. Duncanson; 2nd, Thos. Alyward, Falmouth.

Best barrel Spy, grown in S. Kings—1st prize $5.00, offered by J. M. Patterson. J. D. Sherwood.

Best barrel Spy, grown in N. Annapolis—1st prize $5.00 offered by G. W. Munroe; 2nd prize $4.00 offered by R. W. Ford. 1st, Mrs. A. C. Chesley Grand Pre; 2nd, G. N. Banks, Paradise.

Best barrel Spy, grown in Hants Co.—1st prize $5.00, offered by Chas. Smith; 2nd prize $4.00, offered by W. P. Shaffner. 1st, R. S. Palmer, Windsor Forks; 2nd, R. Duncanson.

Best barrel McIntosh, grown in Nova Scotia—1st prize $5.00 offered by DeWolfe & Lamont; 2nd prize $4,

(Continued on page 82).

Down With a Silo Monopoly.

Editor Maritime Farmer:—

The Iowa Asricultural Experiment Station has set out on a nation wide hunt for a home-made round sile built in 1898 or earlier, and incorporating some of the essential features of the patented structure of to-day. H. L. King, agricultural engineering experimentalist of the station, has offered a reward of $50 for the first definite information about just such a silo. He expects also to make a trip to several of the older dairying districts of the United States for a personal search for pioneer silos.

Back of this unusual hunt is the claim of the wooden silo manufacturers that American farmers cannot build round silos of any type or material without first paying tribute to them in license fees. They claim a patent monopoly and they have organized themselves to enforce it. In the past summer of extensive silo building, they sent out thousands of letters warning farmers who were putting up home-made silos and threatening suit for infringement.

This claim of a silo monopoly concerns the Iowa statian because two of its experimenters, Prof. J. B. Davidson and M. L. King, designed a successful hollow tile silo three years ago which they dedicated to the American farmer and his free use. This silo has been made the special object of attack in Iowa where nearly a thousand are in use. Letters warning farmers building these silos have been sent out and intimations of damage suits have been frequent, Whenever appealed to the station has made the positive statement, based on investigation, that neither brick, tile nor masonry silos in any way infringe upon wooden silo patents. After further investigation the station has taken the new stand that it is doubtful if the manufacturers really have a monopoly, as they claim, on wooden silo building.

"We have good reason to believe," says Mr. King, "that the special features of wooden silos for which patents are claimed were ueed in some of the silos built prior to the date of the patents, June, 1899. Those features are the continuous door, reinforced door jambs, door jamb braces and devices for holding the doors in place. Round wooden silos were in use long before 1899. We want additional information about them. For the first information received about such a silo containing some of these mentioned features, $50 will be paid if it is sent to the Iowa Agricultural Experiment Station, Ames, Iowa.

"The Iowa station is not setting out to fight any body. It merely wants to make certain about these disputed points and to protect the farmer in Iowa and in every state in what it considers their right to build round silos of brick, tile or masonry, and possibly of wood also."—F. W. Beckman.

Reduction in Price of Cement.

In November, 1910, it was announced that the price of Cement had been reduced. That announcement was admitted by many as corroborative of the opinion that the merging of the Cement interests in Canada would prove a good thing for the public.

The theory of a consolidation such as the Canada Cement Company is that the consolidated interests are in a position to effect economy in production and distribution.

That the Canada Cement Company are working upon the idea of increasing consumption by lowering prices, rather than curtailing production and obtaining higher prices, is clearly shown by its President's report to the Shareholders at the last Annual Meeting, when he stated: "It is confidently expected that the increased demand and increased output will result in further savings in the cost of manufacture and distribution, and it is the policy of your Dirctors to give your customers the benefit of these eductions."

This is further evidenced by the announcement, which was made on November 1st, 1911, of a still further reduction in the price of cement. The reduction in some districts is 10c per barrel, and in others, 5c. On the whole it will probably average 7c per barrel. This reduction—with the reduction made last year—means a very large saving to the cement consumers of Canada.

We trust that the expectations of lower cost voiced by the President of the Canada Cement Company, will be realized again next year, so that the Company may continue its policy of giving the benefit of these reductions to its consumers—thereby enlarging the uses to which Cement may be put.

Potato Growing.

Editor Maritime Farmer.

The potato crop being almost a failure this year, I believe you would be glad to give your readers the results of my endeavours to overcome the unfavorable conditions of the season; also the different results from certain fertilzers for this crop.

My land is clay loam under buckwheat last year. As soon as the buckwheat had started I spread a light dressing of barnyard manure (horse, cow and hog) as if I wanted a crop of buckwheat, and ploughed the whole down when about two inches high. I divided the field into three parts. Plot No. 1 no other fertilizer. Plot No. 2 at the rate of 200 lbs. Sulphate of Potash, 400 lbs. Acid Phosphate and 120 lbs. Nitrate of Soda per acre. The whole field was well harrowed and planted to Sensation potatoes. No. 3 (I had almost forgotten) at the rate of 400 lbs. Acid Phosphate and 120 lbs. Nitrate of Soda per acre.

The first two weeks the weather was splendid, but our first rain was not until 18th July followed by many days at 96 to 104 degree in the shade and from 108° to 130° in the sun. To prevent too great evaporation I kept the cultivator and hoe going nearly all the time. We got a few light rains in August, our hopes revived, things looked well; but in the night of August 31st potatoes, tomatoes, beans, corn, etc., were killed to the ground. The potatoes were certainly not more than half grown. However, I feel that God rewarded my persistency and courage, as the following results seem to show:

The seed was planted 30th and 31st May, killed 31st August, 3 months instead of 4 months at least.

Plot No. 1, light dressing of manure only, at the rate of 194 bus.

Plot No. 2, manure and in addition 200 lbs. Sulphate of Potash, 400 lbs. Acid Phosphate, 120 Nitrate of Soda, 242 bush.

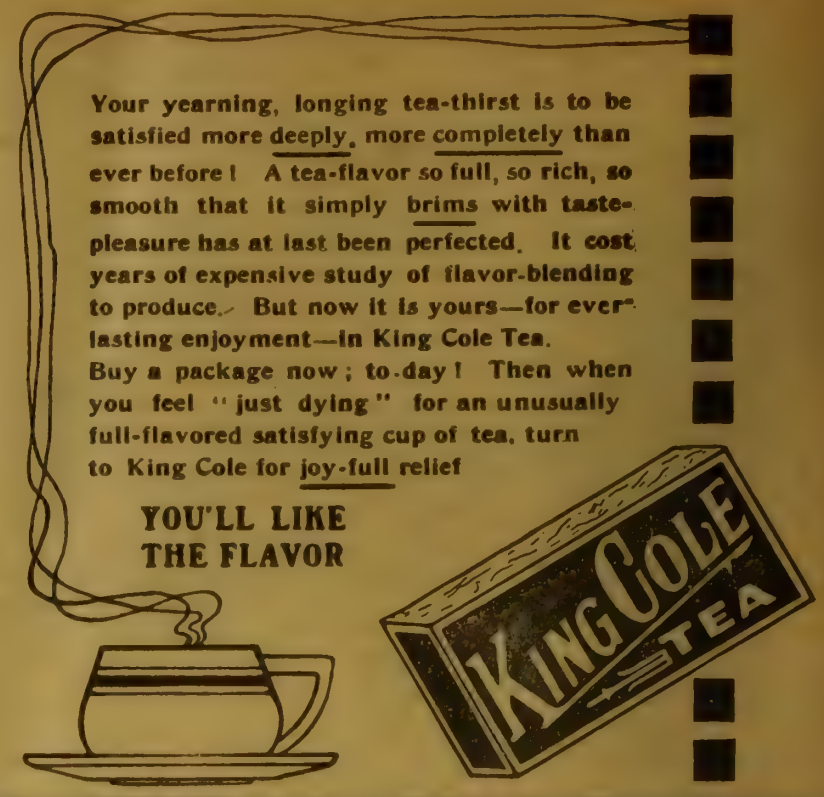
Plot No. 3, manure and 400 lbs. Acid Phosphate and 120 lbs. Nitrate of Soda, 204 bus.

The latter plot gave 12 bus. more than Plot No. 1 and Plot 2 gave 48 bus. more than No. 1. This means in the one case an increase of value, at .75 per bush (they are going up fast and will be at least $1.00 in the spring) of $9.00 and in Plot No. 2, 48 bus. at .75 gives an increase of $36.00.

Now, Mr. Editor, all up to date farmers will admit that the constant surface cultivation did a great deal of good, but will they give any credit to the green buckwheat ploughed in? I do.

Hoping that if any of your readers make any comments on the above you will kindly forward me the number or numbers containing them that I may complete statement if required. —Wm. H. Taylor, Potato Specialist, St. Giles, Lothiniere Co., P. Q.

Editors Note:—Mr. Taylor is a prominent member of the Canadian Seed Growers' Association.


Your yearning, longing tea-thirst is to be satisfied more deeply, more completely than ever before! A tea-flavor so full, so rich, so smooth that it simply brims with taste-pleasure has at last been perfected. It cost years of expensive study of flavor-blending to produce. But now it is yours—for everlasting enjoyment—in King Cole Tea.
Buy a package now; to-day! Then when you feel "just dying" for an unusually full-flavored satisfying cup of tea, turn to King Cole for joy-full relief
YOU'LL LIKE THE FLAVOR
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Shave Yourself by the TIME SAVING METHOD
NO STROPPING-NO HONING
To the busy man time is money. Why waste it? The old way of shaving is slow. It's unsafe, too—you may gash your face any day. Besides saving time, the
GILLETTE SAFETY RAZOR
saves your face. With it you can shave as fast as you like—no cuts—no scratches.
Ask your dealer to show you the GILLETTE. If he has not the goods or our catalogue, write us. We will see that you are supplied.
GILLETTE SAFETY RAZOR CO. OF CANADA, LIMITED,
Office and Factory, 63 St. Alexander St., Montreal.
The GILLETTE Standard Set: triple silver-plated razor and 1 doz. blades, $5.
NO STROPPING - NO HONING
KNOWN THE WORLD OVER
King C. Gillette
311

HAVE YOU a Lump in the Breast, or a Growth on any part of the body, or a Sore that will not heal?

If you have, write, describe the trouble, and mention this paper and we will mail FREE in plain envelope, particulars of the

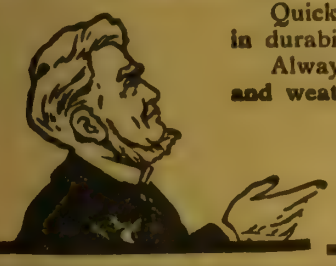
Painless Home Treatment

Write to-day.

THE CANADA CANCER INSTITUTE, Limited
10 Churchill Ave., Toronto.

That "EASTLAKE" Steel Shingle of ours

Known as "best for barns" for the past twenty-five years. Now known also as the best roofing for any building, any where.



Quickest to lay—economy in labor; longest to stay—economy in durability.

Always proof in all climates against fire, lightning, rust and weather.

Give us the measurement of any roof you wish to cover. We will send complete estimate of cost.

The METALLIC ROOFING CO., Limited

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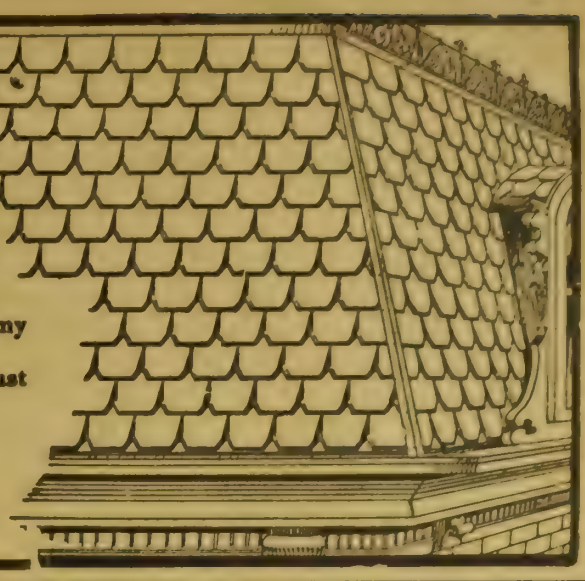


Cooperage Production, 1910.

The amount of cooperage produced in Canada during 1910, has been compiled by the Dominion Forestry Branch at Ottawa. Reports were received from one hundred and thirty three firms, of which ninety four were in Ontario — showing that slack and tight cooperage was produced in Canada to the value of one million seven hundred and forty thousand dollars. As the hard wood forests of Canada are already greatly depleted, and of the Canadian products transported in barrels are chiefly flour and apples, requiring only slack cooperage, the tight cooperage stock manufactured in 1910 amounts to only one-fifth of the total value. Barrels made from tight stock are used as containers of oils, alcoholic liquors and other liquids, and as Canada has practically no wood of sufficiently clear quality for such stock, the most of it has to be imported as staves or stave bolts from the United States. Of the total, slack cooperage made up one million three hundred and ninety-five thousand dollars, which is two hundred thousand dollars less than the 1909 value. Notwithstanding the decrease in value of slack cooperage for 1910. the number of pieces produced was five hundred thousand more than in 1909. Practically no cooperage is manufactured in Canada for export, and whatever quantity is shipped out is the cooperage left on the manufacturers hands after the domestic market has been satisfied. In the middle of the last decade the export trade was quite an important branch of the cooperrge industry, but in 1910, exports of staves, heading and barrels amounted to only one hundred and fifteen thousand dollars.

Acadia Notes.

Acadia University in Wolfville, N. S. opened on October 4th. As yet the registration is not complete. but will no doubt, surpass that of last year, which was 230. The Freshmen number 83 ; this time last year they numbered but 70. The Senior class is this year the largest in the history of the University, numbering 46. The class of 1891 graduated 43, the the largest until the present year. The registration in Acadia Seminary and Horton Academy is as large as last year, while applications in hand show that it will be somewhat larger.

The teaching staff of the University has been enlarged by the coming of two new professors, Prof. Thompson in Latin and Prof. Jpidle in the department of Theology.

Every day the campus swarms with football men who are working hard to put up a team that will win the incollegiate league.

A pleasant time was spent Friday evening, (Oct 20) by the student body at an "At Home" given by the college Y. M. C. A. and Y. W. C. A.

The department of Biology under Prof. H. G. Perry is in a flourishing condition. The study of Insects and Bacteria proves very interesting, especially to those students who look forward to systematic Farming.

The Ontario Business College.

The commercial field offers far greater and surer opportunities for success in life than any profession. The professions are so crowded that many professional men have difficulty in earning a living. In contrast with this condition the demand by business men and manufacturers in all parts of Canada for well trained, industrious young men and women as bookkeepers and stenographers, many of whom, beginning in this way, will by and by become employers themselves, is never fully met, and it is greater now than ever before. Every young man and woman should have a thorough commercial training such as is given at the Ontario Business College of Belleville, Ontario.

This old established institution is now in its 44th year, and for 34 years Mr. J. W. Johnson, F. C. A., has been the principal. Each year students come to the O. B. C. from every province of Canada, from the United States, all the West India Islands and from British Guiana, South America.

Ayrshire Records.

In a recent list of records of Ayrshire Cows and Heifers that have registered in the Record of Performance, Milkmaid 7th—28,796—a two-year-old heifer owned by Wm. McRae, East Royalty, P. E. I. heads the two-year-old list in quantity of milk and total quantity of butter fat. Her record for 365 days was : — 11,673.5 pounds milk, testing 4.22 per cent. butter fat ; total butter fat 492,75 pounds. The example set by Mr. McRae in testing his cows should be an incentive for others to follow.

W. F. Stephen, Secretary Canadian Ayrshire Breeder's Association, writes :

since the commencsment of the test 164 cows and heifers have registered summarized as follows : —

Class	Lbs. Milk.		Lbs. Fat.
55 Mature cows with	10213.05	and	397.82
17 Four-year-olds with	8896.20	"	358.07
29 Three-year-olds with	8273.79	"	337.63
65 Two-year-olds with	7222.89	"	294.54

Shopshire Sheep For Sale.

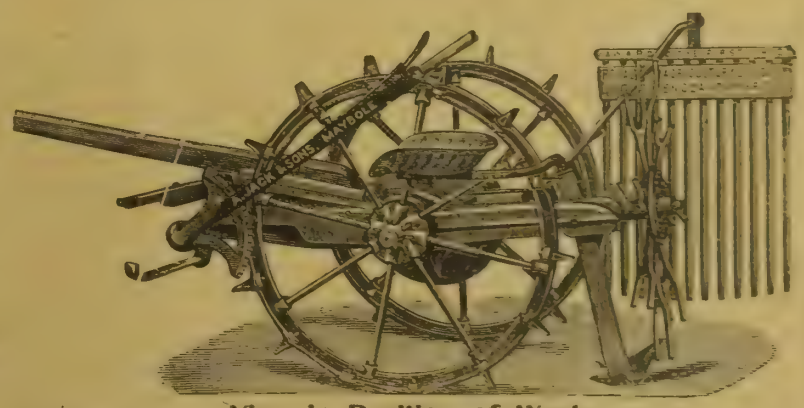
On another page of this issue will be found Mr. S. A. Logan's advertisement of a big Shropshire Sheep Sale which will be held near the Winter Fair Building, Amherst, N. S., on December 6th, at 1 o'clock p. m, This will afford parties who wish to buy and breed pure bred Shropshires an excellent opportunity to get a good start. Railway fares to the Winter Fair are so cheap that no one can afford to stay away. Mr. Logan's Shropshires are so well known that they need no introduction to our Maritime Farmer reoders.

The World's Best Potato Digger.

Jack's Royal First Prize New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position of Work.

The New Patent Caledonian Potato Raiser holds the record as the most perfect Potato Raiser in the world. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, *Canadian Agents* **Port Williams, N. S.**

The Nova Scotia Horticultural Show.

(Continued from page 89).

offered by W. E. Porter. 1st, H. Loomer, Falmouth; 2nd, Arthur Gravatt, Berwick.

Best barrel McIntosh, grown in S. Kings—1st prize $5.00, offered by Barclay Webster. A. Gravatt.

Best barrel McIntosh, grown in Hants Co.—1st prize $5.00, offered by W. H. Roach. H. Loomer.

Best barrel Bishop Pippin, grown in Nova Scotia—1st prize $5, offered by R. C. Dickey, 2nd prize $5, offered by W. H. S. Ritchie. 1st, B. F. Chesley, Clarence; 2nd, H. E. Bent, Tupperville.

Best barrel Bishop Pippin, grown in N. Kings—1st prize $5, offered by William Fraser. Geo. P. Magee, Lower Church Street.

Best barrel Bishop Pippin, grown in W. Hants—1st prize $5, offered by C. W. Strong. 1st, R. S. Palmer; 2nd N. S. Freemasons' Home, Windsor.

Best barrel Bishop Pippin, grown in S. Kings—1st prize $5, offered by H. H. Wickwire, M. P. P.; 2nd prize $4, offered by Porter Bros. 1st, J. D. Sherwood; 2nd, J. O. Hardacker, Grand Pre.

Best barrel Bishop Pippin, grown in Nova Scotia, outside of Kings, Annapolis and Hants—1st prize $5, offered by S. P. Benjamin Co. H. T. Hebb, Bridgewater.

Best barrel Bishop Pippin, grown in North Annapolis—1st prize $5, offered by Young's Bakery, Wolfville. B. F. Chesley.

Best barrel Bishop Pippin, grown in Hants Co.—1st prize, $5, offered by P. M. Fielding. R. S. Palmer.

Best barrel Gravenstein, grown in S. Kings—1st prize $5, offered by R. E. Harris & Son; 2nd prize $4, offered by A. I. Daniels. 1st, A. Gravatt; 2nd, E. P. Brown, Wolfville.

Best barrel Gravenstein, grown in Hants Co.—1st prize $5, offered by F. O. Curry. H. Loomer.

Best barrel Gravenstein, grown in Annapolis Co.—1st prize $4, offered by C. H. Wright; 2nd prize $4, offered by H. M. Watson, Wolfville.

Best barrel Grimes Golden, grown in Kings Co.—1st prize $5, offered by H. L. Cole, Aberdeen Hotel, Kentville. Amos Lee, Berwick.

Best barrel Grimes Golden, grown in Nova Scotia—1st prize $5, offered by W. W. Pineo. Amos Lee.

Best barrel Fallawater—1st prize $5, offered by Ralph Creighton; 2nd prize $4, offered by B. G. Bishop. 1st, E. P. Brown, Wolfville; 2nd, Havelock Neily, Middleton.

Best barrel King, grown in N. Kings—1st prize $5, offered by H. H. Wickwire, M. P. P. Laurie Healy, Church Street.

Best barrel King, grown in S. Kings—1st prize $5, offered by J. D. Chambers; 2nd prize $4, offered by Mrs. J. W. Vaughn, "Evangeline Cottage," Wolfville; 3rd prize $3, offered by J. R. Lyons. 1st, C. F. Trenholm, Grand Pre; 2nd, H. D. Johnson; 3rd, J. R. Lyons, Kentville.

Best barrel King, grown in Nova Scotia—1st prize $5, offered by Thos. Doran. E. T. Neily.

Best barrel King, grown in Kings Co.—1st prize $5, offered by R. S. Rosborough. L. E. Healy.

Best barrel King, grown in Hants Co.—1st prize $5, offered by Prin. H. T. DeWolfe. R. Duncanson.

Best barrel King, grown in S. Annapolis—1st prize $5, offered by R. J. Messenger, H. E. Bent.

Best barrel Baldwin, grown in Nova Scotia—1st prize $5, offered by D. W. Murray, Hantsport Fruit Basket Co.; 2nd prize $4, offered by C. Henry Dimock, 1st, J. D. Sherwood; 2nd, E. T. Neily.

Best barrel Baldwin, grown in S. Kings—1st prize $5, offered by Mitchell's Shoe Store; 2nd prize $4, offered by J. G. Van Buskirk, tailor. 1st, J. L. Hardacker; 2nd, J. D. Sherwood.

Best barrel Baldwin, grown in Hants Co.—1st and 2nd prizes, $6, and $4, offered by Capt. R. Pratt; 1st R. Duncanson; 2nd H. Loomer.

Best barrel Stark, grown in Kings Co.—1st prize $5, offered by T. E. Hutchinson, E. P. Brown.

Best barrel Stark, grown in Hants Co.—1st prize $5, offered by W. M. Christie; 2nd prize $4, offered by W. H. Curry. 1st, H. Loomer; 2nd P. S. Lawrence.

Best barrel Golden Russett, grown in S. Kings—1st prize $5, offered by Prof. Clarence Hemmeon. H. A. D'Almaine, Wolfville.

Best barrel Golden Russett, grown in Nova Scotia—1st prize $5, offered by J. H. Lombard; 2nd prize $3, offered by F. C. Rand, 1st E. T. Neily; 2nd P. C. Inglis, Tupperville.

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Best barrel Golden Russett, grown outside of Kings, Hants and Annapolis—1st prize $5, offered by J. Sealy. H. T. Hebb.

Best barrel Wagener, grown in Nova Scotia—1st prize $5, offered by T. P. Calkin. J. D. Sherwood.

Best barrel Wagener, grown in Kings Co.—1st prize $5, offered by J. A. S. Wilson. J. D. Sherwood.

Best barrel Wagener, grown in Hants Co.—1st prize $5, offered by Gustavus Bishop. R. Duncanson.

Best barrel Pomme Grise, grown in W. Hants—1st prize $5, offered by G. H. Yeaton & Son, Ltd., Confectioners; 2nd prize $4, offered by E. S. Crawley. 1st, R. Duncanson; 2nd, Thos. Aylward.

Best barrel Pomme Grise, grown in S. Kings—1st prize $5, offered by Dr. O- B- Keddy. H. D. Johnson.

Best barrel Nonpareil, grown in Annapolis Co.—1st prize $5, offered by Prin. W. L. Archibald. E. T. Neily.

Best barrel Blenheim, grown in Kings Co.—1st prize $5, offered by C. H. Borden; 2nd prize $4, offered by A. deW. Foster. 1st, L. E. Healy; 2nd, C. F. Trenholm, Grand Pre.

Best barrel Blenheim, grown in Hants Co.—1st prize $4, offered by G. K. Wilcox. H. Loomer.

Best barrel Cox Orange Pippin, grown in Kings Co.—1st prize $10, offered by J. Elliot Smith. G. B. Woodworth.

Best barrel Banks Gravenstein, grown in S. Kings—1st prize $5, offered by Dr. C. H. Morris. I. B. Oakes, Wolfville.

Best three barrels, one each, of Kings, Ribston and Blenheim, grown in Annapolis County—$30.00, offered by Edward Jacobs & Sons, London, England. E. T. Neily.

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Best box Spy, grown in Annapolis Co.—1st prize $3, offered by W. G. Clarke. Mrs. B. F. Chesley, Clarence.

Best box Wagner, grown in Annapolis Co.—1st prize $3, offered by W. G. Clarke. H. E. Bent.

Best 3 boxes King, grown in Nova Scotia—1st prize $5, offered by Dr. McKinnon. E. T. Neily.

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Best Plate Gravenstein, grown in Annapolis Co.—1st prize $5, offered by S. W. W. Pickup, M. P. E. T. Neily.

Best Plate Ribston, grown in Annapolis Co.—1st prize $5, offered by F. C. Whitman. H. A. Bent.

Special Prize—Furness Withy Co., Steamship Agents, Halifax, Offer a Sterling Silver Tea Service Valued at $150.00, for:

Best collection of 10 commercial or export varieties of apples, 5 plates of each variety, 5 specimens on a plate. Must be won three times before becoming the property of the exhibitor. H. E. Bent.

This prize was offered in 1910 to the Provincial Exhibition at Halifax and has been transferred for this year to the Nova Scotia Harticultural Exhibition at Wolfville.

This prize was won in 1910 by L. E. Healy, Church St., Kings Co.

Special Prizes Offered by the Niagara Spray Company of Nova Scotia Limited.

Best box Gravenstein, $3, E. T. Neily.

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Best box Cox's Orange Pippin—1st prize $4. G. B. Woodworth.

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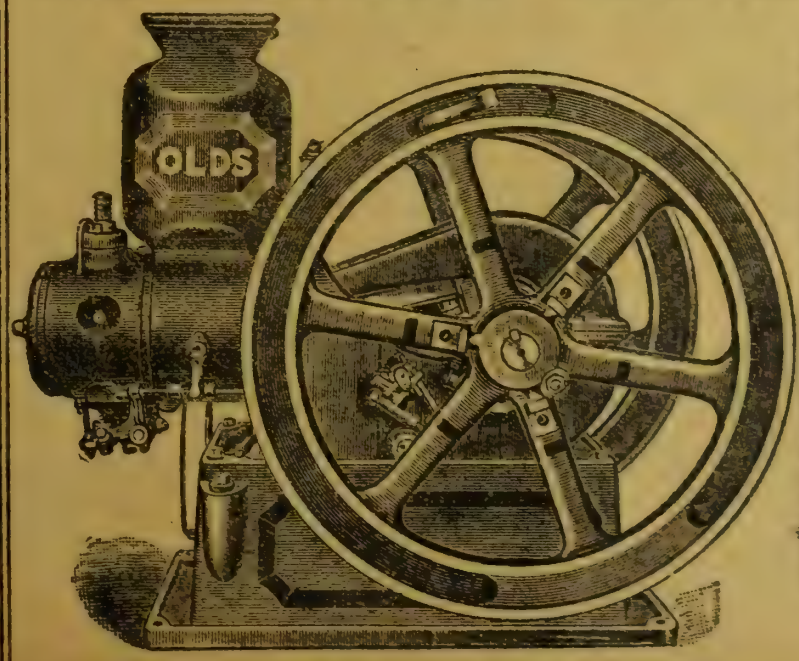
IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Compsny, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

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Halifax Prices.

Flour—$4.60 to $6.35; Beans—$2.30 to $2.45; Peas—$5.75 to $7.00; Oatmeal Standard, in bbls.—$6.15 to $6.25; Oatmeal Standard, in bags—$5.95 to $6.05; Rolled Oats, in bbls.—$5.60 to $5.70; Rolled Oats, in bags.—$5.40 to $5.50; Middlings—$27.50 to $28.50; Bran—$26.50 to $26.50; Shorts—$27.00 to $27.50; Feed Flour, bag 98 lbs.—$1.75 to $1.85; Cornmeal in barrels—$3.85 to $3.95; Cornmeal in bags—$1.85 to $1.90; Feed Oats, in bags—.55 to .57; Hay—$12.00 to $14.00.

Butter.—It is each day becoming more apparent that stocks of butter in the hands of Canadian dealers are none too large, and that the prospect for a supply of fresh made promises a sufficient quantity to meet future requirements. Holders, therefore are very confident in their ideas for the future of the market. Factory men are asking 27 to 28 cents f. o. b. for best creamery. The high prices may affect consumption of this grade to some extent, but even then there does not seem to be any prospect of a surplus. Very little dairy butter is offering at the present time, and what is coming forward is Provincial and not very good, and now that the cheese factories have closed down, we may expect supplies of dairy rolls from Ontario. This will relieve the situation somewhat.

Cheese.—The cheese market is very firm. Stocks are not large, and the dealers' needs are urgent. Last sales at Island cheese boards were made at an advance over the board price of the previous week. This completes the marketing of the different factories for the present year, and it is interesting to know that October make brought a higher price than September. September, strange to say was sold below the price of August. Usually, as our readers know, September is the most expensive and best cheese of the year, but the August market was extremely high this year and when grazing conditions improved in September, it affected the price of cheese for that month.

Eggs.—The price of eggs advanced very suddenly on Monday of this week, and dealers are now asking 28 to .30 cents, according to quality. The egg situation is abnormal, and it has been brought about by the disastrous effect of the drouth in Europe during the past summer. Germany and other countries have been compelled to look to Australia and New Zealand for a supply of farm products this winter, and the effect of this is felt in the general market prices elsewhere.

The following are Halifax jobbing prices to-day:

Creamery Prints—30cts. per lb.; Creamery Solids—29cts. per lb.; Dairy Solids—24cts. per lb.; Cheese, Twins—16cts. per lb.; Cheese, Large—15cts. per lb.; Eggs, Selected—28 to 30cts. per doz.; Fresh Eggs—27cts. per doz.

GREEN FRUITS AND VEGETABLES

There does not seem to be an unusually large supply of good quality apples locally, despite the large crop in the province this year; the market, however, is heavily supplied with poor stuff which has to be sent to auction.

Apples, Gravensteins—$1.50 to $2.50; Apples, Kings—$2.50 to $3.00; Apples Other Varieties—$1.50 to $2.50; Pears, native, half barrel—$2.00 to $3.00; Beets, per bbl.—$1.25; Carrots, per bbl.—$1.50; Potatoes, per bag—$1.75; Celery, per doz.—$1.35; Cabbage (native) each—.05 to.07; Native Squash—.01½.

FRESH MEATS AND POULTRY.

The supply of turkeys at present is poor and the trade are looking for stiff prices until after the end of the year. If any change, pork is easier. There seems to be a large supply of pork in the provinces, no doubt as a result of the high figures which have ruled for the past three years. Lamb is much easier, owing to large supply and very few foreign purchasers. Beef is holding its own, but the supply of very ordinary stock is almost too large, due to the fact that farmers are killing off animals that they do not wish to feed over winter. We quote Halifax jobbing prices as follows:

Fowls, per lb.—10 to 12 cents; Turkey, per lb.—20 cents; Chickens, per pair—.70 to $1.00; Ducks, per lb.—.15 to .18; Beef, per lb.—.09 to .10; Mutton, per lb.—.08; Veal, per lb.—.06½ to .07; Pork, per lb.—.07 to .07½; Lamb, per lb.—.08 to .09.

St. John Prices.

The market is well supplied with all kinds of produce. There is a move on foot to get the supply for the first winter boat. Mutton will be in demand after the first of the next week. Pork is easy at 7cts. Poultry is slow this week if the weather turns cool the prices will go higher. Good Butter is in demand at good prices. The provision market in general is fair. We are looking for good markets until the Christmas holidays

GRAIN—Buckwheat, $2.25 to $2.50.

LIVE STOCK—Milch Cows, $40.00 to $50.00.

DRESSED MEATS—Beef (carcass), .05 to.08; Beef (retail), .10 to .18; Mutton, .07; Veal, .09 to .10; Lamb, .09 to .10; Pork, .06½ to .07.

DAIRY PRODUCTS—Creamery Butter, .25 to .26; Dairy Butter, .24 to .25 Cheese, .14.

DAIRY AND POULTRY PRODUCTS—Eggs, .35 to .40, fresh; Fowl, .70 to .90; Ducks, $1.25 to $1.40; Geese, $1.10 to $1.40; Turkeys, .23 to .25.

FRUIT—Apples, $1.25 to $2.00.

MISCELLANEOUS—Hay, $10.00 to $12.00 ton; Straw, $8.00 ton; Wool, .14 to .21; Beef Hides, .11; Calf Skins, .16; Sheep Skins, .60 to .65; Lamb Skins, .60 to .65.

VEGETABLES—Carrots, 1.25 to $1.30; Potatoes, $1.75 to $2.00; Turnips, .80 to .90; Beets, $1.25 per bbl.

TAKE THIS BELT

AND BECOME

A MAN

All men cannot be MILLIONAIRES, but thousands of them could be much better off FINANCIALLY, SOCIALLY and in every other respect if they would guard their health. With VIGOROUS HEALTH—a body full of ELECTRICAL ENERGY—a man can make OPPORTUNITIES if he don't find them, but lacking in the COURAGE and SELF-ASSURANCE that is born of MANLY VIGOR, he is but a derelict—a vessel without mast or rudder—cast hither and thither by every storm of life that besets his pathway. GIVE ME A MAN that has exhausted his VITALITY—suffering from PAINS AND ACHES—MENTAL DEPRESSION—SLEEPLESSNESS—NERVOUS DEBILITY—without HOPE—AMBITION — COURAGE gone — drifting with the tide—and I can transform him into a STRONG MAN—A man of push—a man that will make his way in spite of all obstacles—if he has anything left to build upon, and he will follow my advice and use the DR. McLAUGHLIN ELECTRIC BELT as I direct. Save your tobacco money for a few weeks—cut out a few of your health-destroying, soul-destroying habits—procure one of these appliances—USE ELECTRICITY, and use it in the right way to invigorate your body, and you will look upon the day you gave your case to me as the TURNING POINT OF YOUR LIFE. Here is what some say of this remedy, who have used it:

Dear Sir,—I am perfectly satisfied with your Belt for what it has done for me. I am now a well man.

Yours, very truly,
HUGH McLEAN.
New Glasgow, N.S., Box 464.

Dear Sir,—I find your Belt all right for every kind of pain that is felt in the human body, and I have not missed a day with sickness since I got the Belt.

Yours very truly,
JAS. W. BARRIE.
Auld's Cove, N.S.

Dear Sir:—

Having received a Belt from you some years ago, I now desire to express myself in regard to the benefits, which I received from it. I wish to say in as few words as possible that it was all that it was represented to be, having cured me of Indigestion and other ailments, and I must say that I feel a new man, and I give all credit to Dr. McLaughlin's Electric Belt. I would advise any one suffering to give the Belt a trial, and I know they will feel as I do. Although I have been four years benefited without saying so to you, I have been doing all I could in my locality personally. So giving you the privilege of using this letter as you wish, and wishing your Belt every success, I remain,

Sincerely yours,
SAM J. HARNETT.
North Gower, Ont.

Any man or woman who will give me reasonable security, I will send them the Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED

Never mind waiting until you use the last dose of that bottle from the drug store. Begin now. Call and talk your case over with me or send for my book. It costs you nothing. For over 24 years I have taught the great truth that "ELECTRICITY IS LIFE," and have proved the soundness of my doctrine by making cures when others have failed time and again. Others have aspired to do the work I am doing with my ELECTRIC BELT. They offer you Electricity in some other form, or an "electric belt" that possesses no curative power whatever. They are like "boys on bladders" floundering in a sea of uncertainty—while to-day the DR. McLAUGHLIN ELECTRIC BELT stands the world over as the most correct—the most perfect—method of applying Galvanic Electricity to the body that has ever been devised. Call at once or send coupon for our FREE illustrated 80-page book, from which you can learn much that you want to know. Do it now.

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FLORICULTURE.

Correspondent, Hampton, N. B., writes:—

I was presented with a fine Heath plant, in bloom, last winter. It grew well during the Spring and I planted it out-of-doors during the Summer. When I dug it up and potted it this fall the leaves had all fallen off and it looked poorly. It does not show any signs of growth, although I keep it in a nice cool room where there is lots of sumlight. Please advise me what to do to revive it.

Ans:—The plant is a true Erica and your treatment of it, during the Summer, probably dried it out and thus killed it. "A dry heath is a dead heath," is an old saying among gardeners. I feel quite sure from your description that the plant is dead. You should not have allowed it to dry up.

A. W. wants to know how to grow her Calla Lily.

Ans:—The Calla Lily likes plenty of water and sunshine when growing. It should be planted in a cool, dry, shady position in May and remain dormant until the first of September, when it should be potted in new soil, watered and started into growth. Without such rest the plant will seldom bloom well. When the pot is crowded with roots it will be better for a heavy feeding with liquid manure. The Calla Lily is one of the few plants that should be watered through the saucer. The saucer should be kept full of water all the time.

The Harrisii or Easter Lily should be potted in a six or seven inch pot, the top of the bulb near the surface of the soil. Water sparingly until the pot fills with roots and top growth is established, when they will require much more water. Never let any lily, in active growth wholly dry. After blooming dry the bulbs off by gradually withdrawing the water. Keep the bulbs in a dry, cool place, without being disturbed until the fall when they may be shaken out of the old soil and repotted as before.

H. W., St. John, wants to know how to grow Smilax, bought from the editor of this column.

Ans:—Smilax likes a night temperature of about fifty-five degrees, shade and moisture on the foliage, and plenty of water when growing. It should be dried off so that it will become dormant during the Summer. After a two-months' rest the tubers should be divided and planted in fresh soil, watered and started into fresh growth again. It should have strings or some sort of trellis, on which to climb.

R. K., St. Stephen, N. B. writes:—

My Hyacinths have been in the cellar since the first of October. They are beginning to sprout and some of them are sending out bud stems, with only a few leaves. The top of the clump of buds is all covered with a blue mold and seems to be rotten. The roots are coming through the bottom of the pot. Should they be brought to the sunlight at once? If not, when? The cellar is quite cold and damp.

Ans:—By all means bring the bulbs to the light at once, if the roots are coming out of the bottom of the pot Do not give them the full sunlight at first but place them near a window until the leaves and bulbs have turned a glossy, dark green then give them full sunshine and water thoroughly. It is likely that the moldy tip of the flower stalk will rot and thus disfigure the flowers somewhat, but not necessarily spotting them.

All persons forcing Dutch bulbs should look carefully to them from now on and bring to the light as soon as rooted. It is not well to allow them to grow too much in the dark. If only fairly rooted, should they begin to grow too much, it is better to bring them to a light cool room. They will complete their root growth before the bloom begins to develop. Do not allow them to become dried out while in the sunshine.

H. A., Hampton, writes:—

What shall I do with my Hollyhocks. Last year I left them in the border and the ice seemed to rot them as there was nothing left in the Spring but some green pulp. I have a good lot of plants and do not know what to do with them. I notice some of the plants have young sprouts at the bottom of the flower stalks. Should these be taken off? When is the best time to plant Paeonies? What is the best lily bulb for fall planting.

Ans:—Hollyhocks, in beds where ice would form, should be dug up, planted in boxes and placed in a dark, cool cellar—a warm cellar will not do. Cut the flower stalks off about six inches from the top or crown. The young sprouts you mention are the beginning of growth for next year and unless they are present the roots are of no value. Hollyhocks often go blind this way so do not

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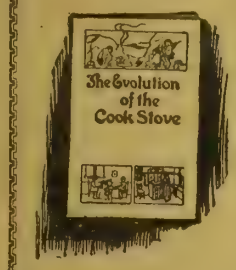
IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



"The Evolution of the Cook Stove"

TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of **tough, strong, malleable iron** and the **best blue polished steel**—materials which **will not warp, crack or break.**

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it **saves over 30% of fuel,** burning either wood or coal.

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A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. **If not convenient to pay cash we will arrange to accept your note.**

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

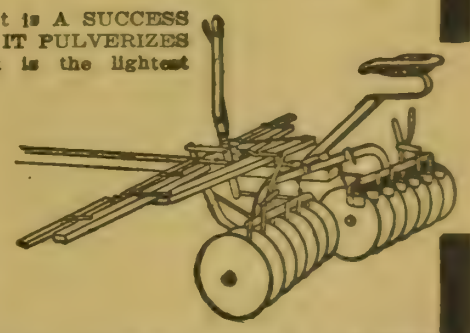
When writing it will be a distinct favor to us if you will mention this paper. 7

Prove the "BISSELL" by Its Work

Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.



Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept M for free catalogue.

60

T. E. Bissell Company, Limited, Elora, Ont.

Before cold weather comes

brighten up the rusty stove-pipes, grates, coal scuttles and metal work with Sherwin-Williams Stove Pipe and Iron Enamel. Makes old stove-pipes shine like new and keeps them from rusting. Easy to apply. Keep a can handy—ask the local agent.

48

SHERWIN-WILLIAMS PAINTS & VARNISHES

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

Advertise in the Maritime Farmer for results.

Had Palpitation of the Heart

Weakness and Choking Spells.

When the heart begins to beat irregularly, palpitate and throb, beats fast for a time, then so slow as to seem almost to stop, it causes great anxiety and alarm. When the heart does this many people are kept in a state of morbid fear of death, and become weak, worn and miserable.

To all such sufferers Milburn's Heart and Nerve Pills will give prompt and permanent relief.

Mrs. John J. Downey, New Glasgow, N.S., writes:—"Just a few lines to let you know what your Milburn's Heart and Nerve Pills have done for me. I was troubled with weakness and palpitation of the heart, would have severe choking spells, and could scarcely lie down at all. I tried many remedies, but got none to answer my case like your Pills. I can recommend them highly to all having heart or nerve troubles."

Price 50 cents per box, or 3 boxes for $1.25. For sale at all dealers or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

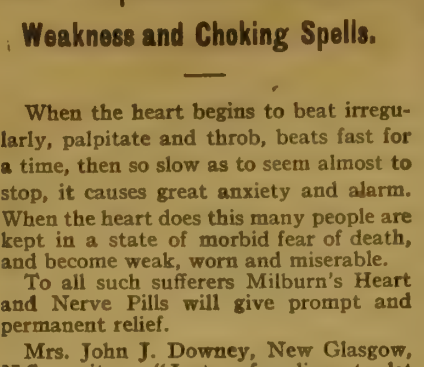
MAXWELL'S
HIGH SPEED
CHAMPION

has the largest opening of any washing machine. Practically the whole top opens up because the wringer attachment is on the side. No other washer washes clothes so quickly—so well—so easily. Tub made of Red Cypress—will last a lifetime. In every respect, the "Champion" is the champion of all washing machine.

If you want quality butter, use Maxwell's "Favorite" Churn.

DAVID MAXWELL & SONS,

St. Mary's Ont.



See large opening in tub. So easy to put in clothes.

90

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

bother with crowns that have no young plants in sight. Plant Paeonies any time now. This is far the best season of the year to transplant. Fairium Auratum is the best Lily. Bulbs may go into the ground any time now before the ground freezes too hard to cover them. ...

Plant Shrubs now, hardy Vines and trees later, if you do not want to wait until Spring.

Hardy plants that do well to plant now are the Sweet William, Larkspur, Forget-me-not, Fragrant Pinks, Foxglove and Canterbury Bells. You cannot beat the old fashioned flowers that come up year after year and can be so planted as to have flowers all through the season.

Inquirer, Wolfville, N. S., writes:—Do you consider that placing Moss on the top of a plant pot and thus covering the soil would injure the plant? I have a number of Chinese Sacred Lilies, some of them in bowls of water. They are growing well but the tips are turning black. Is this going to spoil the flowers, and if so, what shall I do to save them? I have had given me some bulbs, one the Jacobian Lily and two other small bulbs marked Atamasco. Are they for winter blooms and what color flowers do they bear? Should they be planted like other bulbs?

Ans:—Moss on the top of the soil in which a plant is growing is very objectionable for several reasons. First, it is very difficult to tell whether a plant is thoroughly watered, or not as the top of the pot may be quite moist while the bottom soil may be thoroughly dried out. Second, it is a great place to cultivate a crop of insects as it provides a hiding place for many of a very injurious nature. I do not think the blooming tips of the Giant Narcissus sprouts cause any damage to the blossoms. I have often noticed it but never saw any harm therefrom—be sure that plenty of water is kept in the bowls. The Jacobean Lily is a Summer bloomer and should be kept dry during the winter. The color of this Lily is a dark scarlet. A peculliarity of this Lily is that like the Hyacinth it can be forced in water. The Atamasco Lily produces waxey flowers of various colors. It is a winter bloomer and its habit of growth is similar to the Amaryllis.

Beet Top Poisoning.

As the beet digging season is now on, a word of caution is advisable on feeding the tops. Every fall the tops are used for feed and this is usually done by turning the animals into the fields after the beets have been hauled out. Also every fall reports come in of stock dying from eating the tops.

Death comes from two general causes: First, and probably most common, is the oxalic acid poisoning. Beet tops contain a considerable amount of this acid, and when a considerable quantity of tops is consumed, it is very likely to produce oxalic acid poisoning and death. Animals may die very quickly from paralysis of the geart, or they may show great depression and diarrhea and live for several days, or even recover.

grows on the beet tops and is more

The other cause is mold, which prevalent in damp weather. Anything moldy is dangerous as a food, but moldy tops and moldy beets are especially so. The tops that are dry, or nearly so, while they may not be so palatable, are really safer.

Feed in moderation. When in good condition, however, the tops save feed; but when given in too large quantities, or when moldy, they do a great deal of harm.—I. E. Newsom, Colorado Agricultural College.

Louis XV. Style 105

Compare This Piano With Others

YOU'LL choose the **Sherlock-Manning** Piano after comparing it, because you will then appreciate it's superfine quality. All it's goodness—(beauty, power of expression and a wonderfully sweet tone) is built into the **Sherlock-Manning** to stay.

This is the piano with the famous Otto Higel **Double Repeating Action**---tee piano in which Poehlmann Wire (the best piano wire made) is used exclusively---the piano with Wickest Felt Hammers. Let us explain to you more fully what these add to piano value. Ask us.

Don't take our word alone for **Sherlock-Manning** excellence. See for yourself or write for our latest catalogue. If you cannot visit the factory we will give you the adaress of a wareroom near your home.

If you do not know the **Sherlock-Manning** dealer near you, write us and we will gladly introduce him to you or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.

SHERLOCK-MANNING
PIANO & ORGAN CO.
LONDON, - - CANADA
(No Street Address Necessary)

ARNOTT INSTITUTE

The work of the ARNOTT INSTITUTE in treating Stammerers and Stutterers is becoming more and more widely recognized as perhaps the most successful on this continent.

Following our own scientific methods, the Institute treats the CAUSE of stammering—not the habit itself. It teaches the patient **why** he stammered, and once he understands that, it is comparatively easy for him to learn, in from five to eight weeks, how to speak fluently and naturally, without any of the objectionable mannerisms commonly taught. As he knows **why** he is speaking correctly, the cure is permanent.

If you know anyone who stammers or stutters, in kindness to them advise them to consult the ARNOTT INSTITUTE.

BERLIN, ONTARIO, CAN. 7

Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St. St. John

N. B. Fruit Growers' Annual Convention.

(Continued from page 72).

fruit. I mean the farmer who has a few trees and takes with a thankful heart such fruit as they may drop down to him every autumn. There are not many farms without a few apple trees growing as weeds in the hay field, or where the grass is growing as a weed in the orchard, I never could quite decide which, and it is not an uncommon thing to find a plot of 20 or 30 such trees without a single tree of hrafted fruit. The trees are seedlings transplanted from the wayside or elsewhere and set in orchard form to contribute what they may to the sustenance of man or beast. These same trees will occupy no more space as good fruit than they do at present, and may be easily and speedily transformed. This year I picked two barrels of excellent Astrachans from a tree which five years ago yielded about a barrel of worthless fruit, and I have some Mc Intosh Reds on exhibition here, grown on trees that a few years ago were a shapeless tangle with fruit of no value. Turn your trees to good varieties and take care of them, and just in the measure of your generosity of treatment they will yield you returns.

Our display of fruit in the rink this year must be a source of pleasure and pride to all who love good fruit and I trust that each succeeding year will find us advancing in all our methods until we attain a position among fruit growing sections which our natural advantages urge us to aim for.

Following the reading of the President's address, Mr. Tappan Adney, of Woodstock, took up an interesting discussion re Experimental Orchard word and elucidated, some of the "Why's" which are responsible for the fact that certain varieties of fruit thrive better in some sections than others.

Mr. A. G. Turney, the Provincial Horticulturist read the following Synopsis of a proposed System for giving futurity prizes to encourage more extensive and better orchards:

SYNOPSIS OF THE COMPETITION.

1. To properly direct and oversee in accordance with the principles of modern orchard practice the present extent of apple orchard planting in the province which planting, under the present lack of system and proper preparation is detrimental to the development of the orchard industry and is not productive of the financial results which the expenditure of time labor and capital under proper direction, should warrant.

2. To encourage the planting on our farms of orchards of a commercial size.

3. To eliminate the planting of undesirable varieties and to confine the setting of new orchards to fewer varieties of proved commercial quality and hardiness in New Brunswick.

4. To bring intending planters of apple orchards into touch with the Provincial Department of Agriculture and thereby assist them in the selection of proper soils, sites, varieties and nursery stock.

5. To strengthen and encourage the Fruit Growers' Association and thereby foster the adoption, so much to be desired, of co-operation between the fruit growers.

6. To develop generally the apple growing industry in the province.

It is proposed that the sum of 2000.00 together with interest accruing shall be offered in prizes for apple orchards planted in the province of New Brunswick and entered for competition in accordance with the rules and regulations given below; The amount to be subdivided as follows:—

A. $1000.00 to be offered as prizes or apple orchards of not less than two acres and not more than five acres as follows:
1st, 175; 2nd, $150; 3rd,$135; 4th, $120 5th, $105; 6th, $90; 7th, $75; 8th, $60; 9th, $50; 10th, $40.

B. $1000.00 to be offered as prizes for apple orchards of not less than six acres and not more than ten acres as follows:—
1st, $200; 2nd, $175; 3rd, $150; 4th, $125; 5th, $100; 6th, $75; 7th, $75; 8th, $50; 9th, $50.

It is proposed to obtain this money by setting aside the sum of $400.00 per year from the annual appropriation for the encouragement of horticulture in the years 1912, 1913, 1914, 1915 and 1916. The interest accruing upon these deposits to go either towards defraying the judging expenses or to be offered in the shape of small additional prizes.

RULES GOVERNING THE COMPETITION.

1. Individuals only shall be eligible to compete. Orchard and Land Development Companies are not eligible for competition.

2. Orchards to be eligible for competition must be planted in either 1912 or 1913.

3. No orchard shall be eligibe for competition unless its owner pays regularly for five years from the date of planting the annual membership fee of the New Brunswick Fruit Growers' Association of $1.00 and is a member of that Association in good standing during the said five years.

4. Owners of competing orchards must pay the membership fee of $1.00 to the New Brunswick Fruit Growers' Association for the four years after the year of the planting of the orchard when called upon to do so by the Secretary of the Association.

5. All entries must be accompanied by the membership fee of $1.00 for the New Brunswick Fruit Growers' Association except where the owner of the orchard to be entered in competition is already a bona-fide member of the Association for the year in which the orchard was or is to be planted.

6. Notice must be given to the Provincial Horticulturist at least two months in advance of the actual date of planting that it is the intention to plant an orchard and enter the same in the orchard competition.

7. Full particulars of competing orchards must be furnished to the Provincial Horticulturist on prepared entry forms provided for the purpose.

8. All orchards shall be judged in the sixth summer of their growth; orchards planted in the summer of 1912 shall be judged in the summer of 1917 and those planted in 1913 shall be judged in the summer of 1918.

9. At the conclusion of the judging in the summer of 1919 should the awards be in doubt between two or more orchards planted in different years, the judges before coming to their decision shall visit those orchards again which were previously judged in the summer of 1917 and between which orchards and those judged in 1918 there is a doubt as to which is best.

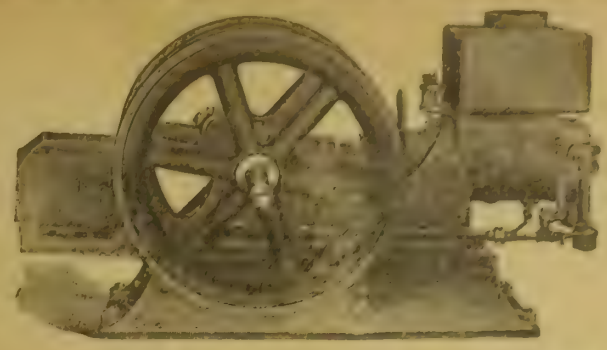
10. The judge shall consist of the Horticulturist of the Provincial Department of Agriculture and two other men to be sudsequently selected by the executive of the New Brunswick Fruit Growers' Association.

11. Owners of competing orchards must furnish the judges with all desired information but shall not attempt to interfere with or bias the judges in arriving at their decision.

12. The orchards shall be judged primarily according to the score card decided upon by the executive of the New Brunswick Fruit Growers' Association after consultation with various horticultural authorities.

Messrs. S. L. Peters and J. B. Dag-

(Continued on page 100).



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

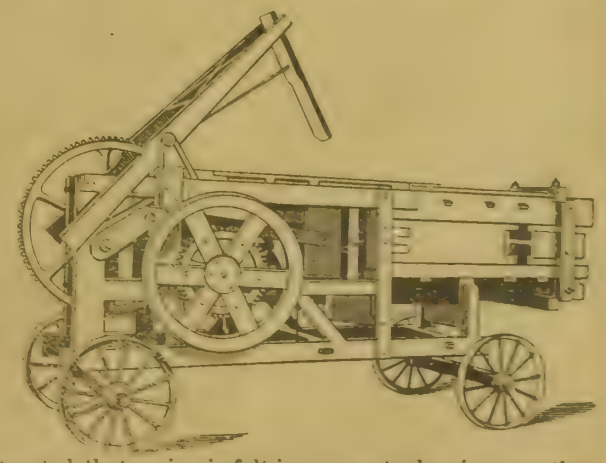
Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Improved Trenholm Gear Hay press

Operated With Gasoline Engine or Tread Power.
The More Power The More Work.



Note the strong, heavy frame built of the best quality of well seasoned hardwood. The heavy balance wheel weighing over 500lbs. The heavy cog wheel weighing over 500 lbs. Thesidesprings made of the best quality of spring steel. The bale box is steel lined and the whole machine so powerfully constructed that no jar is felt in any part when in operation.

This is now the season for Wood Cutters, we manufacture them in three different sizes; Long Swing, Short Swing and Flat Roller Table.

In Farmer's Feed Boilers we make the Star with steel frame and cast culdron in three sizes and the All Cast in two sizes.

We can fill your orders at quick notice. Get our catalogue and prices at once.

THE SUSSEX MANUFACTURING CO. LTD., SUSSEX, N. B.

When writing advertisers mention the Maritime Farmer.

Growing the Montreal Melon for Market.

(Continued from page 71.)

is the greatest enemy af all melons. If pots or berry boxes are used the roots are disturbed very little in the transplanting. Careful watering and perhaps shading is necessary for a few days until the plants are established. Frequent shallow cultivation is neeessary. The roots are near the surface and must not be disturbed.

About the first of June we commence to harden the plants. This is done by careful manipulation of the sash and by lifting the frames. This is done by placing bricks under them. Very soon the vines commence to creep out from under the frames and then the fruit should set quickly.

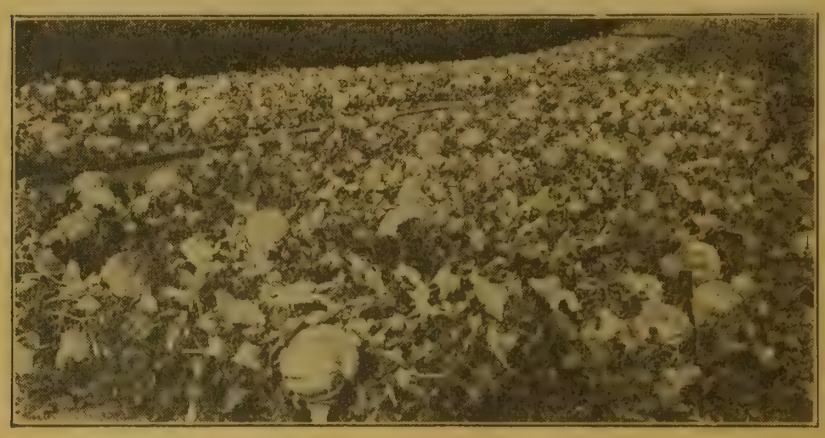
ve ry soon the sash and frames are entirely and permanently removed. This year we did it about the middle of June, but it is often necessary to let glass remain until the first of July.

As soon as the melons have become the size of cocoanuts they mnst be turned from day to day that every side may be equally ripened. Even with the gieatest care the flavor of one side is often better than the other. They must be kept from the ground too, for the ground induces rot and impairs the flavor. For this purpose stones are often used; inverted berry boxes answer very well; but what we believe is better than either is straw matting cut 1 inch x 1 inch or less. This keeps the fruit effectually from the ground, holds no water and ss cheap.

The productiveness of the plant is amazing. Some growers sell $2000 or more of fruit per acre. It must not be forgotten that the expense of growing is very great. In addition to other expenses, the plants must be watered in a dry time.

The basket is the common package used in the marketing of this fruit. It is expensive and not altogether desirable, yet on the Montreal market it is everywhere in evidence.

The crate was used at Macdonald this year and was found very satisfactory. They are of necessity very large and strong.



Melons at Macdonald---Some Idea of Their Productivness may here be Obtained

Melons, in common with other plants have many enemies. First there is the striped cucumber bettle. They are known and feared in every locality. Many repelants are recommended but I have not found any method entirely satisfactory. They also help to spread Melon wilt, a bacterial, desease very destructive and decidedly hard to cure. Plants attacked with the wilt show a sudden flagging without any apparent cause.

Montreal Melon Basket.

We found it necessary to pull out and destroy every plant showing wilt and the disease did not spread. Bacillus Melonis, another bacterial disease, cansing soft rot of the fruit visited our plantation but did little damage. What did gaeater damage was the red spider. It thrives best in dry, hot weather. We had our share of both insects and heat. It can be quite readily controlled by spraying with cold water. It must be done frequently and thoroughly. The melon louse is troublesome in some sections but has not given us trouble. It is a large green aphid, which may be controlled by soapy washes or kerosene emulsion.

We have outlined the usual method of growing tho Montreal Melon. There are other ways of doing it which necessitate less labor, give excellent fruit before frost, but the market does not demand it then, as it does during the heat of July and August. It is the man who beats his neighbour in time, who wins the golden prize in Melon growing.—E. M. Straight, McDonald College, Montreal.

FELL FROM A HAY LOFT

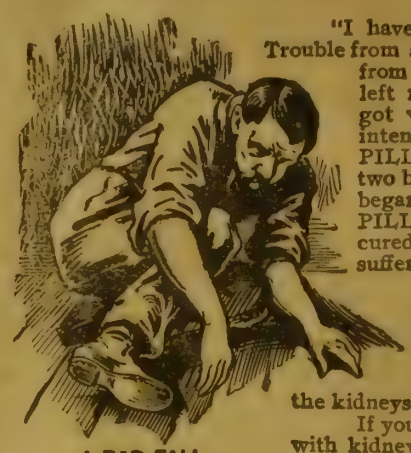
Suffered Tortures With His Kidneys Until He Tried Gin Pills

You might think that Mr. Baker needed a surgeon more than GIN PILLS. But there were no bones broken. His back was strained, which was harder to cure because nothing seemed to do any good. It is the same with a sprained ankle and broken leg. You can set the fracture and it will be well in six weeks—but the sprain may take months to get well.

However, Mr. Baker found the quick way to get relief from the pain—here are his own words.

AULTSVILLE, ONT.

"I have been a great sufferer from Kidney Trouble from an injury to my back caused by falling from a hay loft about six years ago. This left my kidneys weak, so that every cold I got would settle in my kidneys and cause intense suffering. I was advised to try GIN PILLS. I found, to my surprise, after taking two boxes, that the pains were relieved and I began to feel better. I am still taking GIN PILLS and feel sure I will be completely cured. I recommend GIN PILLS to all who suffer from any Kidney Trouble". C. BAKER.



A BAD FALL

You see, the fall had strained the kidneys and they were affected by the slightest chill. GIN PILLS immediately strengthened the kidneys—soothed any irritation and thus enabled the kidneys to overcome the effects of the fall.

If you are having pain in the back—or trouble with kidneys or bladder through accident or overwork—do just as Mr. Baker did—take GIN PILLS. They will help you—cure you—or we will promptly refund your money Buy six boxes at your dealer's. If, after taking them, you feel that Gin Pills have not helped you, return the empty boxes and get your money. We will take your word for it. 50c. a box, 6 for $2.50. Sample box sent free if you write National Drug and Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS regulate the bowels and cure Constipation, Biliousness and Indigestion. 25c. a box. 111

An excellent "Buy"

the preferred stock of a big, prosperous, expanding business concern—a concern controlling Natural Rosources which are bound to double the value of its securities before long.

This preferred stock is cumulative, profit-sharing—the 7 per cent. dividend payable twice annually.

You can resell this stock to us or the company, at par, plus 7 per cent, one year from the date of your investment.

Because the block we now control is limited you'd best write to-day for particulars.

NATIONAL SECURITIES CORPORATION, LIMITED

Confederation Life Bldg., TORONTO 303 Board of Trade Bldg., MONTREAL

Cuts, Bruises, Stiff Joints, Swellings, Sore Throat, Colds, Bowel Troubles—both outward and inward ailments are cured by

A Proud Record. 101 Years in Use. Millions of Cures.

JOHNSON'S ANODYNE Liniment

PARSONS' PILLS regulate the bowels without distressing.

Be prepared for emergencies. No other liniment so effective, no other has such a record. Sold by dealers everywhere.

25c and 50c Bottles.

I. S. JOHNSON & CO., Boston, Mass.

The Late William Robertson.

The many friends of William Robertson, who for the past seventeen years has been the head herdsman on the well known stock farm of W. W. Black, Amherst, will learn with regret the news of his death, which occurred on Sunday morning, October 29th. The deceased was born in Scotland, but came to Canada when a young lad and for some years resided in Ontario, coming to Amherst as previously stated about seventeen years ago. A little over a month ago he was taken seriously ill with appendicitis, complications following, the necessary operation set in, which resulted in his death. He is survived by his wife and five children.

For the past fifteen years, the late Mr. Robertson has been a prominent figure at all the important exhibitions in the Maritime Provinces and more than once during that time he has led W. W. Black's magnificent herd to the coveted positions at Canada'a national exhibition at Toronto. Although of a quiet, modest, retiring disposition, the deceased was

After the Victory.

The Late Wm. Robertson posing one of his favorite prize winning steers at the Maritime Winter Fair.

in all respects a public spirited citizen and in his own unassuming way did much to advance agricultural and livestock interests in these provinces. A few years ago he read a paper to the Nova Scotia Farmers' Association on beef raising which was one of the most valuable contributions ever submitted to this gathering. He gave frankly and freely from his abundant store of knowledge and often by kindly words and keen oversight encouraged young exhibitors to greater efforts and ultimate success in the show ring. As a breeder and feeder of livestock he had no peer in these provinces and as an all round judge of animals few equals. Ever since the organization of the Maritime Winter Fair, he has been a prominent figure at these shows. He loved a keen contest and was always the first to extend the glad hand to the man who made him take second place. He was a friend of every lover of livestock in the Maritime Provinces and in many other parts of Canada. They all knew William Robertson and he won the respect and esteem of all, to each of them his untimely death is a personal loss. The livestock industry throughout these provinces has lost a great benefactor and his family a kind husband and loving father.

Prize Winners of the N. B. Fruit Show.

(Continued from page 75).

Apples, (3 varieties) won by J. C. Gilman & Son, Fredericton.

Special Premiums offered by St John Business Firms.

Best Two Boxes:

McINTOSH RED:—1, J. C. Gilman & Son, Fredericton; 2, I. W. Stephenson, Sheffield.

FAMEUSE:—1, St. John Valley Fruit Co., Burton; 2, J. C. Gilman & Son, Fredericton.

RIBSTON:—1, S. L. Peters, Queenstown.

DUDLEY:—1, T. Adney, Upper Woodstock; 2, St. John Valley Fruit Co., Burton.

GOLDEN RUSSET:—1, J. C. Gilman & Son, Fredericton.

BISHOP PIPPIN:—1, W. P. & F. L. Fox, Lower Gagetown; 2, S. L. Peters, Queenstown.

BETHEL:—1, B, Charters, Chartersville.

WEALTHY:—1, J. C. Gilman & Son, Fredericton; 2, St. John Valley Fruit Co., Burton.

MILDING:—1, J. C. Gilman & Son, Fredericton.

ANY OTHER VARIETY:—1, T. Adney, Upper Woodstock; 2, J. C. Gilman & Son, Fredericton.

Best Cone of Apples.

WEALTHY:—1, J. C. Gilman & Son, Fredericton; 2, G. W. Clark, Maugerville.

DUDLEY:—1, I. W. Stephenson, Sheffield.

ALEXANDER:—1, G. W. Clark, Maugerville; 2, J. C. Gilman & Son, Fredericton.

FAMEUSE:—1, W. A. Colpitts, Mapleton; 2, G. W. Clark, Maugerville.

McINTOSH RED:—1, G. W. Clark, Maugerville; 2, J. C. Gilman & Son, Fredericton.

WOLFE RIVER:—1, H. Orchard, White's Cove' 2, S. L. Peters, Queenstown.

Best 10 Plates Apples.

McINTOSH RED:—1, J. C. Gilman & Son, Fredericton; 2, I. W. Stephenson, Sheffield.

FAMEUSE:—1, J. C. Gilman & Son, Fredericton; 2, St. John Valley Fruit Co., Burton.

DUDLEY:—1, I. W. Stephenson, Sheffield.

Best Barrel Winter Apples offered by W. H. Thorne, Esq.

1, Geo. MacAlpine, Lower Gagetown; 2, H. Orchard, White's Cove.

Best Box Apples, offered by the Maritime Farmer, St. John.

1, Geo. MacAline, Lower Gagetown; 2, J. C. Gilman & Son, Fredericton. 3, W. P. & F. L. Fox, Lower Gagetown.

Best Exhibition of Apples. Prize of a No. 1 Perfect Spray Pump offered by R. B. Westhaver, Mahone Bay, N. S.:—1, B. F. Peters, Queenstown.

Best Collection of 5 export varieties, 1 plate of each, offered by Niagara Spray Co., Kentville, N. S.

1, J. C. Gilman & Son, Fredericton; 2, G. W. Clark, Maugerville.

ALBERT CO. SPECIALS.

Best Barrel Winter Apples, 1, W. A. Colpitts, Mapleton.

Box Bishop Pippin:—1, W. A. Colpitts.

Box Wealthy:—1, W. A. Colpitts.

Box Fameuse:—1, W. A. Colpitts.

Box Alexander:—1, W. A. Colpitts.

WESTMORLAND CO. SPECIALS.

ST. JOHN CO. SPECIALS.

25 Plates, 8 varieties:—1, W. R. Mc Fate, Golden Grove.

CHARLOTTE CO. SPECIALS.

Box McIntosh:—1, C. N. Vroom, St. Stephen.

Box Kings:—1, E. Martin, Deer Island.

KINGS CO. SPECIALS.

Box Dudley, Wealthy or Alexander:—1, H. Smith, Long Reach; 2, A. R. Gorham, Grey's Mills; 3, A. H. Fairweather, Hampton.

Barrel Winter Apples:—1, H. Smith Long Reach; 2, A. R. Gorham, Grey's Mills.

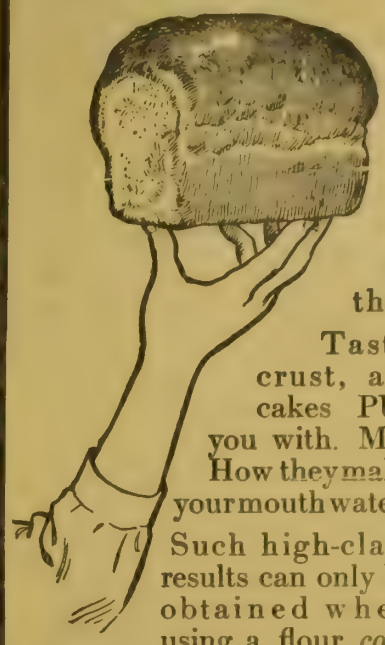
SUNBURY CO. SPECIALS.

Best Exhibit Apples:—1, G. W. Clark, Maugerville; 2, I. W. Stephenson, Sheffield.

Special Prize for Best Seedling Apples:—1, T. Adney, Upper Woodstock; 2, F. W. Short, Brown's Flats.

Be Fair. Buy a sack or barrel before judging PURITY FLOUR

SOME people have attempted to judge PURITY FLOUR before knowing the facts about it—before using it. So we ask you to be fair and to buy a sack or barrel of PURITY FLOUR and give it a thorough try-out before attempting to arrive at a judgment.



Look at the beauty and loftiness of the golden-crusted, snowy-crumbed loaves, fit for a king. Count them and see how many more of them PURITY yields to the barrel than ordinary flour does.

Taste the creamy, flaky pie crust, and the deliciously light cakes PURITY FLOUR rewards you with. My! How they make your mouth water!

Such high-class results can only be obtained when using a flour *consisting exclusively* of the *high-grade portions* of the *best Western hard wheat berries.*

And remember, that, on account of its *extra* strength and *extra* quality, PURITY FLOUR requires *more* water when making bread and *more* shortening when making pastry, than you are accustomed to use with ordinary flour.

PURITY FLOUR

"More bread and better bread"

Buy a bag or barrel of PURITY FLOUR. Test it for a week. Then pass judgment.

Add PURITY FLOUR to the grocery list right now.

105

N. B. Fruit Growers' Annual Convention

(Continued from page 97).

gett, strongly endorsed the idea and moved a resolution to the effect that the suggestion offered in Mr. Turney's Synopsis be referred to the Provincial Department of Agriculture for their support and that the arranging of details in connection with its enactment be left with the Department of Agriculture and the Executive of the Association.

Mr. Henry Wilmot, Treasurer of the Association read his report showing: Receipts $976.90; disbursements $927.76.

The matter of defining a standard size for No. 1 and No. 2 grades in the different varieties of apples was discussed by Tappan Adney and others. The question was referred to a Committee consisting of Messrs. Adney, Turney and Flewelling for future report.

THE FRUIT GROWERS' BANQUET was held on Tuesday evening, in the New Victoria Hotel, where upwards of sixty members and guests sat down to a bountiful repast, after which they listened until the wee sma' hours to toasts optimistically and eloquently responded to by W. Frank Hatheway, M. P. P., A. R. Slipp, M. P. P., Hon. Robert Maxwell, M. P. P., W. W. Hubbard, S. L. Peters, T. H. Estabrooks, President of the Board of Trade, Prof. Macoun, Dominion Horticulturist, Prof. W. S. Blair, Prof. P. J. Shaw, Dr. E. S. Kirkpatrick, formerly Trade Commissioner to Cuba, Wm. Gilman, A. G. Turney, Tappan Adney and C. N. Vroom.

ON WEDNESDAY.

The Fruit Growers' Association held three sessions on Wednesday, at all of which there was a good attendance. At the morning session there was a discussion on the question of having a standard size for No. 1 and No. 2 grade of apples in the various varieties, and an address by Professor Blair of Macdonald College on the planting and care of orchards. At the afternoon session there was an address by Prof. Macoun, Dominion horticulturist, on the question of selecting varieties suitable to conditions in the province, followed by a discussion on spraying. At the evening session Prof. Shaw of the Agricultural College at Truro, N. S., gave an interesting account of orcharding in the sister province, and an instructive discussion followed.

FRUIT MEN ASK FOR EXPERIMENTAL FARM.

A feature of the evening session was the introduction of the following resolution, moved by W. B. Gilman, seconded by J. W. Clark, which was carried unanimously.

"Whereas, it is of great importance to the development of fruit growing in the province that we should have greater and more definite information on the suitability of varieties, cultural methods and many points of orchard practice, such as can only be obtained by scientific investigation in the province; therefore be it resolved,

"That this Association request the Dominion Minister of Agriculture to establish as soon as possible under his department an experimental farm at some point in New Brunswick, typical of average provincial conditions, and that a copy of this resolution be sent to the Federal Minister of Agriculture."

PRACTICAL ASSISTANCE TO FARMERS.

The following resolution, introduced by Mr. Jas. Gilchrist was carried by an unanimous vote:

"In the opinion of this Fruit Growers' Association, the Department of Agriculture could render very great assistance to the fruit industry of this province, and farmers in general, by supplying sufficient horticulturists, at the proper season, to prune, graft and spray and give instructions generally. Farmers to care for such assistant, after his arrival in their respective localities, without cost to the department, and to pay such fee as may be fixed by the department from time to time."

OFFICERS ELECTED.

President—C. N. Vroom, St. Stephen.

Vice-president—S. L. Peters, Queenstown.

Secretary—A. G. Turney, Fredericton.

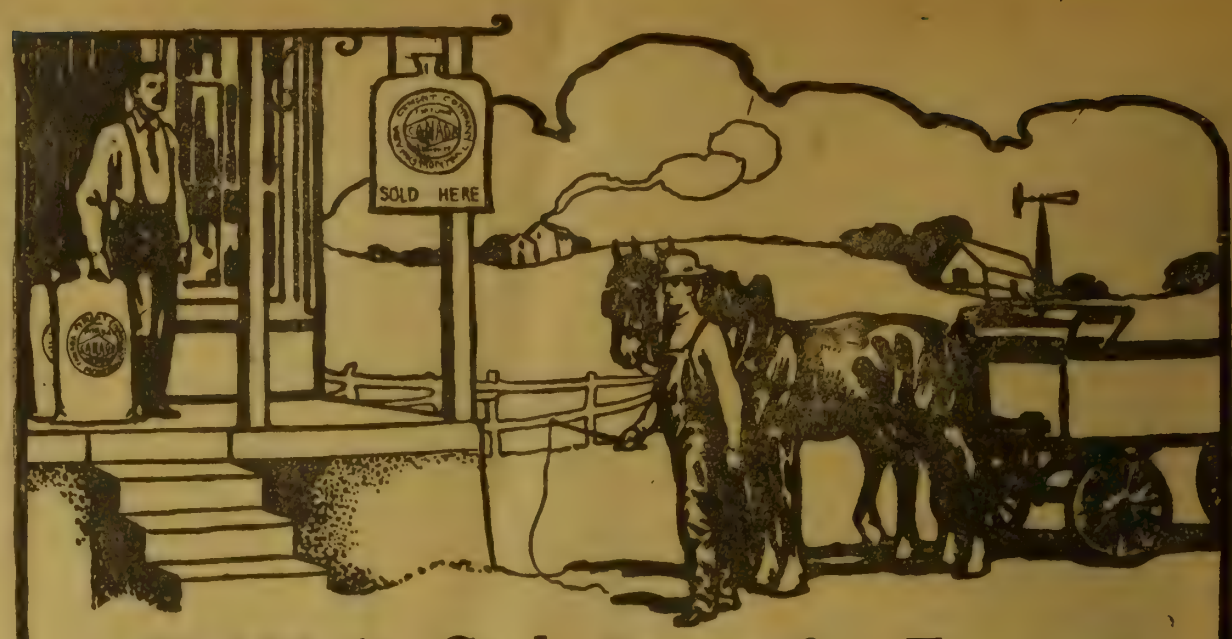
Treasurer—H. Wilmot, Oromocto.

County Directors:

Albert—W. A. Colpitts.
Carleton—Tappan Adney.
Charlotte—G. E. Martin.
Kings—N. W. Eveleigh.
Queens—W. P. Fox.
Northumberland—G. E. Fisher.
St. John—W. B. McFate.
Sunbury—J. W. Clark.
Westmorland—Benj. Charters.
York—W. B. Gilman.
Gloucester—B. J. Power.
Kent—H. W. B. Smith.
Restigouche—James E. Stewart.
Victoria—Donald Fraser, jr.

THURSDAY MORNING.

A demonstration in the proper system of the box packing of apples was given on Thursday morning after which the members of the Association went back to their farms and orchards resolved to do better in the future than they have ever done in the past.



$3,600 in Cash Prizes for Farmers

WHEN you enter the Canada Cement Prize Contest, your dealer will assist you. Consult him in reference to conditions of the contest. Refer all questions of doubt to him to decide. Confer with him when his experience and advice and his knowledge of our plan would seem helpful.

Don't hesitate about doing this. We have requested him to assist to the best of his ability any farmer in his locality competing in this contest—whether it's a matter involving the application of cement, or how to go about winning one of the prizes offered in this contest. Do you realize that you have as good a chance as the next man to win one of these prizes? There are four for each Province, as follows:

PRIZE "A"—$100.00 to be given to the farmer in each Province who will use during 1911, the greatest number of bags of "CANADA" Cement. PRIZE "B"—$100.00 to be given to the farmer in each Province who in 1911 uses "CANADA" Cement on his farm for the greatest number of purposes. PRIZE "C"—$100.00 to be given to the farmer in each Province who furnishes us with photograph showing the best of any particular kind of work done on his farm during 1911 with "CANADA" Cement. PRIZE "D"—$100.00 to be given to the farmer in each Province who submits the best and most complete description of how any particular piece of work shown by accompanying photograph, was done.

Contest will close on November 16th, 1911, and as soon as possible thereafter, prizes will be awarded.

Be sure and get a copy of our Contest Circular, telling all about the contest. Ask your dealer for one or use the attached coupon, if you find it more convenient.

In writing us, mention whether you have received your copy of "What the Farmer Can Do With Concrete," a profusely-illustrated 160-page book, which tells you how to build with concrete, so that you can do much of the work yourself. It's a mighty handy and useful book, and should save you many a dollar. Farmers who have received it, say it is splendid. Write to-night and it will go back to you with Prize Contest Folder, by return mail.

Please send Circular and Book.

Name.....

Address.....

Canada Cement Company, Limited, Montreal

Do You Shave Yourself?

If so, you no doubt have shaving troubles, as there isn't one man in fifty who knows how to strop his razor correctly, the almost invariable result is a rounded edge instead of a keen, sharp edge so necessary to a clean satisfactory shave.

MAIL ORDERS FILLED

BRANDT'S AUTOMATIC RAZOR STROPPER

"Makes every man an Expert." Does what no human hand can do.

It automatically sharpens the ordinary old style razor any size or make, and all kinds of safety razor blades including the Gillette, Ever-Ready, Durham-Duplex, Keen-Kutter, Enders, etc. It sharpens them better than the most expert barber can do it. In using the Brandt Automatic Stropper, you do not hold the razor while stropping. You cannot round your edge or cut your strop. The Brandt Automatic Stropper strops the razor for you. It requires no skill or experience. We invite any man who shaves himself to call at our store, and examine this celebrated stropper, and see how it does away with all stropping troubles.

SOLD AND ADVERTISED EVERYWHERE AT 3.50 **OUR PRICE $2.50 EACH**

Canadian Specialty Company,

P. O. Box 228 154 Prince William Street, SAINT JOHN, N.B.

MARKETS.

Market Review.

Seeds of all kinds will be scarce and high next spring. This is particularly true of clover and grass seeds. Present indications point to first-class red clover seed retailing at seed time at about 25 cents per pound; Alsike at round 20 cents per pound, and timothy at 18 cents to 20 cents. Alfalfa seed will probably sell for about 17 or 18 cents per pound and farmers who have their soil in good shape and who have been successful in growing Alfalfa on a limited scale will probably sow it more extensively next year. The present high prices are the result of the general scarcity not only in Canada but in the United States and Continental Europe as well. The English crop seems to be better than the European Continental crop and if it turns out fairly well the above prices may be some what modified.

The scarcity of seed is not confined to clover and grass seed. It will apply to all classes of grain as well, as so much of this year's crop was too light to serve for purposes of reproduction.

Hogs—Toronto, $6.75; Montreal, $6.60; Buffalo, $6.25.

Cattle—Toronto, $6.50; Montreal, $5.90; Buffalo, $9.00.

Lambs—Toronto, $5.40; Montreal, $5.50; Buffalo, $5.25.

Butter—Toronto, 27c.; Montreal, 27½c.; New York, 33½c.

Eggs—Toronto, 33c.; Montreal, 28c.; New York, 55c.

One or two explanations are necessary in dealing with the above table of comparative prices. The prices quoted for butter and eggs in Toronto are those prices which dealers are actually paying for produce shipped in, while the prices quoted for butter and eggs in New York are those at which commission houses sell produce and the commission charges must, of course be deducted therefrom. Even with full allowance for this it will be noticed that the New York price is very much above the Toronto level. Hogs are higher in Toronto and Montreal than in Buffalo.

HAY AND STRAW.

Hay is selling in Toronto at $18 to $22, and clover and mixed hay at $14 to $16. In New York prime hay is quoted at $1.35 per cwt., No. 1, $1.30 and No. 2, $1.20 to $1.25. Clover, mixed, $1.00. Straw is selling in Toronto for from $7.00 to $8.00, in the loose state to $15.50 and $16.50, baled. In St. John and Montreal loose straw is selling at $7.50 per ton. Baled, No. 1 hay is selling in St. John for $13.00 to $15.50, while the lowest figure in Montreal is $14.00. No. 2, hay ranges from $12 to $14.50. The highest figure for the same quality in Montreal is $14.00.

Clover Seed Crop.

The latese reports from the alsike districts of Ontario indicate that the quantity of seed produced this year will not exceed 50 per cent., or, at most, 55 per cent. of a normal crop. The general quality is inferior and in many cases is mixed with a proportion of white clover. The high prices offered for good quality red clover seed have induced farmers to gather seed from fields that would not be considered worth cutting under normal conditions. The red clover heads, wherever found are well filled with seed, and the yields per ton promise to be large. The estimate of the Dominion Seed Commissioner is that there will be 25 per cent. of a normal crop.

Large areas of timothy seed have been saved for seed in Eastern Canada. While a good deal of this seed caanot be made to grade No. 1, the greater part of it will be available for the retail trade. The very high price for timothy seed is due largely to a shortage in the seed producing centres which supply the Chicago market. Nine dollars per bushel for timothy seed is a price that few farmers can recall and their purchases this year are not likely to be very extensive. A great deal of perennial rye grass and orchard grass will doubtless be used to supplement timothy.

New Brunswick Potatoes For Cuba.

The indications are that the trade in New Brunswick potatoes with Cuba this year will be better than in previous seasons. The crop has been good, and the very favorable reputation which the New Brunswick article has attained in the Cuban market indicates that there will be an even heavier demand for them this winter than last year. Mr. Nelson Robertson of the firm of Stewart & Robertson, of Havana, was in the city this week, and he said that the New Brunswick potato was in a fair way to capture the great bulk of the Cuban business. If there is not a better trade this year than formerly it will be largely the fault of the steamship service which interferes with the success of the New Brunswick shipper. It is stated that a rate from Boston to Cuba can be obtained cheaper than from St. John to Cuba, and this places the Maine potato shipper who ships through Boston at an advantage over the New Brunswick shipper shipping through this port.

Charlottetown Prices.

GRAIN.

Oats, White, 40c. to 41c.; Black, 42c. to 44c.

FEEDSTUFFS

Bran, $27.00 to $29.00 per ton; Shorts, $28.50 to $30.00 per ton; Middlings, $29.00 to $30.00; Oil-cake, $2.25 to $2.60; Corn Meal, $1.85 to $1.95.

GRASS SEEDS

Timothy, 15c. lb.

LIVE STOCK

Butcher's Cattle, 5½c. to 8c. dressed weight; Stockers, $18 to $28.00; Milch Cows, $24 to $40.00; Sheep, live weight, 3c. lb.; Lambs, 3½c. to 3¾c.

DRESSED MEATS

Beef (carcass), 6c. to 9c.; Beef (retail), 8c. to 14c.; Mutton (retail), 8c. to 12c.; Mutton (carcass), 6¾c. to 8c.; Lamb (retail), 10c. to 12c.; Lamb (carcass), 7½c. to 8½c.; Pork (carcass) 6c. to 7½c.

HORSES

Drafters, $125 to $200.

DAIRY PRODUCTS

Creamery Butter, Solids 27c., Prints 28c.; Dairy Butter, tub, 20c. to 22c.; prints 22c. to 25c.; Cheese, 14½c.

POULTRY AND POULTRY PRODUCTS.

Eggs, 23c.; Fowl, 8c.; Chickens, 9c. to 11c.; Ducks, 12c.; Geese, 10c. to 12c.; Turkeys, none.

FRUIT

Apples, $2.00 to $3.50.

VEGETABLES

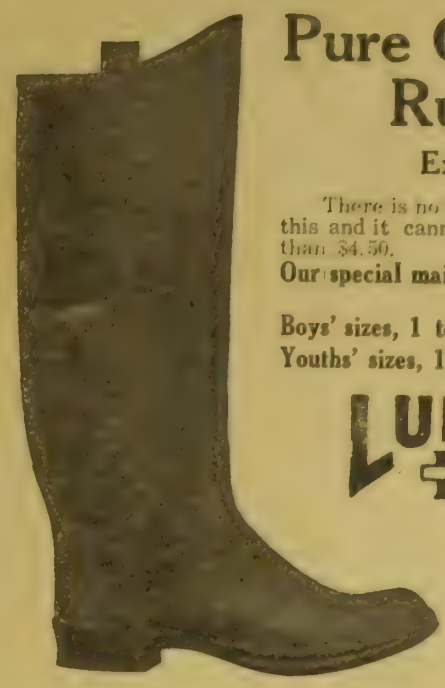
Carrots, 40c. per bushel; Potatoes, 30c. to 36c. per bushel; Turnips, 12c. to 14c. per bushel; Beets, 40c. per bushel; Parsnips, $1.00 per 100 lbs.; Cabbage, 50c. to 60c. per 100 lbs.

MISCELLANEOUS

Hay, $11.50 to $12.00 per ton; Straw, $5.00 to $6.00 per ton; Wool, 22c. to 23c. lb.; Beef Hides, 10c. lb.; Calf Skins, 14c. lb.; Sheep Skins, 50c. to 60c. each; Lamb Skins, 50c. to 60c. each; Oysters, $4.50 to $5.50 per bbl.

Market prices since last report has varied considerably, but on the whole prices are higher. Large quantities of potatoes have been shipped to Montreal and this has resulted in a good demand at fairly high prices, but just as we write the demand for shipping by sail is about over as shippers are not willing to take the risk of frost consequently market is easier, and demand not so good with result that prices are lower than a short time ago. Sydney market is slightly oversupplied and demand for shipment there is not so good as it was. Other vegetables have been in good demand at prices quoted except cabbage which seems to have been in larger supply than the markets we have could handle them and the demand for this line has been slow. Dressed Meats and Poultry are lower than a year ago. This is more particularly true with respect to lamb and mutton, but pork is also lower than last season, and it looks as if lamb and mutton at present prices should be good value. Oats are scarce and prices are firm and round lots might bring even higher prices than figures given. Hay in the immediate vicinity of the town is also a limited supply, and what is being shipped from here

BARGAINS!!



Pure Gum Rubber Boots

Extra Special

There is no better rubber boot made than this and it cannot be bought elsewhere less than $4.50.

Our special mail order price, . . . **$3.45**
Sizes 6 to 11.

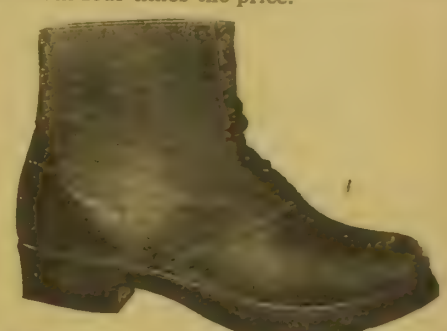
Boys' sizes, 1 to 5, for **$2.65**

Youths' sizes, 11, 12, 13 only, . **$1.98**

LUMBERSOLE BOOTS

Made of fine Grain Kip uppers lined with thick brown felt, as the name suggests the soles are made of wood, which keeps the feet dry and warm. FROST PROOF AND WATER PROOF.

For Farmers, Drivers, Fishermen, Builders, Dairymen, Sailors and all out door workmen, they are worth four times the price.



No. 2C. Men's 2 Buckle Lumbersole, Brown Felt Lining, sizes 5 to 11, at $1.75

No. 34 1-2C. Laced with one Buckle, unlined, Lumbersole, cut from selected Grain Kip skins $1.98

No. 12C Men's Grain Kip Laced Lumbersole Boot. Whith Felt Lining, sizes 5 to 11, at $2.25

No. 14C. Men's Leg Boots, Lumbersole, Brown Felt Lining. We guarantee all feet warm and dry with our Lumbersole Boots no matter how low the temperature. A great boot for deep snow . . $2.95

No. 4C Men's Grain Kip 3 Buckle, high cut Lumbersole, Brown felt lining, size 5 to 11, at $2.15

Shoe Packs.

Made from best quality Oil Tanned Beef Hides, Ballows Tongue.

No. 233 Men's, sizes 6 to 12, $1.75

No. 234 Boy's sizes 1 to 5 $1.35

No. 235 Youth's, sizes 12, 13, 1 $1.25

No. 236 Lads', sizes 8, 9, 10 98c

Sent to any address in Canada. Ask for our Catalogue of Bargains in Shoes and Clothing, and Free Premium Lists.

C. B. PIDGEON, MAIN STREET ST. JOHN, N. B.

There could be no better medicine than Chamberlain's Cough Remedy. My children were all sick with whooping cough. One of them was in bed, had a high fever and was coughing up blood. Our doctor gave them Chamberlain's Cough Remedy and the first dose eased them, and three bottles cured them," says Mrs. R. A. Donaldson, of Lexington, Miss. For sale by All Dealers.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issie. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

FOR SALE—Pure bred Holstein bull calf. $25 will buy it. Apply S. J. DARCUS, Fredericton, N. B.

FOR SALE OR EXCHANGE Yorkshire Boar 2 years old. N. M. BECKWITH Sec. Nictaux Agr. Sec., Middleton, Anna. Co.

FOR SALE—Pure Bred Hereford Bull, 11 months old. LYMAN A. WHITMAN. New Albany, Annap. Co., Nova Scotia.

FOR SALE—1 pure bred reg. Ayrshire Bull, 4 years old. 1 pure bred reg. Yorkshire Boar, 19 months old, both choice animals. A. FITZ RANDOLPH, Box 75, Brighton, N. S.

FOR SALE—Two registered Chester White boars, about 9 months old. Took first in their class at Charlottetown Exhibition. Apply to T. W. PROWSE, Union Road, P. E. I.

FOR SALE—One pure bred Shorthorn Bull, 15 months old, dark roan in color, extra large, and of excellent milking strain. Any breeder having Shorthorn females for sale, please write L. M. ANDERSON, Sackville, N. B.

FOR SALE—1 Ayrshire bull, four past. 3 Ayrshire bulls sixteen months. 2 Ayrshire bulls, six months. 2 Holstein bull calves, six months. 2 Holstein cows. Please write for particulars. JOHN A. HUGHES, Petitcodiac, N. B.

BOYS & GIRLS—FREE, a lovely watch for selling three dollars worth of our fast selling Xmas and View Cards. Write to-day for cards. W. CRAWFORD, Department S. Post office Box 24, Toronto.

REPRESENTATIVE WANTED at once for work in your locality. Will guarantee $2.00 to $3.00 per day. Opportunity to advance rapidly. Will pay liberally for spare time. Work not difficult. Experience not required. INTERNATIONAL BIBLE PRESS, Toronto.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

AGENTS WANTED—"Boy and Girl Agents—Sell 24 Coronation pictures for us at 10c each and receive a beautiful pen free. Write to-day, FORVES SUPPLY CO., Dept 11, 50 Elm St. Toronto, Ont.

FARM FOR SALE—Good farm at Avonmore, Kings Co., N. B., containing 180 acres about two thirds under cultivation, rest in timber, well watered, good seven room house. Barn and out buildings in good repair. Convenient to school, post office and railway. For terms, etc, apply F. A. SCHOFIELD, Avonmore, Kings Co.

Don't waste your money buying strengthening plasters. Chamberlain's Liniment is cheaper and better. Dampen a piece of flannel with it and place it over the affected parts and it will relieve the pain and soreness. For sale by All Dealers.

For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111,
"Sunnyside Stock farm," Sussex, N. B.

For Sale Cheap.

A Good Horse, trianed to work in woods or on farm, weight 1450. Only reason for selling—A large supply of Colts on hand.

T. M. TODD.
Narrows, Queens Co., N. B.

Is your husband cross? An irritable, fault finding disposition is often due to a disordered stomach. A always good natured. A great many man with good digestion is nearly have been permenently cured of stomach trouble by taking Chamberlain's Tablets. For sale by All Dealers.

comes mostly by rail from Prince County where the crop was much better than in the other parts of the Island. Supply of fresh gathered eggs has become very small and shipments now are mostly storage stock. Butter although quoted at high prices, elsewhere is not in brisk demand here and dairy is rather a drag, except for finest quality, but creamery butter is high and meets with ready sale. The cheese season is over and prices quoted are simply nominal. In fact we do not know of any stocks in factory men's hands and very few in the hands of wholesalers or jobbers. Trade in general has been good all fall and we feel that it will continue so until close of navigation.

Market Review.

FLOUR AND MILLFEED.

Save for a 50c. advance per hundred on car lots of Manitoba bran on Toronto market, both Montreal and Toronto prices for millfeeds show no other change. Demand is just as keen as heretofore, with a big scarcity of bran and shorts. It looks as if the improved condition in wheat and oats is going to affect the coarse grains, and now may be a good time for the farmer to stock up. Manitoba patents and strong bakers have all advanced 10c. at Toronto, but Montreal prices are firm at last week's quotations. It will be remembered that the present prices of Montreal markets on flours are 10 cents higher than they were two weeks ago, and Toronto prices are just following suit. All kinds of mill feeds and products are in keen demand, and there is no little difficulty being encountered in meeting demand.

BUTTER AND CHEESE.

It is hard to account for the advanced price of butter, unless we stick to the same old reason called "short supplies." It is evident that there is a shortage of milk supplies just now, and our butter business is beginning to feel the change, however slight. Up to recently supply and demand have remained balanced, but now the demand is slightly in excess. Even Winnipeg has felt the influence, and prices there show 1c. of a rise all through. English butter shows up on the fall, as conditions there are all for the consumption of process butters of the oleo order; also liberal shipments are being received. Cheese markets are not stirring much, and prices at the wholesale show no change, and the figures stand at last week's quotations.

HAY AND STRAW.

The demand for hay of any quality or kind continues to be keen, and export demand far exceeds the shippers' ability to fill. With hay so scarce in Canada in general, it seems rather suicidal to our own interests to allow the coarse feed to find shipboard. There will be an ample demand all winter for all the spare hay and straw that we have in the country. Our live stock must be fed, and turning the hay into beef will be a good thing this winter, because beef prices are going to be high, and also because whilst the feeding quality of our mixed and straight hay is fairly good, the fact that the color is bad has a tendency to reduce its marketable value. At any rate, a demand does not have to be satisfied if the holder has better things to do with his feed supply.

HOGS.

Hogs are on the rise! The hold-off on supplies at Toronto last week kept the packers from getting all they needed, and brought them to a unanimous conclusion that the farmer needs at least $6 a hundred when feed is so dear. This looks better, but whether this revival in price will hold good is doubtful, as immediate needs are now fully supplied. However, it is evident that no immediate break away is imminent. At Montreal the price advanced 40c., and on Monday morning large supplies arrived, but were well taken care of by the packers, and selects went off at a high figure. Buffalo hog prices have dropped about 25c., and Chicago figures show no advance. Whilst it has become the season for a swell in deliveries, it is evident that supplies are smaller than a year ago at most points in Canada.

BEANS AND PUMPKINS.

J. A. Gallant, of Mount Carmel recently marketed the product of half an acre of land. The half-acre was planted with beans and pumpkins, both occupying the same land. The beans, after being threshed with a flail, were sold in Summerside for about $90. The pumpkins—about 300 in all—were sold at 10 cents each, making the returns of the half-acre over $120. Although no place in the world can grow better beans than Prince Edward Island, yet thousands of bushels are imported from other countries. There is money in raising beans. Farmers should make a note of this item.

Shropshire Sheep SALE

45 Pure Bred Shropshire Sheep 45

At or near the

Winter Fair Building, Amherst

on

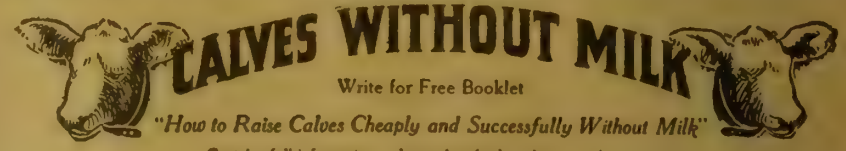
December 6th, 1911

At One o'clock Sharp

I will sell an entire flock of Shropshire sheep consisting of 29 ewes from one to five years old and 15 ewe lambs. Also the prize winning ram "Sultan" three years old. These sheep are well bred and in field condition. They will be sold to the highest bidder without reserve.

Terms made known at time of sale. Get the cheap rates, attend the Fair and sale.

STANLEY A. LOGAN,
Amherst, Nova Scotia
T. P. Lowther, Auctioneer.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Blatchford's Calf Meal—The Perfect Milk Substitute
Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.
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Champion Fruit Pickers.

Harry Coyle and Gordon McDonald two boys, are believed to be the champion apple pickers of the world. Last week they wagered $50 that they could pick fifty barrels in five hours. The bet was accepted and the contest was held on the farm of G. P. Ireland near Coborne, Ont. In four hours and seventeen minutes the fifty barrels were filled. The average time per barrel was 5 minutes 8 4-8 seconds.

P. E. I. Fruit Growers.

The P. E. I. Fruit Growers' Association are planning to hold their Annual Meeting and Winter Fair Show on Nov 29th, and 30th, so that delegates attending the Central Institute Convention on Nov. 28th, and 29th, can remain for the Fruit Show.

The boy's appetite is often the source of amazement. If you would have such an appetite take Chamberlain's Tablets. They not only create a healthy appetite, but strengthen the stomach and enable it to do its work naturally. For sale by All Dealers.

BREEDERS DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. .B

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple. Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.S.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake NB. .
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West: N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

"Hillside Stock Farm"

Hillside Ayrshires won in 1911, first for herd at Chatham and Fredericton also Male Champion at Halifax and Chatham, and Female Champion at Fredericton. Write or come and see us. At present offering four yearling bulls, and females all ages.
PRESCOTT BLANCHARD, Truro, N.S.

Dyke View Farm.

We offer for sale 1 Guernsey Bull, No. 322, 2 years old in January, 1912, of superior stock, also 2 young Bulls, 1 dropped the 4th of March and 1 the 11th May, 1911 and 3 registered cows, 8, 6 and 5 years old, to freshed in January, February and April, 1912. Agricultural Societies please note.

William Cox, & Son.

L. D. 'Phone Canard, Kings Co., N. S.

MEADOW BROOK STOCK FARM

Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

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FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

FOR SALE.

20 Brown Leghorns, S.C.Cockerels, Both matings from $1.00 up. 15 Brown Leghorn S. C. Pullets from $1.00 up both matings. Single and Rose Comb R. I. Red Cockerels and pullets. 2 Brown Leghorns S. C. Cocks, both show birds. Price $2.00 and $3.00 each.

W. H. HENRY,
Shubenacadie, N. S.

SPECIAL POULTRY SALE.

Columbian Wyandotte cock, 2nd prize at Fredericton, $3.00; Columbian Wyandotte hen, 1st Amherst, 3rd at Fredericton, $2.50; Columbian Wyandotte cockerel, 1st at Halifax, $1.50; Barred P. Rock Cock from McDonald college, $1.50: White P. Rock cock, grand utility bird $1.50; S. C. White Leghorn Cock, 2nd ckl.at St. John 1900, $2.00; S.C. White Leghorn hen, 2nd pullet at St. John 1910. Buff Orpington hen, Clark's strain, $1.50. Also one Pure Bred Yorkshire Sow pig, 8 weeks, $3.00. ORCHARD HILL FARM, Brown's Flats, N. B.

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'Experience in Poultry Raising,'
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Orpingtons and Brown Leghorns

PICTOU, - N. S.

B. P. ROCKS

High class breeding Cockerels and Pullets in trios and pens for sale in both Matings. Also, a few Yearling Cocks at close of Winter Fair.
Prices given on application.
CRAIG BROS.
Box 447. Amherst, N. S.

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Now offers for sale a lot of choice pure bred Barred and White Rocks, Rose Comb Reds, and Buff Orpington Cockerels and pullets at $1.00 each to make room. Order now.

EGBERT DeYOUNG,
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Leicesters and Jerseys.

Young stock for sale. Special bargains in a 5 months bull calf out of Sylvia of Maple Grove, 1086, who qualified for C. R. of R. in milk and fat with a large margin making a yearly profit of almost $90.00. This calf is a bargain at any price but will be sold reasonable. Apply to
WM. CLARK & SONS,
North Wiltshire, P. E. I.

Trees That Will Grow.

Reliable men wanted to work during the winter; part time or steadily. Should average $25. weekly. Special salesmen wanted for the fruit belt. Our trees will grow; there's a reason.

THOS. W. BOWMAN & SON Co., Ltd.,
Ridgeville, Ont.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers aud a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Spring rook Farm Ayshires.

Headed by two imported Bulls. Stock all ages, for sale. Exceptionally fine lot of young Bull Calves from cows that won at Amherst 3rd in aged cow class. 1st and 4th in three year olds, and 5th in two year olds.

McINTYRE BROS.
Inspection invited. Sussex, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

Rosebank Farm Jerscys.

We have for sale three heifers by Pogis 40th of Hood Farm due to calve this fall to Foxhalls St. John O'Dreamwold. And some bull calves from one to seven months old. Also some pure bred Yorkshire sows three months old.

JOSSELYN & YOUNG
St. John, N. B.

CEPHAS NUNN

Lot 33 Winsloe Road, P E. I.

Breeder and Importer of Shropshire Southdown and Hampshire Sheep.

Some good animals of either sex of the above breeds for sale at reasonable prices. Inspection invited.

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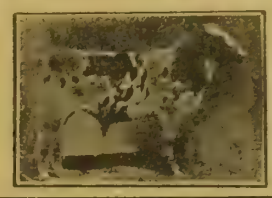
YORKSHIRE SWINE.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

Glen View

Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns.

Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

GLEN VIEW POULTRY YARDS, - SUSSEX, N.B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon Dekol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon Dekols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

SHEEP MEN ATTENTION !

Those who desire to purchase some of the best blood obtainable in all the leading breeds of sheep will do well to write me for prices. I have a car of beauties coming from Ontario which I intend to exhibit at the Maritime Fairs. Make a point to see my exhibit and be convinced I have the goods and that they may be bought right. Special attention paid to Farmers' Societies.

JAS. A. TELFER, Sunny Brae Sheep Ranch, Sussex, N. B.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

Milking Shorthorns

I have to offer, 5 Shorthorn Bulls, fit for service. Dams excellent milkers. Sire ¾ Cruikshank blood.

BLISS M. FAWCETT.
Sackville, New Brunswick.

Shorthorns For Sale

We have sold eight pure-breds and have a choice lot of roan and reds left, ages from 13 to 26 months. Also a large red bull, 3 years old.

C. C. H. EATON,
Canard, N. S.

ings, as branch wires can be run from the main line to the buildings and thus save wire and simplify the construction. Reference to Fig. 4, in which c, e, etc., represent the buildings to be connected, mn the main line and a and f the branch wires, will make this point clear.

POLES.

Poles twenty-two or twenty-five feet long of any good stock, cut when green, should be used. Cedar and chestnut are particularly desirable on account of their lasting qualities. The poles should be reasonably straight and well proportioned. The diameter

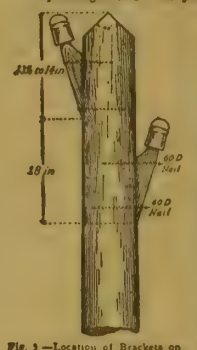


Fig. 5—Location of Brackets on Pole for Straight Lines.

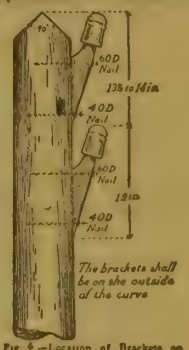


Fig. 6—Location of Brackets on Pole at Curves.

of the top of the pole should be about 5 or 6 inches. In order to prolong the life of the poles and add to their attractiveness, all the bark should be removed, knots trimmed close and the butt cut off square. The top of the poles should be roofed as shown in Fig. 5.

POLE FITTINGS.

Where only one or two line wires are to be mounted on the poles, oak brackets fitted with glass insulators are fastened to the pole as indicated in Fig. 5 for straight lines, or as shown in Fig. 6 at curves. The brackets should be attached to the poles before the poles are raised.

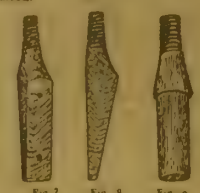


Fig 7 Fig 8 Fig 9

BRACKETS.

Brackets Figs. 7 and 8 are usually made of oak and given two coats of metallic paint and have a thread on the upper end to which is fastened a glass insulator, a type, as used in telephone work, is shown in Fig. 32.

They should be about 18 inches apart. The upper bracket should be 8 inches from the top of the pole

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THIS book consists of 100 solid pages of carefully compiled information on the building of rural telephone lines. It is well printed, profusely illustrated and handsomely bound in stiff, cloth-covered binding. Apart entirely from its actual cost of printing and binding, the preparation of the technical matter in it has run into a great deal of money. That is why we ask for the coupon —we want to be sure that you are interested in the subject, before we go to the expense of sending you this book dealing with

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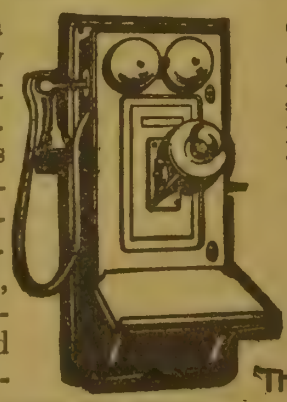

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The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., NOVEMBER 28, 1911 No. 4

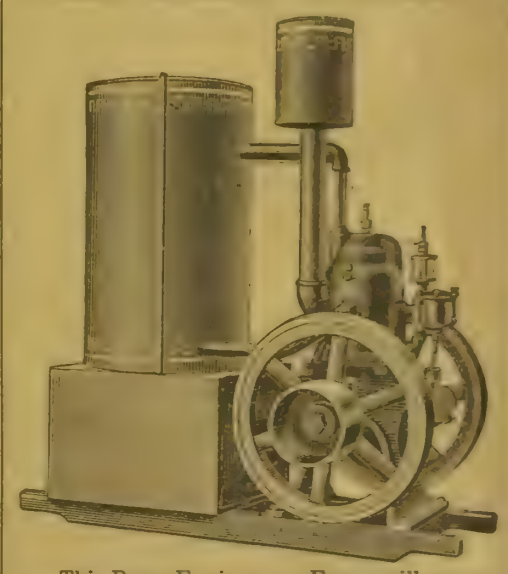
Page Work Engines

Since our first advertisement appeared a month or so ago giving particulars and prices of our engines, we have had many orders. People seem to readily realize that they cannot afford to go without an engine at prices we make—a 3 1-2 horse power at $138. or a six horse power engine for $188. The engines use for fuel either gasoline or kerosene. These engines are powerful but light and can be carried from place to place where work is to be done.

You may be wishing you had an engine to help you do your work, but may be unfamiliar with engines and have an idea that a gasoline engine is an uncertain, complicated thing. If you think so your fears are groundless, for gasoline engines are so developed nowadays as to be just as reliable as any other machine. Anyone can operate a gasoline engine, as there is no danger. No engineer is needed. There is nothing to blow up. Simply put gasoline or kerosene in the fuel tank and give the fly wheel a turn and away she goes for all day. Go off and leave it if you want to. It is safe.

A gasoline engine is started instantly. You do not have to wait to get up steam. When you are through work stop the engine and, and consumption of fuel stops at once. Hence, you can run the engine for only ten minutes, and you use only the fuel required for operating it that length of time.

As to cost of fuel, a Page engine uses only 7-8 of a pint of gasoline or kerosene per horse power per hour. Hence, if you were operating our 3 1-2—4 horse power it would use less than 1-2 gallon per hour, which at 15c per gallon would cost you only about 7 1-2c per hour. Probably you would not work the engine to its limit and fuel would be less accordingly, for a gasoline engine uses fuel only in proportion to the work it is doing.



This Page Engine on a Farm will pump, saw wood, run a cream separator, washing machine, churn, silage cutter, fanning mill, root cutter, grindstone, etc. It may be easily moved from one place to another, and is always ready to run. It does the laborious and tedious chores of the farm.

We are getting many orders from the Maritime Provinces, especially from Prince Edward Island, although Nova Scotia and New Brunswick are not far behind. Dealers find the Page engines a good line to handle as they are so low in price and so high in quality. We are getting so many applications for agency that we hope to have a thorough organization in the engine branch of our business in the near future.

Marine Engines

We have in above referred particularly to stationary or work engines. But we are also supplying marine engines from 2 to 36 horse power. Catalogue of either style on request.

The Page Wire Fence Company, Limited

37 DOCK ST., ST. JOHN, N. B.

HEAD OFFICE: WALKERVILLE, ONT.

One of the Many Letters We are Receiving Daily

Monastry of Our Lady of Charity,
Ottawa, Ont., Aug. 11th, 1911

Asepto Soaps, Ltd., St. John, N. B.

Dear Sirs:---Please accept our Sincere thanks for having so promptly sent us the premiums asked for. We are delighted with them, they are so beautiful. We remain,

The Sisters of Our Lady of Charity.

Do you realize how quickly you can procure a beautiful premium from us? and that all of the following articles carry coupons that count together on the same premium?

List of Articles That Carry Coupons With Them

Asepto Soaps

Asepto Soap.
Asepto Soap Powder.
Asepto Woollen Soap.
Asepto Carbolic Soap.
Asepto Hand Cleaner.
Asepto Potash or Lye.
Asepto Ironing Wax.
Asepto Bluing.
Asepto Gloss Starch.
Asepto Scouring Soap.
Asepto Black Harness Soap.
Naptho Soap.
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Bees Honey
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Heavy Machine Oil
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Pendleton's Condition Powders
Pendleton's Gall Cure
Pendleton's Hoof Grower
Pendleton's Horse Liniment

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Ground Cloves
Whole Cloves
Allspice
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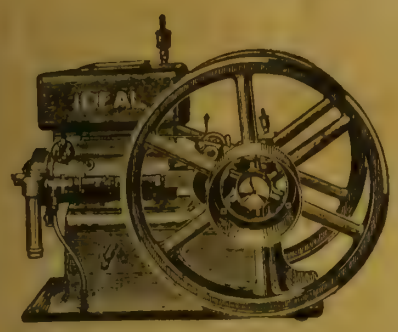

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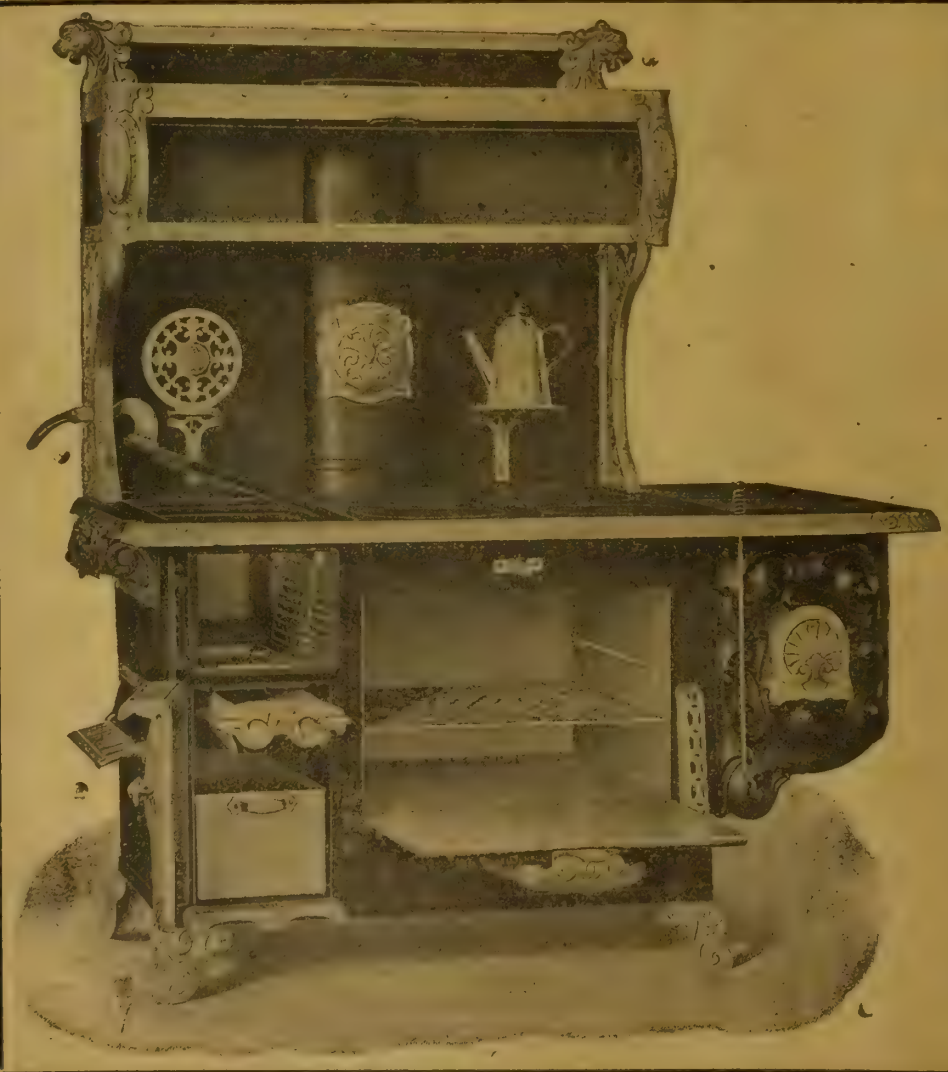

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Is a High-class Family Steel Range, honorably built of the best material, and put together as tight as a steam boiler, and is guaranteed to cook and bake perfectly.

NOTE:—The spacious fire box for wood.
The large fire box opening, 7½x8½ inches.
The roomy square oven.
The top-hinged key plate.
Also note how easily the coal grates can be removed.
The linings can be changed from coal to wood, or vice versa, without the disturbing of a bolt.

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THE UNIVERSAL FAVORITE is specially built to meet the requirements of farm homes. The top is large and roomy with six pot holes, the oven will bake sixteen loaves of bread in pans 4 1-2x10 inches at one time. The fire box for wood is 29 inches long, and will burn coarse wood of any kind

NO RISK IS TAKEN, as an unqualified guarantee goes with every UNIVERSAL FAVORITE that it will cook and bake perfectly.

The Universal Favorite is procurable from a dealer in your market town. Manufactured by,—

FINDLAY BROS., CO. Ltd., Carleton Place, Ontario.

H. H. DRYDEN, Sussex, N. B., Representative for Maritime Provinces.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

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A Few Hints Re Dynamite on the Farm.

Time and Money Saving.

By B. H. Morrison.

MANY farmers who read articles which appear under titles similar to the above, seldom connect the facts stated therein with their own personal needs, and if they do, it is only in a visionary way, and seldom is the knowledge gained ever put to practical use. In this article we wish to give not only a few ideas of what can be done on the farm with explosives, but a simple and clear explanation as well of the proper way in which they should be carried out.

Ask the average farmer if he has any use for explosives on his farm and he will tell you "No," but then he does not know the many uses to which it can be applied. Without any doubt in our minds we would estimate that ninety-nine farmers out of every hundred in Upper and Eastern Canada, can use explosives on their farms to great advantage.

In the farming sections of fifteen states in the Republic to our south, and Ontario, Quebec, New Brunswick and Nova Scotia in our owncountry, we have seen various kinds of dynamites used on the farms for stump blasting, boulder breaking, tree planting, deep ploughing in orchards, hardpan blasting, subsoiling clay lands, log splitting, for digging ditches, post holes, wells, cellars and reservoirs, and for draining swamps, road making and grading.

Removing Stumps by Hand, a Slow, Expensive and Partial Process.

The big horizontal roots remain for years and cause plowing and cultivation to be done with difficulty and needless expense, breaking plow points and harness and injuring man and beast.

Now to give a complete description of the methods pursued in all the above uses, would take up too much space, so we will only treat on three or four of the principal ones. With that knowledge any farmer would be able to see how the others should be done, as many of them are very similar.

First let us take up stump blasting, the oldest use to which explosives have been put on the farm, or the farm in the making, we should say. Until a man has the stumps out of his land he should not call his place a farm, or at least should not expect it to return him the maximum interest on his investments, for every stump is a dead expense on his hands, but this is another question altogether.

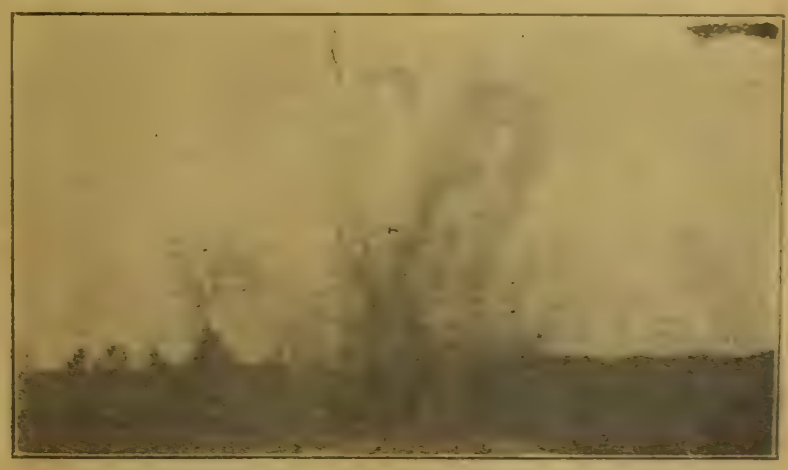
Stumps should be blasted in preference to burning or grubbing, not only because it is cheaper, but when a stump is burnt out, the ground about it is also burnt and takes years to bring back into workable condition. With grubbing, the whole stump has still to be dealt with when it is out of the ground. It is almost as much in the way as when it was in tne ground. In both these latter ways the big roots are left in the ground also—making ploughing a difficult matter. By using dynamite the stump is not only blown out and broken up, but the ground is all loosened ready for the plough.

All the tools needed for stump blasting are usually found on every farm, an auger four or five feet long with 2½ inch or 3 inch barrel, a crowbar, and a long handled round point shovel complete the kit. The explosives necessary are some stumping powder, which is used entirely for all farm work, Safety Fuse, No. 6 caps and a pair of cap crimpers.

To blow out a stump, first bore a hole under it, starting about six inches lrom the base in the dirt. The hole should be on an angle from thirty to forty degrees and should be at least as deep as the stump is wide, going beyond the centre of it a foot or more. The hole must be bored from the weak to the strong side, and the charge placed under the point of greatest resistance. The size of the powder charge depends on the condition and size of the stump, and also the kind of ground in which it has grown. Stumps in clay land take about three quarters of a pound to the foot in diameter, and in sand or loam about one pound to the foot. It is hard to give any exact figure on these amounts, as stumps vary so widely, but the above will serve for a rough estimate, and a farmer will soon find out from a few experimental shots, exactly how much his particular stumps require.

The stumping Powder is put up in sticks eight inches by one and a quarter, weighing about one half pound each. To place a charge of say eight sticks under a stump, the following instructions should be followed. Split each stick several times with a knife, putting them in the hole one at a timef As each stick is put in, it should be firmly packed with a

Placing One Half a Pound of Dynamite—Snake Hole System.



Once a Big Stump, now Kindling Wood.

wooden tamper, the handle of the shovel serving the purpose admirably. The powder must be packed tightly in the holes and no danger is experienced from pressing it firmly with the wooden tamping rod. After six sticks are thus packed in the bottom of the hole, then the stick containing the cap and fuse is pushed in as the others were, being split also to make it pack better, then the last stick is put in on top of the "Primer" stick as the others were. The hole must then be filled with dirt, it being put in a handful at a time and each firmly packed until the hole is full to the collar.

In preparing the "Primer" which is the stick containing the cap and fuse, first the cap must be pushed on the end of the fuse, and crimped on with a pair of cap crimpers, then the capped fuse is inserted into the side or end of the stick of powder, until the cap is buried, and then firmly tied in place with a piece of string. In loading shots the fuse should not be cut off until after the hole is tamped. Fuse burns at the rate of about thirty seconds to the foot, which gives lots of time to get away from a shot as every charge usually has from two to three feet attached to it.

There was never a stump grown that dynamite or Stumping powder would not lift out, but it must be used in sufficient quantities, and the charges located in the right place. It is always cheaper to use one stick too much than one stick too little. A good shot will lift the stump out of the ground and all the roots, and the stump will be broken into six or eight pieces. This result can be obtained by an expert every time but a raw beginner must expect that some of his first shots will be failures or at least they will not all be perfect shots.

It might be well to state here the chief causes of failures in stump blasting:—

First, the position of the hole. It must be along the line of greatest resistance.

Second, the depth of the hole. It must be as long or longer than the diameter of the stump at the base.

Third, the size of the charge. Sufficient must be used.

Fourth, placing the charge and tamping. The powder must be firmly packed so that all the air is expelled from the hole, and the tamping must be rammed even tighter. Over a charge of two sticks there should be about twelve inches of tamping and a charge of eight or ten sticks needs about eighteen inches or more. Two feet of tamping is sufficient for the biggest charges put under stumps. We have seen charges under big green stumps of thirty and forty cartridges, but this large amount is seldom necessary.

Another use to which explosives have been put for some years, and one which many farmers are conversant with, is that of breaking up and removing rocks and boulders.

This is a simple operation, a person only needing to know how to gauge his charges. Drilling a rock is seldom necessary, as the biggest boulders found in a field can be broken by placing the charge on top of them and covering it with mud, or by placing the charged under them in holes, similar to blowing out a stump.

Now, all boulders cannot be treated in this way with satisfactory results. Take for instances a large boulder, say, six or seven feet thick and buried in the ground, it would be better to place the charge directly under the centre of this, for then it would not only break the boulder but would lift it out of the hole as well. If this boulder had been mudcapped, as a charge on top is called, it would only have cracked it and would still be troublesome to get out of the way.

Mudcapping is the easiest way of breaking boulders, as there is nothing to do but to place three, four, or as many sticks of stumping powder as is required, side by side on the top of the rock, having a fuse and cap in any one of them, and then covering them all up with a shovel full of damp clay or muck. This mudcapping is best suited to boulders and rocks lying on the surface or buried only a foot or two. It uses considerable quantities of powder but is cheaper when the time and labor saved in drilling, are considered.

Now comes the sub-soiling of clay lands, and the breaking up of hard pan by the use of explosives. Both might be termed "new uses" but not untested nor untried, for sufficient time has passed since they were first put into use to prove their wonderful merits. In sub-soiling charges of one quarter pound of Stumping Powder are placed in holes two and half feet deep, and ten or twelve feet apart. The holes are well tamped and the fuse lighted as in other operations. These charges going off have the effect of breaking and cracking the hard clay all over the space worked on, allowing better drainage to a crop growing on it and also permitting the solution of valuable plant food which it contained and which previously had been inaccessible.

This breaking up of hard soil has been known to increase the yield of a crop twenty and thirty per cent the first year in which the money expended will be more than made up, and then the effect on the ground lasts for many years.

The only difference between this operation and that of breaking up of hard pan, is that the depth of the holes in the latter case must be governed by the depth of the hard pan, the holes going at least two-thirds through it, being tamped and loaded in the usual way. This will break up the hard streak and allow it to be worked properly. No land having a layer of hard pan under it can be expected to withstand prolonged drought or wet seasons, but by following the above instructions any hard pan can be so broken up that it will not be perceptible and crops will flourish on what was often barren land. This breaking up of hard pan is done to a great extent in the fruit sections of California where the land is underlaid with about a twelve inch strata.

Next we will describe tree planting and deep ploughing in orchards. The former is by no means a new idea. We have in mind several instances where trees twenty-five years old were originally planted this way, and now it is such a common thing that all the big orchardmen of the States are on the traveller's lists of the powder companies, to be called on as regular customers, and they are. We know of one peach grower in Georgia who uses regularly from two to three thousand pounds a year.

The advantages gained in planting trees with Stumping Powder, are many, time and economy being the smallest in our opinion of any, for it is best to take time and go to some expense to set out a tree properly, and make sure of it living and growing to be strong and healthy, rather than rushing the job and planting the tree in a hole where it has to fight for its life, and if it does live will be puny and a poor producer.

Comparative tests have shown and proven beyond doubt that trees planted in dynamited holes have the smallest percentage of failures, that they bear fruit from one to two years sooner, that they resist droughts and wet spells better, and that they are stronger and healthier in every way than trees which were planted in spade dug holes.

A Little Fellow "Blown Clean."

The system followed is similar to sub-soiling, a hole being made about two or two and a half feet deep with an auger or bar, and a charge of one quarter pound of stumping powder placed in it, with fuse and cap. It must be tamped but not necessarily hard, eighteen inches of dirt on top of the charge being sufficient. When this is exploded it will be found that on removing a few shovels full of loose dirt, that a large pot-hole has been created. The loose dirt around the sides falls in here and then the hole is ready for the tree. Any person seeing one of these dynamited holes, cannot help but see the great advantages over the old way.

Deep ploughing in orchards is just another form of sub-soiling, the holes being made on four sides of a tree under the end of the spread of the branches and from four to five feet deep. A charge of one half pound at least, should be used and firmly tamped. This loosens up the ground at the end of the roots, allowing them to penetrate deeper and more readily in search of new feeding grounds, and as the fumes from the powder are poisonous to animal life, it kills the grubs and lavae that feed on the roots. Also it provides reservoirs under the roots for the storage of moisture.

An orchard treated this way is not affected by a prolonged drought, granting, of course, that it has been done in the Fall or early Spring, and the fruit will be a better and finer quality.

Now, the other uses we mentioned for explosives on the farm, are nearly all offshoots of the ones described except perhaps log splitting, which is done by boring a hole in the log and placing in it a small charge, one eighth or one quarter pound and tamping with clay. In road making, well digging, etc., money can be saved by the judicious placing of charges in stiff clay for loosening it up, and by breaking up and blowing rocks out of the way.

The Government Agricultural Schools in the United States, have tested and adopted all of the above described uses for explosives, and we hope soon to see the Canadian Schools doing the same, for, in our opinion, a knowledge of the use of explosives is as essential to the progressive farmer, as is the rotation of crops or the proper method of ploughing.

There are doubtless a few points which we have not described, but there are explosive companies in Canada to-day which have men travelling from town to town, demonstrating the practical uses of their products, and which also publish hand books on explosives for farmers, for free distribution, describing every detail minutely.

Editor's Note:—We would like to hear from some of our farmer readers who have used dynamite or blasting powder in their farm clearing operations.

Twentieth Century Methods, Quick, Cheap and Complete.

The tree with all it's roots is blown from the ground, the earth is areated and pulverized to a depth of 2½ ft. on the average and an immense crop growth is possible!

The Pile of Stumps and Roots Ready to Burn, After Dynamiting.

Note how they have been splintered by the blast, also how free from dirt. The blasting process saves the labor of cleaning the dirt off the stumps, and hauling the stumps to out-of-the-way corners where they would be idly rotting and giving nothing to the soil.

First Prize Essays at Port Elgin Fair.

A Commendable Feature.

How to Keep the Boys on the Farm.

How will we keep the boys on the farm? is the problem before the farmers of this country to-day. It is a well known fact that one, at least, of every farmer's sons should stay and run the farm, but the question is, which one should stay?

Generally the smartest or the one who shows the most desire for an education is given a thorough College education, which would cost in the vicinity of two thousand dollars, and is therefore fitted for a doctor, lawyer or whatever profession he wishes to follow.

While the one who does nat show any desire for a higher education is put on a poor exhausted farm and is expected to cultivate and build up agriculture in the community in which he lives, with little or no education to help him along.

His life is all drudgery, because he does everything by hand, and has not the knowledge or ability to seek out easier methods which would make his farming operations and transactions a success and a pleasure to himself and the rest of the family. And all because he was deprived of an education.

Many are asking the same question. How can we encourage the young men to remain on the farm? If you want to make a good farmer of one or all of your sons, do not give the smart ones the advantage, and put the one who is not as smart on the farm, because you think he has not sense enough to be anything but a farmer.

That is the greatest mistake a man can make, and the worst thing he can do to his son. To put him on a farm without first giving him a good agricultural education is not very encouraging to the young man, especially if it be a poor run out farm.

As the boys of to-day reach manhood and think over their future life work, it must be confessed that to many of them farming does not present itself in a very favorable light. Their idea of it might be summed up in the epitaph found on the tombstone of a Minnesota farmer which read: "John Walker, born 1819. Spent his life doing chores." 1897, stopped doing chores."

So "to keep the boy on the farm" the first thing you should do is to get him interested in the business management of the stock and farm. And to do this successfully give him a young animal of some kind and tell him to feed it and care for it nimself, and when it is ready for market he can have the money received for it.

He will take more pride in his work if he thinks he is doing it for himself, and he will soon learn its ways and habits, and the feed it likes best.

When the animal is ready for market and he receives what it is worth, you can see him in your imagination chuckle and laugh over the money he received for his work and worry while tending the animal.

But, do not take it from him it would break his heart and weaken his confidence in you. It would never do you any good, and for him it might mean the nest egg in his future bank book. It also might be the means of driving him from the farm, never to return.

Do not keep him tied home from one end of the year to the other, give him a holiday once in a while. Allow him to go to a picnic, ball-game, horse-race and so on occasionally, and he will work better afterwards and try to make up for lost time. So in the long run you will be further ahead.

You should encourage him to invest his money in live stock of some sort. Perhaps he will choose pure-bred sheep, if he does let him get them, for I believe there is no more profitable stock on the farm than a good flock of sheep.

Then if you see that he wants to take up farming as a profession give him a good agricultural course at some good agricultural college that will fit him to master every problem connected with a farm and its stock, (and there are many for a young farmer to contend with).

You might ask where can a boy get the desired education along those particular branches. That question is easily answered, there is a good Agricultural College in Truro, N. S., which is prepared to give such a course to the young men of the Maritime Provinces.

Having given him such a course he will come back to the farm qualified to take up any branch of agriculture, and will take a greater interest in his work and the planning and managing of the farm operations.

Some boys who are brought up on a farm take no interest whatever in the farm, simply do their work because they have to. Those boys are under the impression that they are working for others and therefore take no interest in their work. To my mind it would be a good plan to take the boys into partnership with you when they get to be say about twenty years of age.

Encourage the boys to have a team of their own. But do not approve of trotting horses, as there is no profit in that stock for a farmer.

When you go to an Exhibition, Agricultural Meeting or a Fat Stock Show do not make him stay at home Show do not make him stay at home, remember more than you will yourself.

And afterwards when he expresses his opinion when he sees you doing something not just as he would do it, do not laugh at his way of thinking, even though it may not be just right, it showed his interest.—J. Roy Sweeney.

Cotswold Ram

First Prize Cotswold Ram at the Chatham and Fredericton Exhibitions Owned by Jas. A. Telfer, Sunny Brae Sheep Ranch, Markhamville, N. B.

Agriculture as a Profession—How Best to Prepare for it.

Agriculture is the leading industry in this province to-day, consequently the farmer has the hardest but the best profession to learn. In the first place the farmer nearly always owns his farm and buildings.

He can raise nearly all he consumes on the farm and that of the very best quality. This is one of the instances where he has the advantage over the city folks.

But how many farmers realize the advantage of living on a farm? The farmer is a free man, he is his own boss, and he can regulate his work to suit himself. He has a home that he can call his own. How many of his less fortunate fellow-men can boast of that. He lives in the purity of God's pure air, while those in the city are continually breathing all kinds of impure and diseased air.

Generally speaking as the boys of to-day reach manhood, many of them drift over into the New England States, Western Canada, and indeed into every part of the continent, generally doing themselves and their native Province credit. Many of the others who remained on the farm have drifted into side lines, such as fishing, and lumbering, consequently the farm being more or less neglected, yields still smaller returns.

While I believe it pays to farm thoroughly and systematically, it certainly does not pay to farm indifferently. There is no season of the year in which a farmer cannot find profitable employment on his farm, and it is one of the farmer's individual problems to find out and arrange his line of work.

If agriculture is allowed to go down no other industry will thrive in this country. Therefore agriculture may be termed the back-bone of every industry. The young men brought up in towns and cities are given an education to fit them for whatever profession they wish to follow. So also should the farmer receive an education to fit him for his profession. But how many receive such an education? Not one out of fifty, you say. A farmer certainly can get a practical educatioo (providing he works at his profession long enough) but it will take time. Where if he had a good Agricultural education he could go right ahead and know what he was doing.

Start two men out together at the age of twenty-one years, give one a two thousand dollar education and the other a two thousand dollar farm and see how they stand at the age of fifty. The one who has received the education will go to work in a store or office as book keeper and perhaps in time will get to be head bookkeeper. At a salary of perhaps one thousand dollars a year. But there he stays, he can go no higher unless he goes into business for himself and that requires a good deal of capital.

He gets married, rents a house and raises a family. When the bills are paid, rest assured he does not have very much to add to his bank account. At the age of fifty he will retire, not because he is rich enough to take things easy for the rest of his life, but because his position is filled by a younger man. Whgt is he going to do? There is the question.

But the farmer who started out when he did. How is he progressing? At the age of fifty he retires too, and lets his sons run the farm. He has been a prosperous farmer and can now take things easy. So when you consider the cost of living in the city compared with the country, and the advantages the farmer has over all other professions, it can be easily seen that agriculture is the most profitable profession that any young man in Canada can take up.

How to prepare for it is the next question to be considered. In the first place start the agriculturist when a boy if he takes an interest in live stock and farming operations in general. He should have at least a common school education. And if circumstances will permit he should go through hign scnool. He will then be able to manage the business part of farming.

But there is something else he must have before he can be termed a scientific farmer, and that is a good Agricultural Education. If he can afford it he should take a two years' course at one of the Agricultural Colleges in Canada.

There is an Institution at Truro called the N. S. A. C. which is prepared to educate the young men of the Maritime Provinces in all the principal series of Agriculture and Animal Husbandry.

This course is regulated to suit the farmer. It is carried on in the winter months when the farmer is not busy. This Institution can give an all round education in Scientific Agriculture, English, Mathmatics that no other College in the Maritime Provinces can give.

When the young man gets through College and gets fairly started, he should get married to a good sensible farmer's daughter.

In the last few years the city working man has been crying out of hard times, and the cost of living so high. The city people are the consumers of farm produce and they have to be fed. It is hoped that farm produce will go still higher and compell the working man of the city to come back to the country and take up some of the vacant farms which they over looked in their young days.

So to my mind the young man who chooses agriculture as a profession is a wise man because farming is not what it was twenty-five years ago when markets were poor and there were no machinery to lighten the labor. It was in those days that so many young men left the farm to make an easier living, as they thought But times have changed, the farm today stand at the head of all other professions, and it is no longer termed the "old hayseed."—J. Roy Sweeney.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

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NOVEMBER 28, 1911.

DATES OF ISSUE.

December ..... 12—26
January ..... .16—30

PRIZE ESSAYS.

On other pages of this issue, our readers will find the essays that won first prizes at the Port Elgin Fair last fall. The subjects were well chosen and the essays show that considerable care and study were exercised in preparing them. Referring to these essays, in a recent issue of the Maritime Farmer, Professor Cummings of the Nova Scotia Agricultural College, said :

"It gives me a great deal of pleasure to "commend the management of the Port "Elgin, New Brunswick Exhibition in "awarding prizes for the best essays on "agricultural subjects entered for com- "petition at their fall Exhibition. Those "essays were forwarded to me at Truro, and "I have just completed reading and award- "ing prizes upon them. This feature of "the Exhibition Prize List was, I believe, "inaugurated last year. At any rate, I ex- "amined a similar series of papers a year "ago. I am pleased to notice that this year, "there are not only more competitors, but "the quality of the essays written is quite "superior. I will be very much surprised "if tangible results do not follow this ef- "fort to interest the younger people of New "Brunswick in writting essays upon sug- "gestive agricultural topics.

"In this year's competition, there were "three separate sections, prizes being "awarded for the best essay in section 1.— "How to keep the boys on the farm." "Section 2—"Agriculture as a profession ; "how best to prepare for it." Section 3 - "A kitchen garden on every farm ; What "to grow in it and how to cultivate it."

"It was my only regret, in examining "these essays that I had only nine prizes "to award and could not award merited "prizes to the number of extra essays over "and above those provided for.

"I thoroughly believe that it would pay "other Exhibition Commissions to follow "the example of the management at Port "Elgin and adopt this commendatory "feature. Those who are interested in "doing all they can to awaken the interests, "especially of the young people, in matters "agriculturally, would do well to corres- "pond in regard to this competition with "Mr. J. R. Taylor, Secretary Port Elgin "Exhibition Little Shemogue, Westmor- "land County, N. B.

LAST CALL TO THE MARITIME WINTER FAIR.

Ere the first December issue of the Maritime Farmer reaches our readers, the Eleventh Annual Maritime Winter Fair will have been held. The Fair will open in Winter Fair Building, Amherst, N. S., on December forth. and will continue for four days. Not a moment of the four days will be wasted. When a farmer visits the fair he is given every opportunity to inspect the various classes of fat cattle, sheep, swine and poultry. He will also visit the dressed poultry, beef, mutton and pork departments, the honey department and the selected seeds department. The foremost seed selectors of the Maritime Provinces will be there with their oats, wheat, barley, buckwheat, potatoes, timothy clover and other seeds. There will also be collections of fruit from each county in the Maritime Provinces. From each one of these departments, the visitor can gleam some ideas that will well repay him for visiting the Fair.

If he stands near the stock judging rings he will see the various animals as they are led out to be judjed. He will have an opportunity to contrast the merits of the different individuals in each class, and if he is so disposed, and wishes to settle any question of doubt that may exist in his own mind in regard to the various classes after the judges have placed their awards, he is at liberty to ask any questions in regard thereto and he will receive a courteous reply.

The dairy department will not be open to the public until the ofternoon of December fifth, as the cows that will be entered in the milk test must not be disturbed. A dairy cow is of a highly strung nervous temperament and the constant rush of throngs of people through the stables would not be conducive to a large yield of milk and butter fat. As each and every breeder is anxious to get his cows to make the best possible showing the dairy department will be the "holy of holies" until the test is completed when the record of each cow will be posted and the public will be allowed to inspect them as much as they choose. The evenings will be profitably spent in listening to instructive addresses, in the large, comfortable auditorium, by prominent agriculturists. The bee men, the poultry men, the seed men and various other associations will hold their annual meetings in the fair building and they will welcome interested parties to their respective meetings. It will do you good to take a few days vacation and visit the fair. The railway rates are so cheap that it would be extravagance to walk. In behalf of the Maritime Stock Breeder's Association, under whose auspices the fair is held—we extend to each and every one of our readers a cordial invitation to visit the fair. Don't forget the dates, December 4th, 5th, 6th and 7th, 1911.

THE N. S. A. C. SHORT COURSES.

The Nova Scotia Agricultural College, Truro, N. S., is an institution that has been built by the Nova Scotia Government, in response to popular demand, for the purpose of giving the young men of the Mayflower province, who wish to make agriculture their life study and work a chance to acquire the scientific knowledge that is so essential to successful practice.

Although the college is wholly supported by the Nova Scotia Government, its doors are thrown open to the boys and girls of the other maritime provinces. Not a few of the bright young men of New Brunswick and Prince Edward Island have taken the opportunities offered, by a course at the college. Some of these, like their Nova Scotia classmates have gone back to the farm where they are giving a good account of their stewardship, while others have taken more extensive courses in other agricultural colleges and are now filling important positions in every part of Canada and the United States, and some have even been called to work in foreign fields. The unamious verdict of each and every student who has even attended the college is that it is as good as the best. Students who have graduated from the Truro college at the end of the two-years course have entered the third year in some older institutions in competition with students who have taken their first two years at the better seats of learning. The N. S. A. C. Students have, on more than one occasion, been successful in leading their classes in point of general average and total aggregate.

The provinces of New Brunswick and Prince Edward Island as well as the province of Nova Scotia needs a lot of agricultural research work. The finances of the two former provinces is not in as flourishing a state as would warrant the building and equipping of provincial agricultural colleges, although no one disputes the fact that the money required for this work could not be spent to a better advantage.

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Tution is free and board can be procured at a nominal figure.

A Kitchen Garden on Every Farm.

In writing of the Kitchen Garden it seems to me the small fruits are inseparable from the main annual garden. A good poultry wire fence (if hens are permitted to run) around a small plot of rich ground, preferably handy the house is the first necessity.

This I would have longer than wide so the plow and cultivator could be run and room in the end for turning horse.

At one side of plot I would have my gooseberry, currant and raspberry bushes, next a bed each of sage mint, horseradish and chives.

The remainder would be divided into four parts, 1st quarter, early potatoes; 2nd quarter, newly set strawberry plants; 3rd quarter, 2nd year strawberry plants; 4th quarter, garden.

I plant my garden on old strawberry ground, potatoes on last year garden ground and strawberries on potatoe ground.

The first year strawberry blossoms are nipped off, and the runners allowed to grow. These are used for next year's plants. Second year the blossoms are left and the runners kept back so that all the vitality of the plants go to fruit. After plants are two years old they are plowed up.

My rhubarb is covered in fall with strawy manure, plowed in spring close to roots, then plowed crossways thinning out the roots.

Early in spring when the ground around the gooseberries and currants is worked up, I plant my parsnips between the bushes, then I can leave as many as I choose in the ground over winter. Thus when I cultivate my parsnips it keeps a mulch around my bushes which would probably have to go without were it not for these.

In the plot allotted to garden, I would have my radish, lettuce, early onions, celery, tomatoes, cucumbers, pumpkins, squash and citrons.

The outside row would be onions, as they only want earth worked up about two inches. Radish and lettuce is put in with well rotted manure in rows. For cucumbers and other vines I open a deep furrow fill with horse manure compost (fresh horse manure mixed half and half with earth early in spring or late the preceeding fall) turn into rows and plant seeds.

I prefer this method of planting to beds as the cultivator can be run through them until they blossom, keeping a mulch to hold the moisture and the cucumbers are more easily picked without injuring the vines.

Tomatoes and celery are started in house early in spring and set out in trenches. As the tomato spreads its roots very near the surface of the ground, I plant it in a hollow and draw the earth gradually around the stem as it grows taller thus getting the root down deep so it gets more moisture. The sides of the trench also break the wind and do away witn the need of shingles.

Celery is grown the same as tomatoes, but in the fal banked up to bleach the stems.

As every good farmer does not have his grain and potatoes in the same place continually so I would not have my main garden always in one place. Besides the fact that some plants need one element of soil fertility and soon exhaust that in the land the cut worm has worked havoc where I had garden continuously in one place.

When the men prepare the potato and turnip land in the fall I get some manure spread and worked in for my garden next year. In the spring when the potato land is worked up I have my garden harrowed and made into rows. For beets no more manure is applied in spring but for other things a light dressing of manure is beneficial. The manure is placed in centre of row.

A stake stuck into the bottom and top of row with cord drawn tight between enables me to plant things straight. In this way I plant carrots, beets, summer savory and transplant cabbage and cauliflowers. It is more pleasure to see a garden coming up in straight rows than crooked and less seed will do as none is wasted by cultivator.

For beans, peas, corn and broadbeans I run a home made marker along guiding cord then plant seeds in marked row and cover with hoe or a scratch with cultivator with hillers attached.

If a garden is put in in this way the cultivating is very much simplified. A cultivator run through the rows after each shower or, if dry weather each week, will hasten growth by preserving the moisture and keeping the weeds down.

When plants are ready to hoe and thin I spread a little nitrite of soda around each plant and mix with earth.

I might add that if our garden is on clover sod or oat stubble weeds are more easily kept in check also I leave carrots and beets quite thick when first thinning them and thin out as I use them in fall thus preventing them from getting too large and I think they are better quality when smaller.

Get seeds from some reliable seedsmen or better still put some of the best roots of each kind in the cellar with earth and leaves on and next year grow our own seed, as almost all seeds except cauliflower can be grown at home.

A part of row each of nasturtiums, sweet peas, asters and mignonette keeps the house in cut flowers and is a nice addition to a vegetable garden.

To make the ordinary hoe twice as easy to work with, cut the upper corners off and sharpen very sharp.—Mrs. Thos. Aulton.

Editor's Note:—The foregoing article on "A Kitchen Garden on Every Farm" was the first prize essay on this subject at the Port Elgin Exhibition last fall. We take pleasure in bringing this subject to the attention of our readers and we trust it will be the means of creating a more general interest in the all important Kitchen Garden.

Gardrum Prince.

Sire of the heifers, Bonnie Jean and Gardrum Snowstorm, shown in the other photo on this page. Champion Ayrshire bull at the 1911 Fredericton Exhibition. Bred by Hugh Montgomery Esq., Newlands Farm, Ayrshire, Scotland. Imported and owned by Retson Bros., East Court Farm, Truro, N. S.

Utilizing Dormant Natural Resources.

Editor Maritime Farmer:—

In your last issue I read a report, by T. E. Martin, of an average yield of 418 bushels potatoes per acre on an 18 acre field. I have also read, in the Farm Journal, another report of 500 bushels from one acre in Carbondale, Colorado.

These reports seem like fairy tales or fish stories to the farmer who is content with 150 or 200 bushels per acre and considers it a good crop.

To the above good results I wish to add a report of my own potato yields, right here in New Brunswick. In 1908 I produced 52 bushels of Carmen No. 1 potatoes from 12 square rods, which is equal to 676 bushels per acre. In 1909 I dug 43 bushels from tne same plot, which equals a yield of 559 bushels to the acre. This year, I dug 580 qushels fron one and one-quarter acres, making an average of 464 bushels.

In the results of 1908-9 no commercial fertilizer was used. The ground was well supplied with a composition of green fish, green bone, tankage, hard wood ashes and black muck. A liberal dressing of muck was also spread in the rows after the seeds were dropped. After the potatoes were dug, I plowed under a liberal dressing of barn yard manure. In 1909, no fertilizer of any kind was used.

The potatoes were sprayed three times each year. The muck used contains a little over 2 per cent of ammonia with slight traces of potash and phosphoric acid. This year's crop was grown on ground half of which had a heavy crop of clover plowed under last fall. A dressing of muck had been applied before the clover seed was sown. On the other half of the ground, which produced a crop of buckwneat the previous year, I used at the rate of 300 pounds of Bowker's potato fertilizer. The crop on the muck and clover patch was fully one-third better than where the fertilizer was used. One check row, where no fertilizer was used, was almost a failure, there being very few potatoes of marketable size. My potato yields are not credited around here except by those who have seen the plots.

I do not believe we have nearly reached the possible in potato culture and I am pressing on for better results. I believe the small yields of potatoes in New Brunswick are due to lack of careful cultivation, improper selection of seed and neglecting to spray rather than to a lack of plant food.

I am delighted with your report of the progress made in fruit growing in New Brunswick. It proves my theory of the absolute necessity for demonstrative instruction in agriculture.

I hope you are right in the prophecy "The cry from Macedonia will not be in vain." A most urgent cry from the eastern part af Macedonia has been before the throne of grace, at Fredericton for nearly four years for assistance in demonstration work, but so far it has not been recognized.

While I do not believe that the importance of fruit growing and pure

(Continued on page 131).

A Trio of Prize Winners

Gardrum Wee Nan, 3 years old; Gardrum Bonnie Jean, 2 years old; Gar drum Snowstorm, 1 year old, winners of three first, two second and 3 third prizes at the 1911 exhibitions. Bred by the late Geo. Retson, Esq., Scotland, Imported, owned and exhibited by Retson Bros., East Court Farm, Truro, N. S.

SUFFERED TERRIBLE PAINS OF INDIGESTION.

MILBURN'S LAXA-LIVER PILLS CURED HER.

Mrs. Wm. H. MacEwen, Mount Tryon, P.E.I., writes:—"For more than a year I suffered with all the terrible pains of indigestion, and my life was one of the greatest misery. It did not seem to make any difference whether I ate or not, the pains were always there, accompanied by a severe bloating and belching of wind. I did not even get relief at night, and sometimes hardly got a bit of sleep. In my misery I tried many remedies said to cure indigestion, but they did me not one particle of good, and I fully expected I would always be afflicted in this way. At this time my brother came home on a visit and urged me to try Milburn's Laxa-Liver Pills, and got me a few vials. By the time I had taken one vial I began to improve, and could eat with some relish. I was greatly cheered, and continued taking the pills until all traces of the trouble had disappeared, and I could once more eat all kinds of food without the slightest inconvenience. I am so fully convinced of their virtue as a family medicine, I have no hesitation in recommending them."

Price, 25 cents per vial or 5 vials for $1.00 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

HORTICULTURE.

Pollination of Fruits.

More than 100 years ago (about 1793) the German botanist, Sprengel, published a book in which he showed as a result of his observations the part insects play in the pollination of flowers. This work, many statements of which have been disputed, proved a stimulus for further work and observations in pollination of fruits. Sprengel himself probably did not understand how important cross-pollination is in nature.

Later, Andrew Knight, in England, carried on experiments in cross and self-fertilization of the pea, which showed that it was probably intended in nature that plants should be cross-fertilized.

Darwin was the first to establish clearly the true value of cross and show the interesting modifications of plants to aid in cross-pollination. In Darwin's "Origin of Species," cross-fertilization is especially emphasized. But it was not until some time later that much attention was paid to his theories.

M. B. Waite, of the Department of Agriculture, Washington, conducted some very valuable work with apples and pears about twelve years ago. Since that time many experiment stations and a few individuals have made systematic studies of this and many other plant-breeding problems.

Many plants are sterile, as far as their own pollen is concerned, but will readily respond to pollen from othet plabts. Some fifty plants are known to be thus self-sterile, but they will bear fruit if pollenized witn pollen from other plants. C. I. Lewis of the Oregon Experiment Station, Corvallis, Ore., has found that out of eighty-seven varieties of apples worked with, fifty-nine varieties were self-fertile, fifteen self-sterile, and thirteen varieties partially self-fertile.

Many varieties naturally tend to be sterile when limited to their own pollen and a knowledge of these is important in pollination work. A sterile variety is one that will not fertilize its ovule with its own pollen; the pollen of a fertile variety will do this. Investigators have found that climatic conditions affect the sterility and fertility of varieties, so that tests must be made in different climates.

The method employed to test this is to enclose the blossoms in Manila bags before they open, thus preventing any outside pollen from entering the flowers; and if the blossoms fail to set fruit after the pollen has been distributed on the stigmas, the flowers are said to be self-sterile.

Among self-sterile varieties of apples, according to Lewis, are Early Strawberry, Gravenstein, Haas, Jonathan, McMahon White, Pewaukee, Rome Beauty, Salome, Polman, Sweet Transcendent Crab, Wealthy and York Imperial.

Self-fertile: Baldwin, Grimes Golden Duchess, Scott's Winter, Shiawassee and Yellow Newtown.

Partly self-fertile: Ben Davis, Whitney and Yellow Transparent.

It has been found that certain varieties make better pollenizers of varieties than others. For example, better results were obtained by crossing Spitzenberg with either Janathan or Baldwin than with Newtown, and very much better than when self-pollenized. In determining the pollenizers for any variety, we must choose those tnat blossom at the same time as the one to be pollenized, and they should bear a large quantity of pollen, although it is not essential.

In planting an orchard, it is well to set alternately about two rows of a variety that is weak in pollen, and then two rows of one strong in pollen, etc. They must be close enough so that insects will visit each easily. Wind has been found to be a poor conductor of orchard pollen.

The floral envelopes of flowers tend to attract bees and insects, but they quite readily visit flowers not having conspicuous floral envelopes or where the envelopes are gone.

Climatic conditions have considerable influence on the blooming periods of fruits. In cold, frosty localities, varieties should be selected in reference to their blooming periods, and success will more often result.

The length of time that pollen will keep varies. It may safely be kept two or three weeks, and even longer if not allowed to ferment.

In the work of cross-pollenizing at Corwallis, it was shown that immediate effects of pollen on color of fruit were seen. Also the crossed apples were heavier, and the seed was also heavier. Many of the self-sterile varieties when self-pollenated were found to be seedless or had small seeds. When the self-fertile varieties were cross-pollenized, an improvement in size was noted.—Southern Fruit Grower.

Orange Rust.

Some sections have been badly struck with orange rust this year. Where prevalent it is the worst enemy of the blackberry and raspberry. It is widely distributed and is known in localities all over the continent.

In the early spring the under sides of the leaves of blackberries and raspberries often present a red or orange color. In every case it will be found that plants so attacked are much retarded in growth. The leaves are distorted, tend to curl, and take on a languid appearance.

Another stage of the same disease is often overlooked by the casual observer. It precedes the red rust by some weeks, and appears on the upper side of the leaves, and may be found the time the leaves unfold.

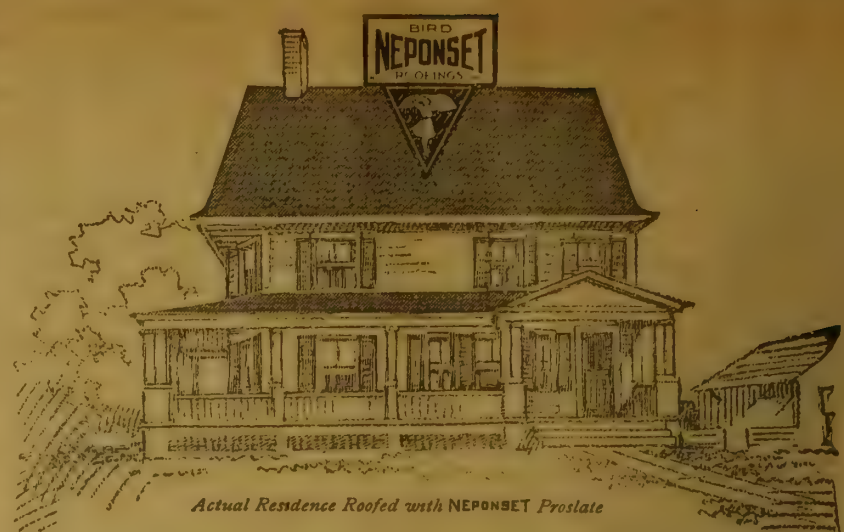
When a plant is once attacked nothing may be done to save it. The mycelium is within the tissue, and lives there from year to year during the life of the plant. Spraying is useless. Remove and burn all affected plants. They are of no value, and a great nuisance to all healthy plants.

Picking Apples.

A very great mistake is often made by picking winter apples too early. Not only is the fruit smaller in size, poorer in flavor and color, but it will not keep nearly as well as if it is allowed to ripen, nor will it be nearly as satisfactory to the customer. I know some very fine apples were almost ruined last fall by picking them too soon. When we pick before the fruit is ripe, we don't stop by having fruit of inferior quality, but we are certain to destroy a great many of the fruit buds already formed for the following season's crop. This is because the apples cling so tenaciously to the trees. There is very little danger of losing apples from heavy winds in the fall before they are ripe. I have often seen limbs torn from trees and carried 30 or 40 feet and yet be full of apples. Pick when fruit will separate from bearing twig without breaking stem of fruit. —J. H. B., N. J.

Apples for Germany.

A big trade with Germany in Nova Scotia apples has been opened up this season. Hitherto the apple exports from Halifax have been exclusively to London, Liverpool and Glasgow but chiefly to London. The British ports already this fall have taken about half a million barrels. Hamburg for the first time has taken apples from Nova Scotia province the exports so far this season being about eighty thousand barrels and shipments will continue. The German steamer Helent Mouzel which sailed October 28, for Hamburg, took 30,110 barrels. The Elder-Dempster steamer Canada Cape, which sailed for South Africa took 3,150 barrels.



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The provinces of New Brunswick and Prince Edward Island as well as the province of Nova Scotia needs a lot of agricultural research work. The finances of these two former provinces is not in as flourishing a state as would warrant the building and equipping of Provincial Agricultural Colleges, although no one disputes the fact that the money required for this work could not be spent to a better advantage.

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We know of no better way to interest a boy in the farm work than by allowing him to attend the Short courses at the Nova Scotia Agriculture College. Co-mingling with his fellow students from all parts of Maritime Canada will so enthuse him that the instructions so ably dispensed by Professor Cumming and his efficient staff will never be forgotten. Will you attend the 1912 Short Courses? Now is the time to act.

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This greasy imitation is the poorest one we have yet seen of the many that every Tom, Dick and Harry has tried to introduce.

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DAIRYING.

Cost of Milk Production.

Principal Dunstan, of the Agricultural College at Wye, Kent Co., England, has given out the results of an inquiry into the cost of winter feeding in milk production. He notes, as the chief factors in the cost the following: Food, litter, labor in feeding, attendance and milking, illness, calving risks, depreciation in value of cow, interest on capital, expenses (carriage, etc.) on sale of milk; while the returns are sale of milk, value of calf, and value of manure. Mr. Dunstan calls atte attention to the necessity for keeping individual milk records, and also of making a close study of the kinds and quantities of food that will enable a cow profitably to maintain her maximum of production as long as possible. Upon 66 farms, carrying 2,097 cows, it was found that the average cost of food per day during the period the cows were in milk was under 1s. on ten farms; from 1s. to 1s. 3d. on twenty-one farms; from 1s. 3d. to 1s. 6d. on twenty-three farms; and over 1s. 6d. in feeding on some farms. The cost per day was 7.8d., the highest 24.1d., and the average 14.88d. These figures show what wide variation there is in the cost of keep, and call attention to what must be extravagance in feeding on some farms! The cost of producing a gallon of milk on 59 farms was next considered. It was 6d. per gallon on 18 farms, from 6d. to 7d. on 11 farms, 7d. to 8d. on 17 farms, and over 8d. on 13 farms. The lowest cost per gallon was 3.83d., the highest 10.54d., and the average 6.58d. Mr. Dunstan points out that high feeding is not necessarily remunerative. In certain cases, where newly-calved cows are brought in, forced during their milking period, and then sold fat, the feeding has a double object, which is not that of an ordinary milk-producer. In such cases the high feeding may be justified, but in the case of an ordinary dairy cow, which is not a mere penny-in-the-slot machine, in which the more penny-worths of food you put in, the more gallons of milk you take out, it is necessary to find out her point of economical productiveness and keep her at that. When, however, the results (cost of food per day and per gallon) are combined, the inference is reached that, with a high milk yield, the cost of production of a gallon of milk is less than with a low milk yield. When the basic factor was the cost of food per gallon of milk, on 59 farms, with 1,924 cows, there was a variation all the way from 4.4d. to 9.2d. It is shown that the cost of food per gallon of milk is influenced more by the cost of the daily ration fed to the cow than by tke decrease in milk yield.

An examination of the figures from 60 farms and 2,038 cows shows that where an average quantity, 20.3 lbs. of hay was used on 22 farms and 519 cows, the daily cost of the cows' ration was 17.4d., and the cost of production of a gallon of milk 7.77d.; whereas, on 30 farms (1,324 cows), where the average quantity of hay was 7.8 pounds, these figures were 13d. and 6.16d., respectively, a reduction of 25 per cent. and 22.3 per cent, respectively. It is probable that the dairy farmer would get equally satisfactory milk yields, at a reduction of cost, if less long hay were fed, and if the bulky fodder consisted of sound straw and chop, with a foddering once a day of long hay.

In the case of concentrated foods, undoubtedly too much reliance is placed on the effects of these foods on both quantity and quality of milk yield, and too little accurate knowledge is obtained of the individuality and capabilities of the cow. Given a cow whose performances at the pail, as evidenced by the fat content and weight of her yield, are unsatisfactory, no amount of high feeding will make a substantial difference in these respects, and the money spent in concentrated foodstuffs will be wasted, unless her previous feeding has been ill-balanced and uneconomical. It is, of course, an axiom in the feeding of dairy stock with concentrated foods, that such foods should be reduced in quantity, according to the decline in the milk yield.

CONCLUSIONS.

Summing up the conclusions from this preliminary inquiry, the following points are worth consideration:

1. The exceedingly wide variation (a) in the cost of the daily ration fed; (b) in the cost of production per gallon of milk.

2. The relatively small number of farms on which it is a regular practice accurately to record milk yields (18 farms out of 60).

3. The unnecessarily large quantities of hay and roots which are fed (13 farms were found to feed more than 100 pounds of roots per cow per day).

It is not to be expected that a ration in the form of a "prescription" can be advocated, as one suitable for all cattle, all soils, and all conditions. Each man must judge for himself the foods which he can utilize to the best advantage and calculate the cost of his daily ration, watching his cows to ascertain whether the live weight is being greatly increased or decreased. But all this care will be of little use, unless the farmer at the same time keeps a record by daily or weekly weighing of the milk yield of each cow in his herd; and this practice cannot too often be insisted upon, as not only does the farmer thereby know which cows are profitable, but by saving calves from these cows got by a bull of good milking strain, he can improve the milk yield of his herd, and consequently his own profits, without any extra expenditure on food stuffs, merely causing a very little extra labor, which is, after the custom of weighing has been in force for a week or so, negligible, and which stimulates the milkers to a beneficial rivalry in comparing the performances of the cows with which they have to deal.

Mold on The Butter.

It is a well-known fact that mold-infected butter becomes unsalable in a comparatively short time, and involves not only heavy financial losses and unpleasant business relations, but also a serious loss of prestige and standing on the market of the person or firm who make and sell such butter. It is important, therefore, that everyone who handles butter, either as a manufacturer, or as a dealer, should know something about the nature of mold. He should know the conditions which are favorable and those which are unfavorable to its growth. Such knowledge will enable him not only to successfully check the scourge when present, but also prevent its further growth.

Science tells us that mold is a plant, though of a very low order. Like other plants, it grows from seed called spores. Mold spores, like many other micro-organisms, abound in the air around us, and, given favorable conditions and a suitable medium, they will settle and grow. Settle they will under favorable conditions, but unless they find a moist surface to rest upon, they are likely to be carried up again by aerial currents and will not grow. Dampness, bad ventilation, medium temperatures and absence of light favors the growth of mold, but the opposite conditions, i. e., dryness, good ventilation, high temperatures and light will retard or even stop its growth. If, and when, dryness, good ventilation, high temperatures and light are

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BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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present, and given the proper application in creamery work, the buttermaker need not worry very much about mold or its effects. Dryness, good ventilation and light in any work-room add greatly to the comfort and pleasure of the workers, so there should be no need of specially urging anyone to apply these conditions in creamery work for the purpose merely of preventing the growth of mold. These conditions should also be provided in the places used for storing supplies, such as salt, packages, parchment paper, etc. The use of lime for whitewashing walls and ceilings, and for scrubbing wooden utensils and floors, will be found very helpful in keeping the creamery and utensils in a sanitary condition, free from mold.

The high temperatures spoken of may be employed in the form of boiling water, with or without the addition of lime or washing soda, for the final scalding of floors and utensils, and also in the daily re-boiling of the brine in which the parchment liners and print wrappers are prepared. In this connection, let me refer you to note 10, attached to a copy of dairy-inspection form, which reads: All parchment liners and wrappers prepared by being immersed for at least six hours in a solution of salt, re-boiled each time fresh waters are put in; butter-box material to receive a thin, even coating of paraffin wax, and to be carefully nailed. All boxes to be thoroughly rinsed out and lined before using.

Lack of cleanliness in the place where it was made is undoubtedly the most frequent cause of mold in or on butter, or it may be to carelessness in the storing and preparation of the packages—boxes, parchment paper, and coverings—prior to using. A frequent, thorough and critical inspection of the work and storage rooms and utensils at the creamery will reveal the presence of mold before it gets a chance to do much damage. Knowing how to combat it, the person in charge must shoulder the responsibility of dealing with it promptly and vigorously. In the light of what we have said in the foregoing, the following recommendations are made respecting the care and preparation of butter packages:

1. The material used in the making of butter boxes should be dry and well seasoned, and the boxes stored in a dry, clean and well-ventilated storage. The inner surface of every box should be evenly coated with paraffin wax. The jute bags, where such are used for covering the butter packages in shipment, and the parchment paper-box liners, and print wrappers, should also be stored in a dry, clean, and well-ventilated place.

2. The parchment papers should be immersed for at least six hours before using in a receptacle containing brine made of salt and water—just strong enough to float a potato. The brine should be re-boiled after a fresh batch of paper is put into it, in order to destroy by heat any mold spores adhering to the paper. An indurated fibre tub is about the best thing to use for boiling the brine in which the parchment paper is prepared.—C. Marker, Dairy Commissioner for Alberta.

The authorities never advise using buttermilk for a culture or starter. They say, use a culture which you know has a clean, pleasant, sharp acid flavor and smell, which may consist of a pint or two of sour cream from your previous churning, or the same amount of good flavored skim milk.

It is claimed if the above method is followed the product would be an article second to none, and one that would command a price that well pays for the little trouble expended in following the instructions.—Dr. Ward.

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The GILLETTE SAFETY RAZOR

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For the man who shaves, you couldn't select a more acceptable gift than this world-famous razor. Progressive men everywhere are using it.

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AMERICAN SEPARATOR CO., BOX 1212, BAINBRIDGE, N. Y

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

Guernsey Cows' Records of Performance

We have the following records from Howard W. Corning, M. P. P., Hillside Farm, Yarmouth County, N. S., who is the youngest member in the Nova Scotia Legislative Assembly, and one of the most progressive dairy farmers in the Maritime Provinces. Mr. Corning is a breeder of pure bred Guernseys and his herd is always quite prominent at the fall fairs.

The cost of food consumed by the Guernsey cows that qualified in the Record of Performance was charged as follows:—Hay, $10.00 per ton; turnips, 10 cents per bushel; pasture, $2.00 per month and market prices for all grain feed consumed. The calves, skimmilk and manure are not credited in these records but are left to offset labor, interest on investment and depreciation on buildings and stock.

How many of our farmer readers keep track of their cows in this way?

"Dorothy's Heiress" Reg. No., 120; R. of P. No., 1; Sire, "Island Heirloom of Glenview"; Reg. No., 9020; Dam, "Rhoneview's Dorothy Dodd"; Reg. No., 15771; Owner, Howard W. Corning, Chegoggin, N. S.; Breeder, D. H. Mott, St. John, N. B.; Class, 4 year old; Age at commencement of test, 4 years, 236 days. Date test commenced, 25th day of October 1909. Date of calving, 20th day of October 1909. Date of previous calving, 4th day of August 1908. Date of calving following test, 22nd day of December 1910.

Month	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
January ...	787.	...43.603...	$3.28...	$5.89
February...	682.5	...39.955...	$3.47...	$5.30
March ...	708.5	...43.927...	$4.64...	$5.89
April ...	668.5	...41.218...	$2.88...	$5.00
May ...	683.5	...41.010...	$2.94...	$3.55
June ...	671.5	...40.290...	$1.90...	$2.00
July ...	670.5	...41.984...	$1.98...	$2.00
August ...	608.5	...38.304...	$1.98...	$2.00
Sept. ...	475.	...41.808...	$1.60...	$2.00
Oct. '10 ...	238.5	...23.373...	.30...	$1.50
Oct. '09 ...	136.	... 8.957...	.36...	.98
Nov. ...	884.5	...46.879...	$2.82...	$5.70
Dec. ...	838.5	...44.441...	$3.07...	$5.89
			$31.22	$48.40

Production required for registration, 7649 lbs. Milk; 306 lbs. Fat Total production, 8085.5 lbs. Milk, 495.747 lbs. Fat. Average per cent of Fat, 6.1313; No. of days in Milk, 365.

Total cost of feed, $79.62. Value of butter sold, 578 lbs. at 25 cents per lb., $144.50. Profit $64.88.

"Lady Heiress of Dentonia", Reg. No., 18171; R. of P., No. 2; Sire "Island Hurlsom of Dentonia"; Reg. No. 7324; Dam, "Island Lady of Dentonia" Reg. No., 13847; Owner, Howard W. Corning, Chegoggin, N. S.; Breeder, Mrs. W. E. H. Massey, Coleman, Ont. Class, Mature; Age at commencement of test, 6 years. Date test commenced, 4th day of November 1909. Date of calving, 23rd day of October 1909. Date of previous calving, 4th day of September 1908. Date of calving following test, 22nd day of December 1910.

Month	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
January ...	874.5	...41.892...	$3.65...	$5.89
February...	753.5	...31.917...	$3.47...	$5.30
March ...	796.	...38.208...	$4.64...	$5.89
April ...	744.	...35.836...	$3.78...	$5.70
May ...	766.	...37.534...	$2.94...	$3.45
June ...	785.	...38.465...	$1.98...	$2.00
July ...	669.	...32.781...	$1.98...	$2.00
August ...	719.	...35.231...	$1.98...	$2.00
Sept. ...	683.	...35.995...	$1.80...	$2.00
October ...	546.	...29.484...	$1.21...	$2.00
Nov. '10 ...	39.	... 2.106...	$2.69...	$5.13
Nov. '09 ...	655.	...30.13 ...		
Dec. ...	895.	...41.17 ...	$3.07...	$5.89
			$33.19	$47.25

Production required for registration 8000 lbs. Milk; 320 lbs. Fat.

Dorothy's Heiress, Lady Heiress of Dentonia, Beauty of Hillside, Dairymaid of Hillside, Buttercup of Hillside, Dairy Queen of Hillside.

Owned by H. W. Corning, Cheggogin, N. S.

Total production, 8925.0 lbs. Milk, 430.7475 lbs. Fat. Average per cent of Fat, 4.8263; No of days in Milk 365.

Total cost of feed, $80.44. Value of butter sold, 530 lbs. at 25 cents per lb., $125.75. Profit $45.31.

"Beauty of Hillside" Reg. No., 64; R. of P. No., 3; Sire, "Dolly's Nereus" Reg. No., 9202; Dam, "Beauty of Eastview" Reg. No., 17995; Owner, Howard W. Corning, Chegoggin N. S.; Breeder, Howard W. Corning, Chegoggin, N. S.; Class, 3 year old; Age at commencement of test, 3 years, 99 days. Date test commenced, 10th day of December, 1909. Date of calving, 7th day of December, 1909. Date of previous calving, 10th day of October, 1908. Date of calving following test, 13th day of January 1911.

Month	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
January ...	979.5	...44.994...	$3.65...	$5.89
February...	840.5	...40.024...	$3.91...	$4.80
March ...	775.5	...40.326...	$4.73...	$5.42
April ...	711.5	...37.116...	$3.78...	$5.70
May ...	713.	...37.789...	$2.94...	$3.45
June ...	672.5	...35.643...	$1.98...	$2.00
July ...	653.	...34.609...	$1.98...	$2.00
August ...	628.	...33.284...	$1.98...	$2.00
Sept. ...	506.5	...33.033...	$1.98...	$2.00
October ...	302.	...21.140		
Dec. ...	612.5	...26.953...	$1.68...	$3.29
			$28.44	$37.85

Production required for registration, 6247.5 lbs. Milk; 250 lbs. Fat. Totat production, 7394.5 lbs. Milk, 384.9060 lbs. Fat. Average per cent of Fat, 5.20; No. of days in Milk 326.

Total cost of feed, $66.29. Value of butter sold, 448 lbs. at 25 cents per lb., $112.00. Profit $45.71.

"Dairymaid of Hillside" Reg. No., 125; R. of P. No., 4; Sire, "Dolly's Nereus" Reg. No., 9202; Dam, "Rosaland of Eastview" Reg. No., 17997; Owner, Howard W. Corning, Chegoggin, N. S.; Breeder, Howard W. Corning, Chegoggin, N. S.; Class, 2 year old; Age at commencement of test, 2 years, 260 days. Date test commenced, 15th day of December, 1909. Date of calving, 11th day of December 1909. Date of calving following test, 1st day of February, 1911.

Month	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
January ...	914.5	...36.102...	$3.65...	$5.89
February...	828.5	...34.797...	$3.47...	$4.80
March ...	831.	...41.55 ...	$4.73...	$5.42
April ...	802.5	...40.08 ...	$2.88...	$5.70
May ...	831.	...40.719...	$2.94...	$3.55
June ...	822.	...40.278...	$1.98...	$2.00
July ...	836.	...40.964...	$1.98...	$2.00
August ...	839.5	...41.136...	$1.98...	$2.00
Sept. ...	771.5	...45.22 ...	$1.98...	$2.00
October ...	678.	...42.036...	$1.21...	$2.00
Nov. ...	509.5	...31.589...	$1.20...	$5.25
Dec. '10 ...	209.5	...12.989...		...$2.66
Dec. ...	488.5	...16.748...	$1.11...	$1.74
			$29.11	$45.01

Production required for registration, 5715 lbs. Milk; 228.6 lbs. Fat. Total production, 9352 lbs. Milk, 464.2055 lbs. Fat. Average per cent of Fat, 4.96; No. of days in Milk, 365.

Total cost of feed, $74.12. Value of butter sold, 541 lbs. at 25 cents per lb., $135.25. Profit $61.13.

"Buttercup of Hillside" Reg. No., 217; R. of P. No. 5; Sire, "Pilot of Hillside" Reg. No., 62; Dam, "Pansy of Hillside" Reg. No., 65; Owner, Howard W. Corning, Chegoggin, N. S.; Breeder, Howard W. Corning, Chegoggin, N. S.; Class, 2 year old; Age at commencement of test 2 years, 62 days. Date test commenced, 17th day of January, 1910. Date of calving, 16th day of January, 1910.

Date of calving following test, 2nd day of March, 1911.

Mouth	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
Jan. '11 ...	176.5	...12.002...		
Jan. '10 ...	324.	...14.904...	$1.08...	$1.97
February...	695.	...31.97 ...	$3.46...	$4.30
March ...	708.	...36.108...	$4.73...	$5.42
April ...	652.	...33.252...	$2.70...	$4.90
May ...	669.5	...33.475...	$2.94...	$3.55
June ...	647.	...32.35 ...	$1.98...	$2.00
July ...	629.5	...32.569...	$1.98...	$2.00
August ...	611.5	...31.798...	$1.98...	$2.00
Sept. ...	594.	...40.073...	$1.98...	$2.00
October ...	535.5	...39.627...	$1.21...	$2.00
Nov. ...	432.	...30.252...	$1.20...	$5.25
Dec. ...	382.	...25.976...	.56...	$4.82
			$25.80	$40.21

Production required for registration, 5170 lbs. Milk; 206.8 lbs. Fat. Total production, 7056.5 lbs. Milk, 394.356 lbs. Fat. Average per cent of Fat, 5.58; No. of days in Milk, 365.

Total cost of feed, $66.01. Value of butter sold, 460 lbs. at 25 cents per lb., $115.00. Profit $48.99.

(Continued on page 126 .

The Tested Sire.

A short time ago I visited a dairyman who has a large five-year-old bull of excellent breeding and some of his get give every promise of developing into splendid individuals.

TRAMPED 60 MILES TO SAVE HIS CHUM

Prospector at Larder Lake Got Back with GIN PILLS Just in Time.

LARDER LAKE, ONT., MARCH 26th, 1911.

"I am writing to tell you the good GIN PILLS did me. I had been suffering for some time with my Kidneys and Urine. I was constantly passing water which was very scanty, sometimes as many as thirty times a day. Each time, the pain was something awful and no rest at night. I began to feel worn out. I heard of your GIN PILLS and decided to give them a trial at once. I sent my chum out to get them (about 60 miles) —and I am pleased to inform you that in less than six hours, I felt relief. In two days, the pain had left me altogether. I took about half a box and to-day I feel as well as ever and my kidneys are acting quite natural again. Thanking you for the pills which I always intend to keep by me. Yours respectfully,

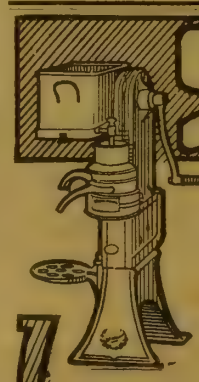
SID CASTLEMAN.

WELCOME RELIEF.

We have never received a letter that pleased us more than this one. When we realize what Gin Pills meant to this sick man, lying on a bed of pain miles away from a doctor in the frozen north, and how they helped him, we feel that our efforts to prepare a standard preparation for Kidney and Bladder Troubles have been crowned with success.

GIN PILLS is a wonderful solvent for uric acid. It instantly neutralizes the hot, scalding urine, allays the burning pain, soothes the irritated bladder and heals the kidneys. Take GIN PILLS on our positive guarantee of a cure or your money back. 50c. a box, 6 for $2.50. Free sample, if you write mentioning this paper, The National Drug & Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS are a positive cure for Constipation, Biliousness, Sick Headache and Sour Stomach. Excellent for Indigestion. 25c. a box. 112



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Embodies the points of advantage in all other Separators—
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Costs very little more than ordinary Separators
Saves 10 to 25 per cent. over all others.

It will pay you to investigate

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CANADA'S Largest Fur Factory is the connecting link between the Trapper and YOU. Here we manufacture the famous PAQUET FURS, which are recognized as the Standard of Quality from Halifax to Vancouver.

And when we say "manufacture" we mean just that. We do not buy the skins ready dressed and dyed, and make them up at an enormous expense which you must help to pay. If we did, we'd have nothing unusual to talk about. We buy the skins in the raw—dress them and dye them ourselves—and then make them up in our own workrooms. This is the ONLY Fur Factory in AMERICA where every processes, from dressing of the raw skins to the finishing of the Fur Piece or Garment, is in operation under the one roof.

We employ only the most modern process of dyeing and finishing. Every member of our vast army of workers is an expert in his line.

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containing 80 pages of illustrations and prices of PAQUET FURS, will be sent to you FREE upon request. This is the most beautiful Fur catalogue ever published in Canada.

Write NOW !

This is because Fur has been to their fathers and grandfathers what it is to them—a life study. It stands to reason that with all our advantages we should turn out the very best Furs on the Canadian market, doesn't it ? And that we do is testified to by the thousands of Canadians who have spent to date more than EIGHT MILLION DOLLARS for PAQUET FURS. Quite a tidy little sum, isn't it ?

And what's more, every one of these purchasers is a satisfied customer.

In the past PAQUET FURS have been sold through the leading fur stores of Canada. The demand has now reached a point where more adequate distributing facilities are an absolute necessity. For this reason we have decided upon this new policy of selling direct to YOU at actual wholesale prices. This will enable us to keep our immense Fur Factory running at full capacity all the year round. It will also enable YOU to buy your furs at the lowest prices ever known in Canada.

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THE PAQUET COMPANY LIMITED.

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The Set Illustrated $25.00

No. 6145—Lady's "Olympic" Stole in Black Russian Lynx (perfect imitation of genuine Black Lynx), lined with plain Satin; Special **$12.50**

No. 2102—Lady's "Teddy" Muff to match, Black Russian Lynx, Satin lined, Special **$12.50**

He told me he will put the old bull away, as he is getting ugly and dangerous about the place. A little fellow of about a year and a half is to replace the big one. This is one of the serious mistakes that so many dairymen and not a few breeders make. When a sire has thus proved himself, he is of great value and should not be sacrificed simply because he is ill-tempered. All big bulls are dangerous and the sooner everyone learns this, the better. The gentle bull is the one that is more dangerous and often gets his victim. I have seen quite a few males sacrificed simply because they were ill-tempered that could not have been bought from a wise breeder for big money. It is a mistake to breed from an immature sire. In natural conditions with the wild animals, the strongest mature male is the progenitor of his race. This is one of the laws of natural selection that helps to perpetuate the best in the species. In nature the fittest survives and under artificial conditions we should not allow the infittest to survive. Do not forget the sire is half the herd and you cannot afford to use an untested one when you have one that has proved himself strongly prepotent along desirable lines.—National Stackman and Farmer.

THE HORSE.

Bitting Horses.

The rule in biting horses snould always be to bit them with ab easy or mild bit, writes a correspondent of an English publication. Horses that have been properly broken in and mouthed do not require severe bitting, and go best in a mild bit, whilst for breaking in a young horse an easy bit is essential, a severe one being quite out of place, as the latter will inevitably spoil the animal's mouth.

A mild bit—either curb or snaffle—requires to have a fairly thick mouthpiece. A bit with a thin mouthpiece is more or less severe, because the latter has a cutting action, which tends to hurt the horse. The thinner the mouthpiece of a bit is, the more severe is the latter in its effect upon the horse's mouth. A twisted form of the mouthpiece or any grooving on it adds to the severity of a bit, as the ridges on a twisted mouthpiece and the edges of the grooves on a grooved one tend to hurt the mouth of the horse by cutting into the flesh. A smooth mouthpiece is the easiest and most comfortable for a horse, and it is therefore the best and most suitable.

In curb bits the port must not be unduly high, as a high port means a severe bit. The port requires to be quite low in a mild or easy curb bit. Bits with high ports are neither sensible nor useful under any circumstances and should not be used. A mouthpiece with a very low port is the best, and it is practically as mild and as easy as a straight mouthpiece (having no port), which last is commonly seen in the Liverpool driving bit.

In the case of snaffles, the form or shape of the mouthpiece is the sole factor which determines the mildness or severity of the bit. But in the case of a curb bit its action on the horse's mouth is largely dependent upon the length of the lower cheek-ends. Tne longer these latter are in a curb bit the more severe is it in its effects, because the amount of leverage that is exerted by the bit increases proportionately with the increase in the length of the lower cheek-ends. It is, therefore, essential that a curb bit should have comparatively short lower cheek-ends if it is to be mild and easy. In the case of riding bits, the lower ends of the cheeks should not be more than twice as long as the upper ends (including the top eyes, and they may well be somewhat shorter. When the lower cheek-ends are longer than this the bit is needlessly severe for ordinary use.

The action of a curb bit is, of course, to some extent, affected by the way in which the curb chain is hooked in. A tight curb chain adds to the severity of a bit, whilst the more loosely the former is adjusted, the less severe is the action of the bit. A properly adjusted curb chain (being neither too tight nor unduly slack) should allow of two or three fingers being placed between it and the horse's jaw.

Care of the Aged Horse.

Some horses never seem to grow old, but are able to perform much work up to the age of twenty-five years, declared a writer in the "American Cultivator." With proper care and treatment the old horse is able to stand a great deal of work, and for light work is worth just as much as a younger animal. If offered for sale of course the old norse will not bring a very large price.

But if horses are to be serviceable until a good old age they must receive the very best of care and treatment at all times. They must not be neglected at any time, whether working or idle.

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevent the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :—I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.
March 28th, 1911.

Hillsboro, N. S.

MESSRS FRASER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.

FOR SALE BY ALL DEALERS

Manufacturers: FRASER THORNTON & CO., Cookshire, Que.

The old horse does not always get proper attention in regard to feed. He cannot masticate some kinds of food, especially corn, thoroughly, nor can he eat his ration in as short a time as can a young animal whose teeth are sound. So, unless some ground grain is provided for him and he is given sufficient time to eat his meals when being worked, he will fail to get the full benefit of his food and in a short time will begin to lose flesh and strength.

When the horse begins to grow old give him just as good care as you did when he was young, and he will more than pay for his feed and care by the work which he can perform.

Watering Horses After Feeding.

It is generally understood that a horse should not be permitted to drink an excessively large quantity of water immediately after being fed, and more especially after a feed of grain. Most people believe this to be true, but few stop to ask themselves why it is the case. The horse's stomach is, comparatively speaking, quite small, and the result of its being filled with water when it is already holding the food material, much of which is only very imperfectly masticated, is to flush some of the grain out into the duodenum or small intestine, without its having first been acted upon by the digestive juices of the stomach, or being even reduced by the action of the stomach, so that the intestinal juices can exert their digestive action to the fullest extent. The opening from the horse's stomach is directly into the small intestine, and thus the food has not so many and so good chances of being digested as is the case with ruminants. It is necessary that the food remain some time in the horse's stomach before being passed on to the intestine, if anything like all the nutriment is to be obtained from it. The physical action of the stomach, together with the digestive fermentations which take place therein, requires time to be properly accomplished, and, as the stomach is the seat of the digestion, the intestinal juices being chiefly concerned in acting upon any partiglly-digested material, or any material that may have escaped the juices of the anterior and middle portions of the alimentary tract, it is important that it gets sufficient time to do its work properly. The intestinal juices are next to powerless when it comes to acting on whole or poorly-masticated grain which has been hurried through the stomach by the flow of water to the intestines. Water is not held in the stomach long. After feeding, the horse's stomach is usually full of food, which crowds the water out into the intestines, and with it undigested grain is often carried. Even if the grain is poorly masticated, if the stomach has time it will partly digest it and prepare it for the action of the ferments and enzymes in the intestines; but where the stomach is not permitted to do its work, much of the food material is lost. A little water some time after feeding is not very harmful, but large quantities very shortly after a grain feed are believed to be harmful and wasteful. It is better to water before feeding.

Breeding Mares.

A writer in the Live-stock Journal states that age has more to do with the production of foals than most breeders are willing to admit. Two-year-old fillies, if well matured and sufficiently developed, breed as readily as mares of any age. Doubtless some have wondered why it is difficult to get three or four-year-old mares with foal, and why it is that the number of foals produced by mares of this age is so small. The as the teeth, which are troublesome at this age, and which, it is said, cause of their not breeding is given cause an inflamed condition of the mucous membranes. Mares between the ages of seven and eleven years produce the largest number of foals, and comparatively few foals are produced by mares over fourteen years of age, and these few by those which have been kept breeding continuously. It is important that an old mare be kept breeding, for if she is, she will likely remain a breeder for many years. Allowing them to remain open for a year is risky, and it will often be found a difficult matter to breed them again. Horse-breeders cannot afford to let the mares miss a year, because very often, especially if they are aged mares, they may never breed again.

Vicious Stallions.

The best-tempered and kindest of stallions are thase that are given the privilege of companionship. It is the stallion that is shut up in solitary confinement, seeing his kind at infrequent intervals and receiving little attention from his owner or caretaker, that develops a bad temper which sometimes reaches the actually vicious stage. The door of a stallion's box stall should be so arranged that he can see all that is going on around him and feel that he is not shut up and forgotten. Under such conditions a stallion will seldom become an ill-tempered, vicious brute.—Breeder and Sportsman.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

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Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blisters for Spavins, Ringbones, lumps or bunches of any kind.

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POULTRY.

Turkey Raising Profitable.

Of all domestic fowls, turkeys are doubtless the most difficult to raise on the farm and the hardest to control by the housewife, who usually has charge of this branch of industry.

In the first place, one should have good, matured birds to begin the business with, and they should be of some good breed and be good types of that breed. The gobbler should be at least two years old and the hens anywhere from two to six years old, as we find that stronger and constitutionally better birds are raised from birds of mature age than from young ones. The next thing is to see to the mating of these at the proper time. This is easily done by having about three or four hens to one tom. In the mating season one hen should be placed in the pen with a tom at a time. She may remain there a half day, or a day, as one thinks best, then be followed by another the next day, and so on. The food of all these turkeys should be wholesome and nourishing all the time, with plenty of water in clean basins, and all filth cleaned up daily.

The next thing after mating properly is to look after the eggs. And as the turkey seeks a nesting place in seclusion and on the ground she should have a place of this kind prepared in her pen, with plenty of fine hay for her nest and shelter from the cold rains that often fall at this season of the year. The eggs must be looked after daily, or hourly, in cold weather, and picked up as soon as the hen has left the nest. I am persuaded that eggs getting chilled is the cause of so many not hatching. As soon as picked up the eggs should be marked with the date, wrapped in tissue paper and then in flannel rags and placed somewhere that is not too cold nor too hot. The earlier we put the eggs to setting the better.

They may be set under the turkey hen, but this is not advisable, as she would better be kept laying until the end of the season. They may be set under the common hen, which often makes the better mother for them. This, however, hatches them in a small way, as a common hen can cover only a few eggs; but if they are to be used we should set several of them at once and when hatched give all the young to the same hen. If we resort to the incubator it is best to set some hens at the same time. and then give all the poults to a hen as soon as hatched. A hen of some kind is almost indispensable to their welfare. As soon as they are hatched they should be removed from the nest and looked over carefully for mites or lice; and if those are found the hen may be greased lightly with a little mixture of lard, sulphur and a small quantity of carbolic acid, very weak. The young ones will get enough of this from her to keep them from lice. Water of the purest and cleanest should be placed before them for they will learn quite early to drink when they have a hen to lead them to the water. After some hours food may be placed before them.

I find that at first boiled eggs mixed with boiled Irish potatoes is perhaps the best food that I have tried, as in the incipient state his food has been egg alone, and this mixture lets him down off the egg food lightly. The food in a short time should consist of corn bread well cooked and never in the raw or dough state. But just as soon as they are able to run about well they must have a lot in which is short and tender grass on which to feed. Here again comes trouble. If they are allowed to run on this when the grass is wet they are almost sure to die of exposure. So care must be taken to keep them on this grass all the time when it is dry and to keep them off it when it is wet. We see that in this alone is a lot of trouble and worry.

And here comes the food question again. As they grow larger they eat almost everything within reach that is edible. The cornbread food may be kept up, and may often be soaked in fresh sweet milk. Cracked wheat, corn grits and ground oats may also be supplied; for they at this time are perfect gormandizers. The lot may be enlarged and if it takes in some woods all the better, for here they get many things that they feed on in the wild state. The trees also protect them from the heat of the sun and hide them from hawks. A large bank of sand should be placed in the lot for them to wallow in and sulphur may be sprinkled in this from time to time with good results.

In this way a large per cent. of them may be raised, but this is not an ironclad method of raising them. The one who follows the business will find it a source of trouble, with some expense, but while turkeys are at the present prices the expense is comparatively small if we can raise the birds to maturity without too great a loss by death.—John Keith. in Tribune-Farmer.

FEATHERS WANTED.

We pay highest prices for all kinds, feathers, furs, hides, wool, beeswax, tallow, etc. Prompt returns. Send for price list.

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Charcoal.

Charcoal is used for poultry for its purifying properties. It is supposed to act as an absorbent and destroyer of gases produced in the digestive tract when the system is out of order, and also of impurities in the blood. It is used in both the granulated and pulverized forms. The granulated is usually fed in hoppers, the other mixed with mashes. I consider the granulated preferable, because when fed thus the fowls take only what they wish, fed in mashes they are apt after a little while to reject the mash containing charcoal.

Sprouted Oats.

One of the cheapest foods for poultry is the sprouted oat. You will get about three times the feeding value from a sprouted oat as from an ordinary dry oat.

The starch in the oat is converted into dextrine and sugar. You have heard of the patent breakfast cereals; well, here you have the idea for your poultry.

Ten pounds of oats will make about 35 to 40 lbs. when sprouted. Simply put some oats into shallow boxes, about one and a half ioches deep, keep moist (not water-logged), and in a week or two, according to the weather they will sprout up and be fit for use. Now I am talking t men who know more about growing oats than myself. Can any reader suggest a good idea to sprout the oats in the winter? Let us have a letter or two on the subject. Maritime Farmer columns are open to readers, and interesting letters are always welcome on any subject of interest. May be you have found out something that other people have not noticed; let us have the news for the benefit of the poultry industry.

Keep the Poultry House Free From Vermin.

You cannot profitably raise chickens and lice in the same house. If the fowls have body lice, dust them with some good insecticide, renovate and fumigate the house thoroughly, paint the roosts, nest boxes and furnishings with a good lice paint, sprinkle a generous amount of air-slaked lime on the dropping boards, provide new litter and nesting material, and your efforts will be rewarded in increased egg production and general thrift of your fowls.

Comb Diseases.

Most comb diseases can be quickly cured by the application of boracic ointment. If this fails mercurial ointment must be used.

Scaly Legs.

This is a parasitic disease. It consists in eruptions formed beneath the scales caused by the parasites burrowing there. It is a contagious disease, annoying but not particularly dangerous. It must be remedied at once or you will have trouble.

Wash the legs of all birds suffering from scaly leg with hot water and soft soap, dry, then paint legs up to hocks with coal oil, or hold legs in a tin of oil for two minutes; be very careful not to go above hocks, if you let any oil get on skin under feathers it will blister the bird. Now wipe legs (not quite dry(and apply sulphur ointment every night for a week to legs. Then again wash with soap and water. All the powder excrescence should now come off if you use a stiff brush. Be sure to disinfect perches to stamp out the disease.

Liver Troubles.

When a hen goes purple or black in comb, mopy, and lame in one leg, immediately give a good dose, half a teaspoonful of Epsom salts in warm water, or plenty af charcoal. These are symptoms of liver disorder.

"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used." writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactary." For sale by All Dealers.

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The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT No COMPETITORS !

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
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BONY TUMORS,
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POLL EVIL,
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REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

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This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Old Doctor Cheerfulness.

Twenty drops of sunshine, mix 'em all together
Take 'em with a mile or more of bright, fresh weather;
Twenty drops of smiling heart, laughter ringing out—
Soon we'll have you well enough to up and be about!

Half a mile of exercise on the bloomy highway,
With a little sparkling eye lifted to the skyway;
Forty grains of atmosphere, with a bird song in it—
Why, you're convalescing, lad; better every minute!

Dozen kindly deeds a day, helping some one's trouble,
Break and blow a mile away like an airy bubble;
Good, you're getting on so fine soon be time to leave you!
To the lips o' love-of-life waiting to receive you!

Morning-glory plaster, plain, on your rheumatism;
Little glimpse of morning gold through love's azure prism—
Why, you'r growing young again!
Say, you're well all over,
All you need's a buttercup and a field of clover!—Folger McKinsey.

Love's Barrie

(Continued from last issue).

CHAPTER XII.

NOBLESSE OBLIGE.

"Please, ma'am, that's Mrs. Hayes coom to caa."

Helen, dozing in the depths of the big easy chair by the study fire, sprang up somewhat confusedly. She had been dreaming of impossible things, and a strange nightmare followed her awakening.

She had long, busy mornings in Midcar Rectory, trying to create beauty where none existed. The staring wall papers, the crude garish colours, the lack of harmony in the house, made her tired. The study, with its plain-coloured drugget, its green distempered walls, and its friendly bookshelves, was the only place where her eye could rest. But she had started bravely; she would make a home. The poor little makeshifts which Jane had contrived to hide the poverty, filled her with compassion. They were so pathetic and so wholly inadequate. The drawing-room she had not yet found courage for. She was waiting the quarterly payment of her allowance to spend it there. It had a cheap carpet of coarse tapestry, patterned with coloured roses on a green ground; a round table stood in the middle of the pattern, covered with a green cloth, and having books and albums laid round it at stated intervals; while a case of stuffed birds, relic of the Somerset house, adorned the centre. On the white marble mantelpiece a small gilt clock was flanked by two ornaments of jingling glass, with crimson base. Some family photographs, enlarged from the original negatives, and having a strange blurred effect, were on the walls. They represented mostly uncomfortable-looking persons of uncertain age, wearing unnatural expressions, and obviously conscious of unusual clothes. A fat gentleman wearing a smirk fingered an immense gold fob which dangled below an embroidered waistcoat. The furniture was light-coloured walnut, upholstered in green rep, and there was not a single safe or inviting-looking chair.

It was all so hideously, gratuitously ugly, that Helen had already decided that nothing but a bonfire and a clear field would help her out. She rubbed her eyes and fixed Hannah's stolid lace with rather a searching glance.

"Where have you put her, Hannah?"

"In the drawin'-room of course, ma'am. Miss Jane told me that wur th' place for ivvery wan what coom to caa."

"Go and bring her down here."

"Yus, ma'am."

Hannah departed willingly enough. She liked the new mistress, albeit her ways were not the ways of her dear Miss Jane. As she had confided already to Ann Coyne, "It wur loike goin' oot into service a'a ovver agen."

Helen straightened her shoulders, pulled down her neat flannel blouse, and stole a glance into the pretty old-fashioned Chippendale glass, which the Rector had picked up in a moorland cottage and hung against his study wall. Her white linen collar was immaculate, her black tie neat and becoming. She wore no ornament but the shining circlet of her wedding-ring.

She took a step forward as Hannah's heavy foot came stumping down the stair.

"I am very sorry that you should have been shown into a room without a fire," she said politely, as the rich and ample vision of Mrs. Hayes filled the doorway. The odour of fine perfume and sable furs swept into the room, and seemed to fill it. Mrs. Hayes, secretly resenting the fact that Mrs. Secretan had not herself fetched her from the green drawing-room, was prepared to be hostile, or at least a little distant. But Helen seemed perfectly unconscious. Her clothes were plain, but she wore them with an indescribable air. The poise of her small head was proud and high; there was breeding in the turn of her neck, in the perfect ease of her manner. Mrs. Hayes realised that here her patronage might fail.

"It is very kind of you to call," said Helen courteously as she sat a chair. "Won't you come nearer the fire? I think the day is very cold, but I have been so very busy all the morning, I only seemed to feel it when I sat down by the fire. I rather think I had fallen asleep."

"I am sorry if I have disturbed you," said Mrs. Hayes graciously, as she spread herself on the offered chair. At the same moment she threw back her rich sables and revealed the lace-trimmed front of her elaborate gown, and the large diamond crescent sparkling on her breast. Her bonnet was adorned by an enormous upstanding osprey, which gave her an aggressive look. She had a comely enough face, but it had grown a little hard and coarse. Her steely grey eyes breathed criticism rather that kindliness. Helen had not liked her looks when she had beheld her at a distance on Sunday morning, and she did not feel more drawn to her now.

"My daughter would have come with me, only she had a feverish cold, and I made her keep her room. She is such a foolish child; she is always about in the cottages nursing sick babies and waiting on ailing mothers. I live in mortal dread of her catching something; she's just like her father, she loves poor people and is never happier than when messing about their homes, though I keep telling her they are the most ungrateful set on earth."

"If they are like our Midcar poor people, I find them very interesting, and they have been so kind to me, you can't think. Did you ever know such a dear as that old Ann Coyne at the shop?"

"There, now," said Mrs. Hayes perplexedly. "That's just how Audrey talks! I believe she would invite Ann Coyne to tea at High Ridges, if I would let her. I think she is a meddlesome, impudent woman who doesn't know her place."

Helen sat back, smiling softly. She thought she would rather enjoy the visit of Mrs. Hayes, after all.

"How is the Rector? I haven't seen him since you came back, and we are hoping you will come up to dinner in a friendly way one of these evenings. Only just ourselves, of course, at first. That's Mr. Hayes's idea. He says he wants to get to know you, and that there isn't any chance in a crowd."

"I quite agree with Mr. Hayes," said Helen politely, but not warmly.

"But after we might make a little dinner for you," said Mrs. Hayes patronisingly, "and ask the sort of people—the sort of people you should know. Of course, coming to a new place, one has to be very careful. We found that out when Mr. Hayes bought High Ridges first. All sorts came, and it was very difficult afterwards weeding them out. I should like to be useful to you in that way, Mrs. Secretan. I have great experience, and, of course, in my position I know everybody."

"How dreadful for you!" murmured Helen, smiling still. "I should not like to know everybody. I shall have to receive everybody at the Rectory, of course, as my husband would wish me to do. But one always chooses one's friends sooner or later, don't you think? It is not a matter for arrangements."

"Well, of course, like draws to like," said Mrs. Hayes, not knowing what to make of this speech. "But you are young and can't be too careful. So much depends on first impressions, and on the stand one takes up. Of course"—and here she hesitated just a moment—"there has been a good deal of talk about your marriage. It was all so sudden and unexpected, and on that account greater tact has to be exercised. I am very willing to be your friend from the beginning, and to pilot you, if you like, socially. I was rather glad to come here alone this afternoon to say this."

Helen did not immediately reply.

"We are all very fond of Mr. Secretan, of course, and really he is a perfect gentleman, fit for any society. His sister, poor thing, has been rather a drag on him. She is an excellent creature, but just a trifle impossible. We were all so very glad when we heard Mr. Secretan was marrying so—so irreproachably."

"Were you? Do you know, Mrs. Hayes, that I have never met a more perfect gentlewoman than Miss Secretan, and if I thought I should ever grow to be as good as she is, I think I should feel very happy."

"Of course she is a good creature, excellent, I think, was the word I used," said Mrs. Hayes, warming to theme, and sitting forward eagerly. "But a perfect gentlewoman. Oh, come, now, Mrs. Secretan, you are joking, surely. She does not know how to dress, or to behave in really good society. She has dined at High Ridges once or twice, and really it was most awkward for everybody, and I felt very sorry for the Rector. A good creature, yes, of course; and she will make an excellent housekeeper to Mr. Courtney, though, after all the scandal there was about his wife, I can't think how she could ever go there."

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"Miss Secretan would go wherever there was need of her, and no matter how hard it was or how much self-sacrifice was involved she would never hesitate. I don't think that you and I, Mrs. Hayes, are fit to discuss Jane Secretan."

The colour flamed hotly in Helen's cheek.

"Dear me, surely you are very fond of her, though people thought when she left so suddenly it was on your account. Well, don't let's talk any more about Miss Secretan, she is really only a side issue now. We are all very glad that the Rector has married you, and now the Rectory will be a real centre of social intercourse. Can you fix a day now for you and Mr. Secretan to come out to dinner, and we shall send the carriage for you? It will not be any trouble, for you see we have two pairs of horses, and even if one has to go down to Bradfield for Mr. Hayes, the other is available."

"I shall have to consult Mr. Secretan," murmured Helen, a trifle confusedly.

"Oh, but Mr. Secretan will be delighted to come. He always is. Of course, Mr. Hayes has done a great deal for the church. Did you know that he put the whole of the heating apparatus in at his own expense, and had the organ overhauled? I assure you you will find us very good friends, and if I can be of any use to you I hope you won't scruple to make use of me."

"Thank you very much," murmured Helen, again wondering how long this sort of thing would go on, and whether she would be safe to ring for tea.

"I'm afraid I'm not a very sociable person, Mrs. Hayes. You won't find me the least interesting in that way."

"Oh, but you must come out of yourself," said Mrs. Hayes affably. "You owe it to yourself, and of course, in a garrison town you must have had a good deal of society of a kind. So you mustn't pretend shyness. I assure you, you will find the West Riding folk very warm-hearted, though some of them ride a bit on their high horse. These, of course, we can let alone. I suppose you have heard that the Duchess-Dowager of Eastlake has come to Mardocks. Of course, she will probably not know anybody, unless Lady Durham; but we can live without these high and mighty folks, and have a very good time. The best way is not to let them know one cares a fig about them."

Helen nearly laughed outright.

"The Rector hardly thinks it can be true about the Duchess of Eastlake."

"Oh, but it is; she arrived at Mardocks the day before yesterday. My maid Grigson has a young sister gone to be still-room maid there, and I do assure you the Duchess has arrived. I shall call, of course, after a time, when I get an idea how the land lies. That is the secret of social success, Mrs. Secretan, not to rush anything, but to walk very warily. Personally, I don't care a fig for social ambition, but, of course, I have a young daughter whose future causes me a good deal of anxiety."

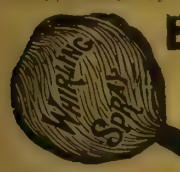
"I am sure it need not," said Helen hastily and quite sincerely. "She is the most beautiful creature I have ever seen. Her future is assured. If it is matrimony you want for her, she will be able to pick and choose in a whole county, I am sure."

Mrs. Hayes simpered a little.

"So you think Audrey pretty; you will please her father if you talk to him like that. Would you believe I looked exactly like her at her age? When you come to High Ridges I will show you an old-fashioned miniature which will convince you. But though Audrey is pretty, she has no sense. She would make the most undesirable acquaintances if she were left unwatched. She is so impulsive!"

Before Helen could reply there came the sound of new wheels on the gravel path beyond the windows, and presently a double knock sounded through the house. Hannah's heavy foot was heard proceeding towards the front door, and the next moment the study door was opened, and a small, slim figure, in widow's weeds, with a clear cut cameo-like face ravaged by suffering, appeared in the doorway. Hannah departed without uttering any name or making the smallest announcement. Helen sprang up, and all the colour receded from her face.

The visitor rapidly crossed the room, holding out both her hands, and smiling very sweetly, though a trifle archly.



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A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser." also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Is your husband cross? An irritable, fault finding disposition is often due to a disordered stomach. A always good natured. A great many man with good digestion is nearly have been permenently cured of stomach trouble by taking Chamberlain's Tablets. For sale by All Dealers.

You will be proud of the bread you'll make with PURITY FLOUR

AFTER seeing a batch of big, golden-crusted, snowy-white loaves, that you have baked from PURITY FLOUR, you will, indeed, be proud of your cooking-ability—and proud of your wisdom in deciding to pay the little extra it costs to procure such high-class flour. You will admit, too, that we are justified in the pride we take in milling this superb flour.

PURITY FLOUR

"More bread and better bread"

PURITY FLOUR is milled exclusively from the best Western hard wheat—the world's finest. More than that, PURITY FLOUR consists *entirely of the high-grade portions of the wheat.* The low-grade portions are separated and excluded during the PURITY process of milling. Such high-class flour, of course, expands more in the baking. It makes *"more bread and better bread."*

It makes lighter, flakier pastry, too, if you just take the precaution to add *more* shortening. On account of its unusual strength PURITY FLOUR, for best results, requires more shortening than ordinary flour.

Progressive dealers, everywhere, sell PURITY FLOUR and take pride in recommending it.

Add PURITY FLOUR to your grocery list right now. 106

An excellent "Buy"

the preferred stock of a big, prosperous, expanding business concern—a concern controlling Natural Rosources which are bound to double the value of its securities before long.

This preferred stock is cumulative, profit-sharing—the 7 per cent. dividend payable twice annually.

You can resell this stock to us or the company, at par, plus 7 per cent, one year from the date of your investment.

Because the block we now control is limited you'd best write to-day for particulars.

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Confederation Life Bldg., TORONTO 303 Board of Trade Bldg., MONTREAL

Constipation is the root of many forms of sickness and of an endless amount of human misery.

Dr. Morse's Indian Root Pills,

thoroughly tested by over fifty years of use, have been proved a safe and certain cure for constipation and all kindred troubles. Try them. 4

25c. a box.

Elegant New Buliding.

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Result. Public appreciation as shown by the fact that our fall classes are far larger than ever before in our 44 years' history.
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For catalogue (44th YEAR) containing full information, write to

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BELLVILLE. ONT.

Dates to be Remembered

Maritime Winter Fair, Amherst, N. S.—December 4, 5, 6 and 7, 1911.
St. John Exhibition, St. John, N. B.—September 7 to 9, 1912.
Short Courses at the Nova Scotia Agricultural College begin on January 2nd, 1912.
Annual Meeting Maritime Poultry Association, Winter Fair Building, Amherst, N. S.—December 6th, 1911.

"So it is true, dear child, and I actually find you here! Heavens, what a stroke of luck! For I'm at Mardocks. Do you hear, Helen, at Mardocks, only a mile distant! When they told me the Rector had married a Miss Revell I could not credit that it could be Bob Revell's daughter, and I'm come to see for myself."

She put her hands on Helen's shoulders and kissed her on both cheeks.

Helen's eyes were smiling, and if a little mischievous light crepy up in the background, she could hardly be blamed.

"Duchess, will you permit me to introduce one of my husband's parishioners, who will also be your nearest neighbour, I believe—Mrs. Hayes, the Duchess of Eastlake."

Mrs. Hayes, visibly trembling, bowed exceedingly low.

"Delighted, I'm sure, to meet your Grace, and so unexpected, too! Who would have thought Mrs. Secretan would have such high-born friends? Yes, we are neighbours, and I hope now we have met, that your Grace will let me call on you very soon. We are all very friendly in the West Riding; our own parish, I do assure you, is quite like a little family."

"Thank you very much," said the Duchess in a small, quiet, rather cold voice. "I'm alraid I shall not have the courage to cultivate new friends. I am an old woman, not strong, very poor, and rather tired. I have come to Mardocks for rest. But I am uncommonly glad to find this child here! I knew her father when he was a boy, and just missed being her mother."

Mrs. Hayes pondered over this cryptic speech all the way home, but it was Audrey who had to enlighten her by explaining that, of course, the Duchess meant that she and Colonel Revell must have been lovers once.

Mrs. Hayes presented rather a pitiable spectacle. Her manner was abject, and she struggled vainly to hide her swelling pride at the stroke of good luck which had given her the opportunity of meeting the Duchess at such close quarters. She had the good sense, however, to see that it would be courteous in her to leave, since such old and intimate friends must naturally have much to say to one another. She departed, her silken skirts trailing majestically after her; while the small figure in shabby black with an amused expression on her face, sat upright on the old settee and began to take off her gloves.

When Helen came back into the room they both laughed.

"Who is the woman? She simply breathed money at every pore. An elevated cook, Helen, eh? Tell her next time you see her not to address me as if she were my servant; but I don't want to see her again. Well, now, come and sit down beside me and tell me the meaning of this matrimonial venture. Who is he, and where did you meet him?"

Helen sat down and momentatily dropped her eyes. She knew that tone of old; the calm scrutiny of tne keen old eyes which nothing escaped.

"He is the Rector of this parish," she murmured inconsequently.

"What Secretan is he? There were Sectetans in the Fen country. I remember Crespigny Secretan breaking his neck in the hunting field when I was a girl. They had a place about nine miles from Grantham. Is he of that ilk?"

"He is no particular Secretan, Duchess. His father kept a linen-draper's shop in Somerset."

"Then how did the linen-draper's son get you?"

"In the usual way. He proposed and I accepted. We met in Paris about three months ago."

"I see, case of love at sight on his part, that's easy enough to grasp for, upon my word, Helen, I never

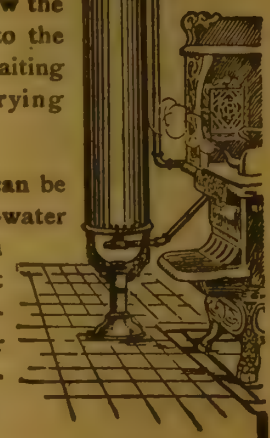
PANDORA Range

What a "Pandora" Hot-Water Attachment Means to Me

"BELOW—You see how I just turn on the tap and instantly get hot water for my dishes, washing, scrubbing, preserving, etc.

"ABOVE—you see how the pipes are connected to the bath and basin—no waiting for a bath—no carrying hot water upstairs."

"Pandora" Ranges can be supplied with a hot-water attachment if you haven't already got one, and the attachment does not either take extra fuel or interfere with baking.



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Do You Shave Yourself?

If so, you no doubt have shaving troubles, as there isn't one man in fifty who knows how to strop his razor correctly, the almost invariable result is a rounded edge instead of a keen, sharp edge so necessary to a clean satisfactory shave.

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BRANDT'S AUTOMATIC RAZOR STROPPER

"Makes every man an Expert." Does what no human hand can do.

It automatically sharpens the ordinary old style razor any size or make, and all kinds of safety razor blades including the Gillette, Ever-Ready, Durham-Duplex, Keen-Kutter, Enders, etc. It sharpens them better than the most expert barber can do it. In using the Brandt Automatic Stropper, you do not hold the razor while stropping. You cannot round your edge or cut your strop. The Brandt Automatic Stropper strops the razor for you. It requires no skill or experience. We invite any man who shaves himself to call at our store, and examine this celebrated stropper, and see how it does away with all stropping troubles.

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saw you look more charming. But why you took the plunge is not so easy to comprehend."

"It had become intolerable there at Colchester with Cynthia. It was a way out."

The eyes of the Duchess cleared, and a vast pity entered them.

"Child, if I had but known, you should have come to me in Califor. nia. Why did you not write to an old friend?"

"I had not the address, and California seemed outside the world. Besides, I had not the right to trouble you with my affairs."

"So it was Cynthia's doing. Heavens, what mountains of misery that insect has to answer for! She broke your father's heart, I know; but I thought you were made of sterner stuff. Somebody wrote to me from Southwold telling me they had heard you were to marry Angela Hunt's nephew. Was there nothing in that?"

"Nothing," replied Helen hastily and hardly, as she averted her eyes.

"Ah, well, I'm not sorry. The Hunts are bad—stock, lock and barrel of them. There isn't a heart in the connection. Where is this husband of yours? I'm curious to see him."

"You will see him if only you wait long enough—he will be in to tea presently."

"I hear him well spoken of, but I can't imagine you as chatelaine of this very obvious country parsonage. Do you remember my brother Anthony Helen? I don't think you ever met him."

"No, I never did; but I've heard my father talk of him, of course."

"He's a perfect dear. That was the husband foe you now, Helen, if only twenty years had been taken off his age. He is fifty-two, but he has the heart of a boy."

Helen faintly smiled, thinking of the world from which she had cut herself off. Somehow the Duchess did not like the expression in her eyes.

She laid a sudden hand on her arm, her shrewd old face alive with kindliest concern.

"Noblesse oblige, Helen! If there is a price to pay, your father's daughter will pay in full."

Helen swallowed a breath, uncommonly like a sob.

"That is Claude's key in the door, Duchess. Let me go and tell him you are here."

An hour later the Duchess left the house. These were her parting words:

"He is a man, Helen! He has looks, understanding, commonsense. With such a one the linendraper's shop ceases to exist. You have something to build upon. Noblesse oblige."

(Continued in next issue).

The Family Medicine Chest.

The medicine chest in the farm house should be well supplied with reliable staples in the way of medicine, the few simple remedies that are used about the house. Keep always on hand those remedies experience has shown you, you need, and whose prompt use may prevent a serious illness or whose lack will be seriously felt in time of emergency. One often knows just what should be done in case of emergency, but the actual emergency drives it out of one's head. For that reason it is wise to have an emergency card on the medicine chest door or somewhere near the drug supply. On this card have a list of accidents and what to do to bring relief. A broken bone, a cut, a scald, a sunstroke, are not unusual on the farm and they are accidents that need prompt attention. A quick glance over your list will show what to do and what medicine to use. Another useful adjunct to the medicine chest is a supply of clean strong cloths and pieces of wool. The need for these things may never arise, but if it does you will be very thankful that you were ready for the emergency. A good habit to acquire is to never use any medicine without reading the label on the bottle both before and after pouring it out and always pour away from the label to avoid defacing it. Medicines should be kept in some convenient safe place by themselves, not on the pantry shelves with the flavoring extracts.

Which is Your Choice?

Sloppy, leaky wooden troughs, or clean, durable Concrete?

Wooden drinking troughs are about as reliable as the weather.

They are short-lived and require replacing every few years—not to mention continual patching to keep them in repair.

The best of wood cannot withstand, for long, constant dampness and soaking. Its tendency to rapid decay soon shows itself in leaks and stagnant pools of water around trough.

Contrast with this the durability, cleanliness and well-ordered appearance of Concrete.

Which?

The dampness which destroys lumber only intensifies the strength and hardness of Concrete.

You can impair a wooden trough with comparatively little use; but it takes a powerful explosive to put a Concrete water tank out of business.

Which

is your choice—expense-producing Wood, or money-saving Concrete?

We'd be glad to send a copy of our book, "*What the Farmer Can Do With Concrete*,"—Free—if you'll ask for it. It tells the many uses of Concrete in plain, simple language—tells how to make

Barns	Hens' Nests	Stables
Cisterns	Hitching Posts	Stairs
Dairies	Horse Blocks	Stalls
Dipping Tanks	Houses	Steps
Foundations	Poultry Houses	Tanks
Fence Posts	Root Cellars	Troughs
Feeding Floors	Silos	Walks
Gutters	Shelter Walls	Well Curbs

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The World's Best Potato Digger.

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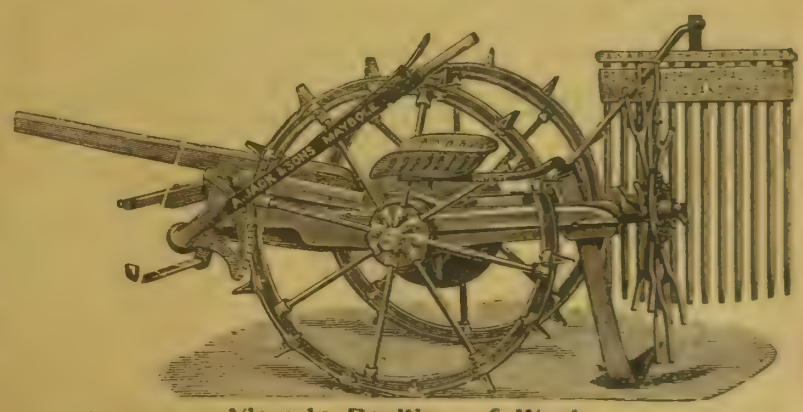
Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position of Work.

The New Patent Caledonian Potato Raiser holds the record as the most perfect Potato Raiser in the world. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

ILLSLEY & HARVEY, Canadian Agents Port Williams, N. S.

To Clean Glass Over Pictures.

To clean the glass over pictures dip a piece of chamois in alcohol, wring nearly dry, and wipe thoroughly, yet lightly. Polish with a piece of dry chamois. The gilded frames may be cleaned with the alcohol. If oil paintings need cleaning thoroughly dampen a soft cloth in warm water in which some castile soap has been dissolved. Dry carefully and then varnish lightly with some thin clear French "retouching" varnish. It is well to consult an artist with regard to the best varnish.

A good Christmas present for one of your farmer friends is a one year sudscription to the Maritime Farmer.

Keep Your Soil at Top Notch Producing Power

THE utmost care and attention given to plowing, harrowing, seeding, cultivating, and harvesting cannot make up for lack of fertilizer, which is necessary to keep the soil at the top-notch of its producing power. In fact, fertilizing is of first importance.

Of all fertilizers, manure is best, because it replaces just the elements the crops have extracted, and is most economical.

But to get its full value, manure must be spread evenly, in proper quantities. Only a good manure spreader will spread it this way. Get an I H C if you want to be sure of the greatest value for your money.

I H C Manure Spreaders
Corn King, Cloverleaf

are simple, strong, and perfect in design and construction. They are light in draft and durable. Here are some of the features and advantages that make I H C spreaders the best investment for you.

The method of transmitting power from the wheels to the beater is simple and direct. There are no unnecessary parts to wear. The beater is large in diameter, and the teeth are long, square, and chisel-pointed, so that the manure is thoroughly pulverized and thrown out before it wedges against the bars, thus reducing the draft.

The apron is supported by steel rollers, and the slats are placed close together, so that manure does not sift down and interfere with the movement of the rollers. The steel wheels have ample strength to carry many times the weight they will ever be called upon to bear. The rims are flanged inwardly to prevent cutting and rutting of meadows and accumulation of trash. There is no reach to prevent short turning.

I H C Manure Spreaders are made in several styles and sizes for field, orchard, and truck farm use. See the I H C local agent for catalogues and complete information, or, write nearest branch house.

CANADIAN BRANCHES: International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
Chicago USA

I H C Service Bureau

The Bureau is a clearing house for agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.

For Coughs—
Colds—
Hoarseness—
Bronchitis—
Loss of Voice—
Pains in the Chest—
and all Similar Throat and Lung Troubles—

NA-DRU-CO SYRUP OF LINSEED, LICORICE & CHLORODYNE is a Safe, Reliable, Quick-acting Remedy.

In 25c. and 50c. Bottles at your Druggist's.

111

National Drug & Chemical Co. of Canada Limited

Guernsey Cows' Records of Performance.

(Continued from page 118)

"Dairy Queen of Hillside" Reg. No. 123; R. of P. No. 7; Sire "Pilate of Hillside" Reg. No. 62; Dam, Colombine of Eastview" Reg. No., 17994 A. G. C. C.; Owner Howard W. Corning, Chegoggin, N. S.; Breeder, Howard W. Corning, Chegoggin, N. S.; Class, 2 year old; Age at commencement of test, 2 years, 74 days. Date test commenced, 17th day of April, 1910. Date of calving, 15th day of April, 1910.

Date of calving following test, 20th day of April, 1911.

Month	Lbs. Milk	Lbs. Fat	Value of Feeds Grain	Sundry
January	324.5	20.432	.50	$5.70
February	261.	16.182		$5.70
March				$5.70
April	333.5	16.008	.72	$1.96
May	778.	37.344	$2f94	$3.55
June	696.	33.408	$1.98	$2.00
July	647.5	32.750	$1.98	$2.00
August	607.5	30.982	$1.98	$2.00
Sept.	575.5	29.581	$1.98	$2.00
October	496.5	30.783	$1.21	$2.00
Nov.	384.5	23.480	$1.20	$5.70
Dec.	342.5	20.207	.56	$5.89
			$15.05	$44.90

Production required for registration, 5203 lbs. Milk; 208 lbs. Fat. Total production, 5447 lbs. Milk, 291.157 lbs. Fat. Average per cent of Fat, 5.34; No. of days in Milk, 319.

Total cost of feed, $59.95. Value of butter sold, 339 lbs. at 25 cents per lb., $84.75. Profit $24.80.

"Dona Clatina" Reg. No., 172; R. of P. No., 6; Sire, "Ottawa's Beautiful Masher." Reg. No. 10050 A.G.C.C. Dam, "Queen Clatina" Reg. No., 16414 A.G.C.C.; Owner, Director Experimental Farm, Ottawa, Ont.; Breeder, Director Experimental Farm, Ottawa, Ont.; Class, 2 year old; Age at commencement of test, 2 years, 245 days. Date test commenced, 6th day of September, 1909. Date of calving, 5th day of September, 1909. Date of calving following test, 14th day of September, 1910.

Month	Lbs. Milk	Lbs. Fat
January	590.5	30.706
February	486.	26.517
March	596.5	34.597
April	507.5	27.571
May	451.	22.55
June	415.5	20.775
July	307.	15.680
August	181.5	12.705
Sept.	583.5	32.676
October	733.5	41.076
Nov.	644.5	36.092
Dec.	599.5	32.590

Production required for registration, 5674 lbs. Milk; 227 lbs. Fat. Total production, 6096.5 lbs. Milk; 333.535 lbs. Fat. Average per cent of Fat, 5.4709; No of days in Milk, 360.

Total profit on 6 cows, over-feed, at liberal prices—$290.82, or $48.47 per cow. These six cows consisted of: 1 five year old, 1 four year old, 1 three year old and 3 two year heifers.

The above records are officially attested to by J. G. Rutherford, Live Stock Commissioner, Ottawa, and his inspector, D. Drummond.

MARKETS.

Charlottetown Prices.

GRAIN—Oats, White, 44c., Black, 45c.

FEEDSTUFFS—Bran, Retail, $1.35 to $1.45; Shorts, $1.45 to $1.50; Middlings, $1.50; Oil-cake, $2.50 to $2.60; Corn Meal, $1.80 to $1.95.

LIVE STOCK—Butcher's Cattle, 3c. to 5c.; Stockers, $18.00 to $30.00 each; Milch Cows, $25.00 to $40.00 each; Sheep, 3c. lb.; Lambs, 3c. to 3½c..

DRESSED MEATS—Beef (carcass), 7c. to 9c. lb.; Beef (retail), 8c. to 16c. Mutton (retail), 8c. to 14c.; Lamb (retail), 8c. to 16c.; Pork (carcass selected), 7¾c.; Pork (carcass light), 6c. to 7c.; Pork (carcass heavy), 6c. to 7c.

HORSES—Drafters, $150 to $225.

DAIRY PRODUCTS—Creamery Butter, solids, 27c.; Creamery Butter, Prints, 28c; Dairy Butter, 19c. to 22c.; Cheese, 14¾c.

POULTRY AND POULTRY PRODUCTS—Eggs, 23c. to 24c.; Fowl,8c.; Chickens, 8c. to 12c.; Ducks, 12c.; Geese, 10c. to 12c.; Turkeys, 16c. to 20c.

FRUIT—Apples, $1.50 to $3.50 per bbl.

MISCELLANEOUS—Hay, Pressed, $11.00 to $12.00, Loose, 65c.; Straw, $5.50 to $6.50; Wool, 23c. to 25c.; Beef Hides, 10c.; Calf Skins, 12c. to 15c.; Sheep Skins, 50c. to 60c.; Lamb Skins 45c. to 60c.

VEGETABLES—Carrots, 40c. bus.; Potatoes, 30c. to 86c.; Turnips, 12c. to 13c.; Beets, 40c. bushel; Cabbage, 50c. to 60c. per 100; Parsnips, $1.00 per cwt.; Oysters, $4.50 to $5.50 per bbl.

Markets have been quiet since our last report and there is little change to note, except in oats which are high, and an advance in pork which was not unexpected, although at the moment the market for dressed hogs is easy and we do not look for any further advance unless there is an advance in the West. Oats continue scarce and in good demand for Newfoundland account. The trade in potatoes is pretty well over, except in schooners, but shippers do not care to take the risk of rail shipments after this. Butter is rather unsettled. There seems to be plenty to supply the demand but increased orders might mean an advanced price for dairy butter besides the summer's accumulation of stock in cold storage and elsewhere is being worked off and fresh receipts will command better prices. Poultry is offering freely and prices are quiet. Hay is rather scarce in most sections and farmers are holding for advanced prices which they expect will come later.

St. John Prices.

GRAIN—Oats, 54c. to 58c.; Buckwheat, $2.25 to $2.50.

LIVE STOCK—Milch Cows, $40.00 to $45.00.

DRESSED MEATS—Beef *carcass), 6½c. to 9c.; Beef (retail), 10c. to 18c.; Mutton, 7c.; Veal, 9c. to 10c.; Pork, 7½c. to 8c.

DAIRY PRODUCTS—Creamery Butter,25c. to 28c.; Dairy Butter, 24c. to 26c.; Cheese, 14c.

POULTRY AND POULTRY PRODUCTS—Eggs, fresh, 45c. to 50c.; Fowl, 70c. to $1.10; Cnickens, 70c. to $1.10; Ducks, $1.25 to $1.40; Geese, $1.15 to $1.25; Turkeys, 23c. to 25c.

FRUIT—Apples, $1.25 to $2.00.

MISCELLANEOUS—Hay, $10.00 to $12.00 per ton; Wool, 15c. to 21c.; Beef Hides, 11c.; Calf Skins, 16c.; Sheep Skins, 50c. to 60c.; Lamb Skins 50c. to 60c.

VEGETABLES—Carrots, $1.25 to $1.30 per bbl.; Potatoes, 1.80 to $2.00 per bbl.; Turnips, 90c. to $1.00; Beets, $1.25 to $1.30.

The market conditions during the last two weeks,as a whole, have been good. There is a good demand for first-class Mutton also for turkeys and good poultry of all kinds. There is a good demand for domestic Beef. Pork is bringing a better price this week. The coming week will bring better prices. There is a call for potatoes and vegetables. Good Butter will sell at any time.

MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.
Personal attention given to sales of Butter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 1905.

Get Your Share of the Profits on

Holiday Poultry

Millions of dollars are spent for poultry during the holidays. What will be your share depends on the condition of your fowls. Give Pratts Poultry Regulator to your turkeys, geese, ducks and chickens and you will have heavy fowls that bring top prices.

Pratts

Poultry Regulator

aids digestion, thus enabling the fowls to get every bit of nourishment from their feed and to put on weight quickly. It also prevents and cures the common poultry ailments.

SATISFACTION GUARANTEED OR MONEY BACK

Our dealers will promptly refund purchase price if Pratts Poultry Regulator does not show you a handsome profit. Test it with all or part of your fowls, and remember that it is an unequalled egg producer also.

25 lb. pails $2.60; also in smaller packages and 100 lb. bags. If your dealer cannot supply you, write us.

Pratts Roup Cure *in 25c. and 50c. packages is a positive preventive and cure of this terrible disease.*

Our 1911 edition Poultry Book mailed free

Pratt Food Co of Canada Ltd. Dept. Toronto

Pratts Animal Regulator invigorates horses, cows, calves, hogs and sheep.

For Diarrrhoea, Dysentary, Cholera, Cholera Morbus and all pains and cramps, children or adults there is nothing just as good as

Gates' Certain Check.

FURS Trappers, Hunters and Dealers in any kind of Raw Furs, cannot afford to dispose of their collections without first obtaining our quotations, which we cheerfully furnish upon request, we specialize in the following:—RIGHT PRICES. LIBERAL ASSORTMENT. A remittance forwarded same day goods received, express and mail charges on shipments paid by us, no shipment too large or too small. Canada's Largest Fur Operator. "There's a Reason" your business and correspondence solicited. DEPT. C

John Hallam - Toronto

HUNTERS & TRAPPERS

We are the largest buyers of raw furs in Canada and we pay the highest cash prices. Write at once for price list and other particulars.

A. & E. PIERCE & CO.

500 St. Paul St., (cor. St. Peter) MONTREAL P.Q.

Don't waste your money buying strengthening plasters. Chamberlain's Liniment is cheaper and better. Dampen a piece of flannel with it and place it over the affected parts and it will relieve the pain and soreness. For sale by All Dealers.

FLORICULTURE.

A., St. John, writes:—I am going to grow some house plants and I wish you would give me all the instruction you can in regard to caring for them. My first question is: How should they be watered?

Ans.—It is difficult to give rules for watering plants as no two plants in a collection may require the same treatment. A good general rule is to water whenever the top soil commences to dry. Do not wait until the soil is dried out. Water thoroughly always watering them over the top of the pot—never by putting water in the saucer. Empty out all water, from the saucer, that drains through the pot. Root bound plants require mote watering than newly potted plants and care should be taken that plants in this condition are thoroughly soaked to the bottom of the pot each time of watering.

Do not have a stated time for watering plants, whether they need it or not, but look over your plants two or three times a day and give water only to those requiring more moisture.

The Aspidiatra or Parlor Palm, so called, likes heat, moisture and partial shade but will stand a low temperature though not frost. It needs repotting as often as the pot becomes crowded with roots.

The Amaearia Exceliasor or Nawfork Island Pine, likes a moderate temperature, partial sunshine, plenty of air, only a moderate amount of moisture and no period of rest. It must not be repotted unless the pot is full of roots.

Begonias, the flowering varieties, like a temperature of say sixty degrees at night and plenty of sun and moisture. The Rex type requires the same temperature at night, no direct sunshine but still strong light. Don't spray the leaves and handle with care. Keep the soil just right and moist using light soil and see that the drainage is perfect. The tuberous rooted varieties like plenty of sunshine and will grow in partial shade out of doors. They do best during the spring and summer months and should be dried off during the winter months.

The Umbrella Palm is an acquatic plant that requires a lot of water. You may even keep the saucer full. It is easily grown in either sunshine or shade and likes a moderately warm room.

The Parlor Asparagus likes plenty of water on its foliage and only a moderate amount of soil moisture. Give it partial shade in a warm room. It requires repotting frequently and if root bound it is apt to loose its foliage.

The Rubber plant is another fine plant for house growing. One writer asks if the leaves turn brown and fall off, will new leaves form in their place? What can I do for them?

Ans.—This plant is, apparently, badly infested with red spider and they have caused the loss of leaf. The foliage should be frequently washed or sprayed after the winter fires are started. If this had been attended to earlier the plant would not have suffered as it has. The leaves will not grow out as before, but branches will appear at some of the axes of the old leaves. Much care should be taken that the soil does not become water-soaked as the few remaining leaves do not require nearly so much water as they did before. At this season, the foliage of Palms and Rubber Plants should have moisture applied at least twice a week, to the under side of the leaves.

The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

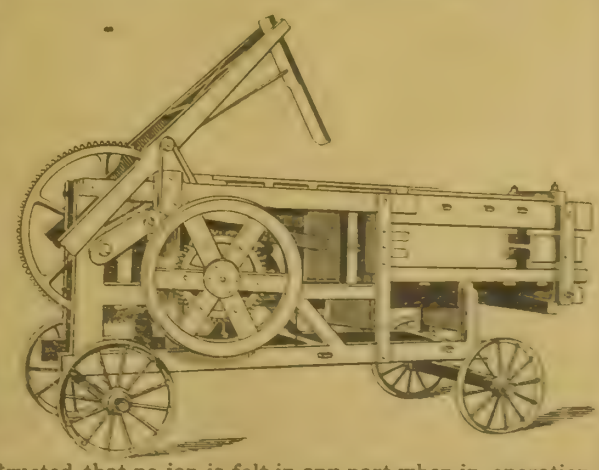
THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Improved Trenholm Gear Hay press

Operated With Gasoline Engine or Tread Power.

The More Power The More Work.



Note the strong, heavy frame built of the best quality of well seasoned hardwood. The heavy balance wheel weighing over 500lbs. The heavy cog wheel weighing over 500 lbs. Thesidesprings made of the best quality of spring steel. The bale box is steel lined and the whole machine so powerfully constructed that no jar is felt in any part when in operation.

This is now the season for Wood Cutters, we manufacture them in three different sizes; Long Swing, Short Swing and Flat Roller Table.

In Farmer's Feed Boilers we make the Star with steel frame and cast culdron in three sizes and the All Cast in two sizes.

We can fill your orders at quick notice. Get our catalogue and prices at once.

THE SUSSEX MANUFACTURING CO. LTD., SUSSEX, N. B.

How One Farm-Owner Found a Road to Prosperity.

A few summers ago—to be exact, it was in 1909—I stopped off with a companion to visit a boyhood friend who owned a considerable farm on the outskirts of a little farming village.

"I never seem to get anywhere," complained our host to us, as we sat on his porch that afternoon. Every time that I get a little ahead of the game and have a little money in the bank ready for the girl's education, some unexpected expense comes up—the money all goes for repairing a barn or buying waggons, and there's nothing to show for the year's work. This year it's the same old story—it will take every spare penny to pay for the new harvester. I'll never get anywhere."

This man was a good farmer and a hard worker, but like many others he had never learned that the modern farm to be profitable must be conducted along modern business lines. He made no allowance for the cost of keeping up his farm and he was regularly disappointed when the year's work showed little or no profit. He did not spend a dollar on maintenance, and consequently he was continually digging down into his jeans for money to pay for new buildings, implements, etc.

We three walked around the farm. The barn, built less than ten years before but absolutely free from paint, showed distinctly where sun, wind, rain and frost had done their destructive work. Under open sheds and in the corners of fields were various pieces of farm machinery where they had stood since the previous harvest. Rust had eaten its way into the expensive metal and in several places I could stick the blade of my pocket knife deep into open seams in the wood.

We stopped in front of the wreck of the old harvester. "There," said our host, disgustedly, "I bought that in 1903 and look at it now; I'll never buy that make again."

"When did you paint it last, Dick," I inquired.

"Paint it?" said he, paint it? Why it was painted when I bought it."

"And you haven't painted it since?"

"No—I haven't the time or money for such frills—I'm a farmer—not a painter."

"Yes," broke in my travelling companion, tapping on the rusted metal with his pipe for emphasis, "but if you had spent a dollar a year on good paint—say seven dollars in all—you wouldn't be buying a new harvester this year and that pretty daughter of yours would be going to town this winter to finish her schooling. That seven dollars would have been a mighty profitable investment."

"That sounds all right," returned Dick, "but I tried it once. When I painted the house in '98, I had some paint left over, so I painted the plow. It came right off—didn't do any good."

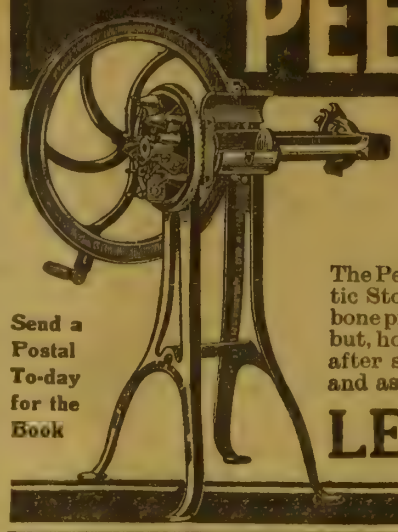
"Of course not—the paint that was made to stick to wood couldn't hold of the hard metal. You can't expect every medicine to cure every disease or one paint to do good work on every sort of surface. That's why the most reliable manufacturers make special paint for every surface and every use. Seven dollars on a good implement paint—one dollar a year—would have kept the old harvester as good as new. Its the same way with the barn."

"Oh there's no use in painting the barn—it's not worth it. I've got to build a new one anyway. The rain goes right through this and spoils the hay."

"It didn't do that the year it was built, did it?"

"No—of course not. It was a good barn then."

"Why didn't you buy a good grade of paint made especially for barns



PEERLESS GREEN BONE CUTTER

For half the cost of wheat, you can feed your flock succulent green bone—the most perfect egg-producing food known. A pound of green bone, costing but a single cent, will feed 16 hens for a day. Per hen, that is only

1/16c. PER DAY

The Peerless Positive Feed and Automatic Stop Green Bone Cutter cuts green bone properly; it does not grind the bone but, holding it endwise, cuts off shaving after shaving—as bone should be cut, and as it is most easily digested and assimilated. Write for our book—sent FREE—telling all about how to feed green bone to your flock, about its economy, its muscle-forming values and its wonderful egg-producing properties. A postal will bring it to you. 101

Send a Postal To-day for the Book

LEE Manufacturing Co., Limited 103 Pembroke Road PEMBROKE ONTARIO CANADA

If you are an expert pianist, five minutes study of the SHERLOCK-MANNING will show you why it offers the best value you can get. If you are not, you must—at best—buy on looks-plus-faith. Any piano has looks—that's mere furniture-making. But if you'd take the time to visit our factory you'd see at once why SHERLOCK-MANNING Pianos have the kind of appearance that endures. It's all in the special processes we employ. They'd interest you—and convince you as well.

But don't buy a piano for beauty's sake alone. You want tonal excellence---and you want to be sure that it will endure, too. Again---a visit here would prove to you---though a novice ---why that is assurred you in this superbly built piano.

If you are too far away to visit the factory we will tell you where these splendid instruments may be tested near home.

20th CENTURY, STYLE 110

Price, too, is a factor. There are sound reasons why you are able to save at least $100 by buying a SHERLOCK-MANNING Piano---and yet you will get just as much as you possibly could if you spent the $100 more for another make.

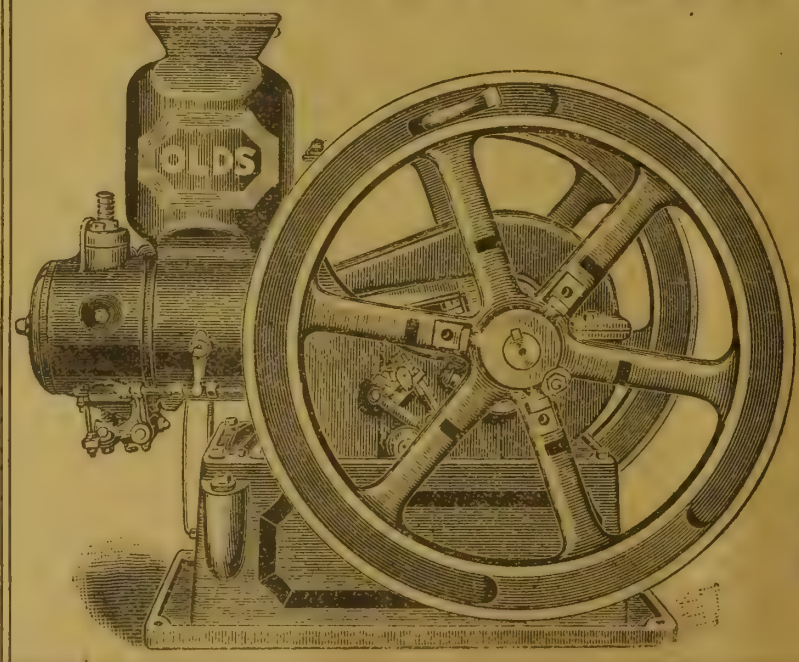
All this suggests a visit---or at least a request that we will make plain to you some piano facts worth your knowing. Will you call---or write---to-day?

If you do not know the SHERLOCK-MANNING dealer near you, write us and we will gladly introduce you to him or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.

SHERLOCK-MANNING PIANO & ORGAN CO., LONDON, CANADA

(No Street Address Necessary)

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

The Wheel That Has Made GOOD!

Reduce Farm Labor 25 to 50 Per Cent.

Put T-K Wide Tire Steel Wheels on your wagons and you can haul 25 to 50 per cent heavier loads without causing any heavier draft. Our steel wheels make heavy loads light and are so durable that they will stand any strain over the rockiest road. They last a lifetime with practically no attention.

TK Handy Farm Wagons and Wide Tire, Steel Wheels

Our Handy Farm Wagons are acknowledged to be the best all-purpose wagons ever used on a farm. They have a lighter draft and are easier to load and unload than all the others. We guarantee them to be great money-savers and the best trucks on earth for the price.

Write and ask about them.

Tudhope-Knox Co., Limited, Orillia, Ontario.

ABSORBINE

will reduce Inflamed, Swollen Joints, Bruises, Soft Bunches. Cure Boils, Poll Evil, Quitor, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle, delivered. Book 7 E free.

ABSORBINE, JR., liniment for mankind. Reduces Painful, Swollen Veins, Goitre, Weng, Strains, Bruises, stops Pain and Inflammation. Price $1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Send Us Only $1.00

Receive by return mail post paid two beautiful little dresses like cut in soft warm dress goods in dark red plaid patterns for little girls age 2 to 8, made with waist and skirt trimmed with braid in latest style. Age 10 to 12, 75c. Age 14 $1.25, add 14c for postage. Standard Garment Co., 16 Standard Building, London, Canada.

"There could be no better medicine than Chamberlain's Cough Remedy. My children were all sick with whooping cough. One of them was in bed, had a high fever and was coughing up blood. Our doctor gave them Chamberlain's Cough Remedy and the first dose eased them, and three bottles cured them," says Mrs. R. A. Donaldson, of Lexington, Miss. For sale by All Dealers.

and rough lumber of all sorts. Unpainted wood cracks and shrinks and lets the rain in. You probably lost enough every year in damaged crops to pay the cost of painting several times over. It's merely a case of spending money to save money."

Dick pulled on his pipe without speaking. "H'm," he said finally; "maybe you're right. I guess I never looked at it that way." He kept silent for a few minutes. "Say," he exploded suddenly, "do you think it's too late to save the barn?"

"Of course not," answered my friend. "Paint it this fall the minute your harvest is safely in. The wood will be in perfect condition to receive the paint after the summer sun has dried it thoroughly, and the weather will probably be clear and settled. That's one reason why there is no better time to paint than fall. The other is that your buildings are properly protected and ready for winter's frost and snow. Frost is mighty bad on wood because it goes in so deep and splits and cracks the timber. There's one thing more—when you go to town for paint don't try to see how cheap you can get it. Ask your local dealer or look in your farm papers for the name of a reliable paint of established reputation. The good paint will cost you a little more this year but you won't need to do it all over again so soon.

This June I stopped off again at the little town and drove up to my friend's home. House and barn were attractively painted. Nowhere could you see a machine or wagon exposed to the weather. I turned in. Dick greeted me from the porch and called his wife.

"I'm sorry," said he, "that my daughter isn't here too."

"Where is she?" I asked.

"Oh!" said he, "she comes home from the Academy to-morrow for her summer vacation."

Quit wasting your pumpkins by gorging the hogs and cattle to them for a few days during the fall; then allowing your stock to be without this most valuable feed for the rest of the winter.

Pile your pumpkins in a row, as high and as wide as you wish them; cover them with a little hay; and set up fodder stacks of four feet thick on each side. This not only protects them from the cold, but as you feed out the corn and fodder, "the golden fruit of the vine" is handy, and a fine balanced ration is quickly and easily formed in the dead of winter. Can you think of a more profitable method of storing pumpkins?—M. Albertus Coverdell.

Cost of Concrete Tile.

K. B., N. S.—What would the cost per foot be for concrete drain tile 6 inside diameter?

Ans.—Drain tile 6 in. in diameter should be 3-4 in. thick made in lengths of 18 in. The amount of materials needed per 100 feet would be 11 1-9 cubic feet of gravel not larger than 3-8 in. and 2 3-4 bags of cement. These quantities are based on the proportions of one bag of cement to four cubic feet of gravel. The cost would vary with the cost of mater

A MAN'S BOOK.

A PRIVATE TREATISE, WITH ILLUSTRATIONS, RELATING TO DEBILITY, ITS CAUSE, EFFECT AND HOME CURE.

Let Me Send It To You FREE

Here is a little volume of cheer and helpfulness which old men, young or out, can read with great profit; it contains much valuable information, of a private nature, is fully illustrated, and represents the practical knowledge I have gained from forty years of actual experience in giving help to upwards of 100,000 unfortunate, but encouraged men. Just a postal card with your name and address and the book will be forwarded free, sealed, by return mail, and with it as well, I will enclose a full description of my new 1910 model Electric

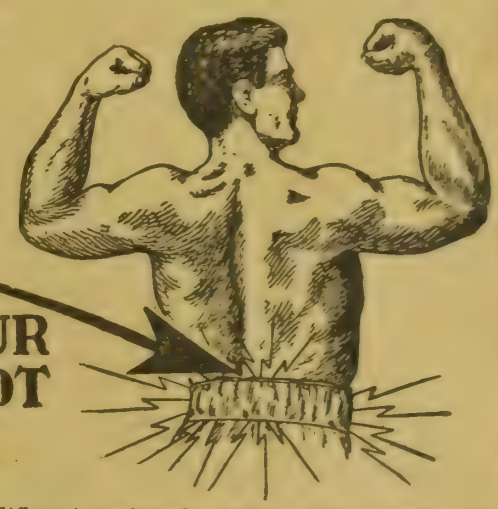
Health Belt

If you need new strength, this wonderful appliance must appeal to you. It generates a pleasant, exhilarating currant instantly felt, though it can be made any degree of strength from mild to strong by simply turning the needle of the current regulator; worn nights while you are sleeping, it pours quantities of health-giving, soothing electricity into your sick, weak nerves; you get up mornings feeling bright, strong, full of courage and ambition; it takes all the weakness and pain out of your back it is a great remedy for your kidneys, bladder, stomach, liver and other vital organs; it cures rheumatism in all parts of the body; it is a courage-giver of the highest order; it brings new strength where weakness exists; it will restore you to vim, vigor and true manhood as sure as night follows day' it makes you feel young and look young; you will live longer for its use; you can throw away all drugs and commence to live as Nature intended you should—a man among men, healthy, happy and vigorous. I can send you thousands of testimonials if you care to see them. Here is a sample Cure:

"Your Health Belt cured me of Nervous Debility, Lost Vigor, Kidney and Bladder Troubles after all else failed

"CHARLES L. SNELL,
"Middleport, N. Y."

In all instances I concentrate the full positive current at small of back; it thus enters the system at the nerve and vital centre,



passing thence through the different weakened organs, giving them new life and force. You can get the Belt.

ON TRIAL UNTIL CURED

or for cash at a discount, just whichever you wish. Send you address on postal or fill in coupon; or call at my office, if you live in or near this city. Advice concerning your case will be cheerfully given without charge or obligation.

DR. M. F. SANDEN CO., 140 Young Street, TORONTO, Ont.

Dear Sirs—Please forward me your book as advertised free.

NAME ....

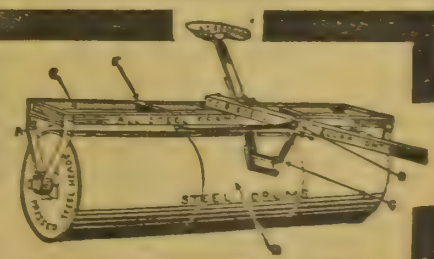
ADDRESS ....

The "Bissell" is a 3-drum roller

3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off with a Roller unless the name "Bissell" is plainly stencilled thereon.



Grass Seeder Attachment furnished if required. Write Dept. M for free catalogue.

T. E. BISSELL CO., LIMITED, ELORA, ONT.

BAD BLOOD CAUSES BOILS and PIMPLES.

Get pure blood and keep it pure by removing every trace of impure morbid matter from the system.

Burdock Blood Bitters has been on the market about thirty-five years, and is one of the very best medicines procurable for the cure of boils and pimples.

PIMPLES CURED.

Miss J. M. Wallace, Black's Harbor, N.B., writes:—"About five years ago my face was entirely covered with pimples. I tried everything people told me about, but found no relief. At last I thought of B.B.B. and decided to try a bottle. After finishing two bottles I was entirely cured, and would advise any lady who wants a beautiful complexion to use B.B.B."

BOILS CURED.

Mrs. Ellsworth Mayne, Springfield, P.E.I., writes:—"My face and neck were covered with boils, and I tried all kinds of remedies, but they did me no good. I went to many doctors, but they could not cure me. I then tried Burdock Blood Bitters, and I must say it is a wonderful remedy for the cure of boils."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

ials and labor. Assuming the cost of cement at $2.00 per barrel and gravel at $1.00 per cubic yard, the cost of cement would be $1.38, and gravel 41c making the total cost of $1.79 per 100 feet. If the tile are made by a hand machine, the cost of labor being 20c. per hour, per man, and the man making 30 feet of tile per hour, the cost of labor for 100 foot of tile would be 67c, so that the total cost of 100 feet of tile would be $2.46.

The Potato Digger.

No one who has seen the modern machine potato digger at work has failed to be impressed by its wonderful efficiency, and the speed and thoroughness with which it lays the potatoes on the surface of the earth, well separated from clods and ready for instant picking up. It is indispensable for any grower on a large scale, for whom in time and labor saved it quickly pays for itself. Smaller growers will do well for themselves by co-operating in the purchase of one for the use of all. It is quite likely, too, that they will find themselves able to save more money with it by hiring it out to others, or by working it for them, for it will surely be in demand by those who have seen it work.

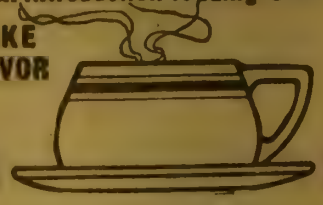
NEVER before has such rich fullness, such delicate smoothness of flavor been within your reach to multiply the keen enjoyment of your tea-cup!

Because King Cole tea sets a new and higher flavor standard. It is blended to excel even those good teas which you and your neighbors had always held as favorites.

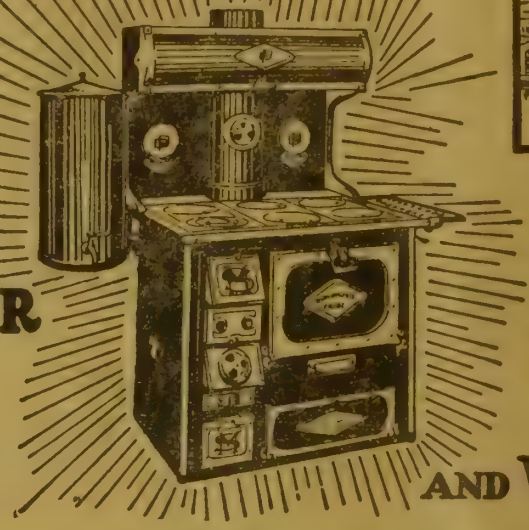
The delightful vigor of its flavor, the delicious zest of your very first cup of King Cole tea, will make it your life-long friend.

Why not tear this out as a reminder to ask your grocer for an introduction to King Cole?

YOU'LL LIKE THE FLAVOR



DIRECT FROM FACTORY TO KITCHEN



SAVE OVER $25 WHEN BUYING YOUR RANGE THIS FALL.

$41.00 TO $49.00

AND WE PAY THE FREIGHT

You can buy DOMINION PRIDE RANGE at Factory Price

Direct from the Largest Malleable Range Works in Canada

THE price which the Dealer quotes you on a Range is made up like this — Manufacturing Cost + Manufacturer's Profit + Jobber's Expense of Handling and Selling + Jobber's Profit + Retailer's Expense of Handling and Selling + Retailer's Profit + Freight.

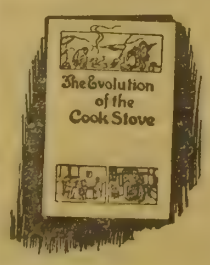
By our direct "Factory to Kitchen" selling plan all these charges are cut out except the actual manufacturing cost, a small profit, and freight. The difference to you is the difference between the $41 to $49 which you pay for a "DOMINION PRIDE" Range and the $69 to $78 which you would have to pay the Dealer for a Range which cost as much to make.

Are you anxious to contribute $25 or $30 to the middlemen?

In the—

Here is a Book Worth Having

IT tells about cooking from the time the Cave Dwellers used to put hot stones in the pot to boil it. The Book contains interesting information gathered from many sources and is illustrated profusely.



The "Evolution of the Cook Stove"

also tells all about the "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy this book.

Write for free copy.

"DOMINION PRIDE RANGE"

you get a full dollar's worth of actual stove value for every dollar you pay.

The "DOMINION PRIDE" is made of tough, strong malleable iron and the best blue polished steel—materials that will neither warp, crack nor break, so that it will last a lifetime. It is made in the largest Malleable Iron Range Works in Canada, and each range is backed by our unconditional guarantee.

The "DOMINION PRIDE" looks well, cooks well, saves fuel and is easily cleaned. You'll be proud of its neat, handsome appearance in your kitchen, and of the appetizing food it will cook to perfection for you. You'll appreciate the ease of keeping its blue polished steel surface and the bright polished top spick and span with a few rubs of a cloth. Your husband will be more than pleased with the reduction in the coal or wood bill—for the "DOMINION PRIDE" saves, by actual tests, 30% of the fuel.

A "DOMINION PRIDE" Range, with High Closet Shelf and Elevated Tank or Flush Reservoir, with Zinc Sheet to go under range, 8 sections Blue Polished Steel Pipe and 2 Elbows, will be delivered to any Station in Ontario, Quebec or the Maritime Provinces for $41, or to any Station in the Four Western Provinces for $49—$5 to be sent with order and balance to be paid when Range is delivered at your Station. If not convenient to pay cash we will arrange to accept your note.

Canada Malleable & Steel Range Mfg. Co. Limited, Oshawa, Ontario.

When writing it will be a distinct favor to us if you will mention this paper. 6

Utilizing Dormant Natural Resources.

(Continued from page 113).

bred stock raising can be over estimated, I believe the importance of general or mixed farming should stand in first rank as it is on the latter system of farming the masses are depending for a living.

The men who specialize in stock breeding and fruit growing are in the minority and are already numbered in the ranks of the wealthy or independent class.

Experience has taught me that demonstration farms are the only or at least the quickest way to get the ordinary farmer out of the rut.

I am going to repeat the cry to the new Premier and perhaps it will be heard, as the time is now drawing near, when the outskirts of the province will be quite as important as the centre.

DARE TO BE A DANIEL.

I do not believe it possible for a man to obtain the highest returns from the soil unless he is a student of divine or natural laws. I have got more instruction and ideas in scientific farming from the Bible than from all other sources combined. I have had the satisfaction of transforming many passages of scripture which, according to ordinary expoundings, appear to me as mere spiritual appendices into valuable literal instruction in agriculture.

We are told that God fed the Israelites, in the wilderness, on manna, When they arrived at a place where they could work for their bread he withdrew the miraculous food. When Christ saw the hungry multitude he had compassion on them and miraculously fed them.

We have outlived the days for the necessity of the miraculous production of bread. We are now required to study out the natural laws of production by the proper use of the intelects given us by the same power that created those laws. If we violate the order of those laws, the result will either be only partial success or total failure.

Are our Agricultural Fathers following the dictates of Nature's orders?

We are told, according to the description given in the book of Genesis, that the Vegetable Kingdom was created, or, put in modern language, "evolved" before animals were created. If this were not the case, what would the animals eat? Their food would have to be imported from Mars or some other older planet.

Notwithstanding the absolute necessity of live stock on the farm, I do not consider their presence indispensible in the rapid upbuilding of the soil.

It appears to me, the proper thing to do is to first instruct the hungry multitudes of farmers—the main producers of food for the consumers—how to produce the food and the pure bred stock will naturally follow. A starved, pure bred animal is the most unprofitable kind of a scrub.

No doubt I may get some rebuke for my daring, radical departure from time-worn Agricultural Orthodoxy, but I am willing to take it if I can stimulate some other farmers to deeper thought and better action in utilizing the valuable natural resources now lying dormant under their feet.—D. MacDougall, Westmorland Co., N. B.

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one feature does not overtop all others because the same I H C standard of quality in design, material, and workmanship is maintained throughout. They are the only separators with dust-proof and milk-proof gears which are easily accessible. The frame is entirely protected from wear by phosphor bronze bushings. These separators have large shafts, bushings, and bearings; the flexible top-bearing is the strongest and most effective found in any separator. The patented dirt-arrester removes the finest particles of dirt from the milk before the milk is separated. I H C Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes.

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The Bureau is a clearing house for Agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.

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	Capacity	Suitable for	Prices
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" 1	200 lbs.	3 to 7 cows	$30
" 2	280 lbs.	5 to 10 cows	$35
" 3	450 lbs.	10 to 15 cows	$50
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ST MARY'S, ONT.

Terms Used in Dynamiting.

We have an inquiry from one of our readers regarding the terms "Mudcapping," Snakeholing" and "blockholing" which appeared in an article on the use of dynamite on the farm, in a recent issue of the Maritime Farmer. We have had several interesting inquiries in regard to the use of dynamite on the farm and we take pleasure in publishing an article and some cuts in this issue about this matter.

The operations of "Mudcapping," "Snakeholing" and "Blockholing" are explained to us for publication by Prof. F. H. Sexton of the Nova Scotia Department of Technical Education, as follows:

MUDCAPPING—When blasting boulders by mudcapping them (also called "doby shooting" or "blistering") the charge of dynamite is packed closely against the surface on the top or side of the boulder, covered with mud and exploded. The charge should be placed on the spot which would be struck with a sledge if the boulder were small enough to be broken in that way and should be packed in a solid mass by slitting the paper cartridge shells, but not spreading them over the surface of the boulder any more than absolutely necessary. A blasting cap crimped onto fuse should be placed in the middle of the charge, and the whole covered with six inches of damp clay or sand. This should be pressed firmly over the mass of dynamite, care being taken not to cover the outer end of the fuse. If the boulder is deeply imbedded in the ground, it is best, before blasting, to dig away or loosen some of the earth surrounding it.

If the boulder is cracked or seamy, the charge should be placed in some depression and covered with a quantity of clay or sand. This will furnish more resistance and secure greater force from the explosives.

The quantity and strength of dynamite required naturally depend on the size and shape of the boulder. The "grain" and kind of rock are also important points. 60 per cent Dynamite is best for mudcapping boulders. The following table gives approximately the number of 1¼x8-inch cartridges to mudcap boulders of different sizes, so that they will be broken into pieces small enough for one man to handle, provided the boulders are mostly above the surface of the ground.

Weight of Boulder	Approximate No. of 1¼in.x8in. cartridges
100 lbs. to 500 lbs.	½ to 1½
1000 lbs.	2
2000 lbs.	3
3000 lbs.	3½
4000 lbs.	4
5000 lbs.	4½
7500 lbs.	6
10000 lbs.	8

If boulders are largely buried in the ground they may be broken by doubling or trebling the above charges, but it is better under these conditions to lift the boulder out of the ground by snakeholing and then break it in pieces by mudcapping.

SNAKEHOLING—In this method of breaking boulders the dynamite is placed in holes underneath them just as in stump blasting. The hole is made with a crowbar or dirt auger in such a direction that the charge of dynamite will be against the center of the lower side of the boulder. If the boulder is hollow or flat underneath, the explosion of the charge will break it in pieces and throw it out of its bed. If the lower side is round or bulging the boulder will be heaved out, but will not be so well broken. When this occurs the large pieces may be broken by mudcapping. Care should be taken when the charge is placed to leave no means by which the force of the dynamite may escape. If it has not been thoroughly tamped or if it is too near the surface of the ground and not in the proper position beneath the boulder, the dynamite may blow the dirt out and leave the boulder untouched.

60 per cent. Dynamite should be used when breaking up boulders in this way. Only from one-half to two-thirds the quantity that would be required to mudcap the same boulder is needed, provided it has a hollow or flat side underneath. The results are better in damp, heavy soil than in light or sandy soil.

BLOCKHOLING—In "Blockholing" one or more small holes are drilled into the boulder and blasted in the ordinary way. This is the most economical way to use dynamite in breaking up boulders, although it takes some time and labor to drill the one or more necessary holes in the boulder. The holes in large boulders should be an inch or more in diameter, while three-quarters or seven-eighths of an inch will answer for the smaller ones.

A boulder weighing from eight to ten tons can be well broken by drilling a one-inch hole in it near the center from eighteen to twenty-four inches deep, as the shape and grain of the rock may demand, and exploding in the hole two or three 1¼ x 8-inch cartridges of 60 per cent. Dyna-

Weak Men, Read

Perfect health and strength denote the absence of disease. When you are weak it means that you lack that which is the foundation of strength—of life itself—Electricity. You may be afflicted with Rheumatism, Dyspepsia, Lame Back, Weak Kidneys, Nervous Debility, Sciatica, Constipation or any of the numerous diseases which lead to an early breaking down of the system. If you have any of these troubles they should be attended to at once. You have tried drugs, and found that if they even stimulated you they did not cure, but left you with some new trouble as a result of the poison put into your system.

It is pitiable to think of the vast number of men who go on from day to day suffering mental and physicial torture as a result of their weakness, while right at their doors other men are being cured of the same disease. One who has not known it himself cannot realize the feelings of a man in an advanced stage of Nervous Debility, nor does he hear it, for these men do not talk of their troubles. Even when they are fortunately led to use the remedy which is now so well known—Dr. McLaughlin's Electric Belt—and are cured by it, they do not mention it to their closest friends; hence the prevalence of this trouble, and the means of cure are appreciated only by those who have had experience. And yet I have thousands upon thousands of grateful patients who are willing to testify to their cures by

Dr. McLaughlin's Electric Belt

and who would be glad to share their knowledge with others if writtten to. I send the names of these men to any one who requests them. There is not another remedy in the world to-day that has proven as effective. Its cures speak volumes for the good work it has accomplished. My confidence in my method enables me to offer to any man or woman who will offer me reasonable security to use the Belt at my risk and

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Dear Sir, I have worn your Belt for a month now, and I am glad to say that I have received the greatest benefits from it. My back is a great deal stronger, and the pain in my legs and arms have gone and I am feeling like a new man already. You may use this letter in an yway you wish. Wishing you every success, I remain, Yours truly,

William McConnell,
Bon Acord, Vic. Co., N.B.

I cannot take up more space with those extracts. But if you will send me your address I will mail you free my beautifully illustrated book, along with testimonials from thousands of grateful people, who have been fully restored to health and strength.

This appliance has cures in almost every twon and city in the country, and if you will write me I will send you testimonials given to me by people that are probably well known to you. My Belt not only cures weakness, but Rheumatism, Sciatica, Lumbago, Backache, Kidney Trouble, Nervousness, Constipation, Indigestion and Stomach Trouble. I have a beautiful 80-page illustrated book, which I will mail, sealed, to any address, FREE. This book is full of lots of good, interesting reading for men. Call today. If you can't call, send coupon for Free Book.

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mite. As it is best to have the dynamite well down in the hole so that as much tamping as possible can be packed above it, the dynamite should be poured out of the shells and packed down into the hole with a stick. When it is all in place a hole is made in it with a sharp stick and the blasting cap, crimped to the necessary length of fuse, is pushed down into this hole and held in position by carefully packing the clay tamping about the fuse.

To break up a boulder weighing approximately a ton a one-inch hole, eight inches deep, charged with from two-thirds to one cartridge of the same size and grade of dynamite, is required. Smaller boulders require holes from four to six inches in depth, which, if necessary, can be filled full of dynamite, and no tamping used.

Lime in the Creamery.

The brightening, sweetening, disinfecting and preserving qualities of lime and its cheapness in price are well known. These are qualities that should appeal to prudent dairymen and in recommending the more extended use of this valuable commodity we give in the following a few suggestions as to its preparation and use in buildings used for dairy purposes.

1. Place freshly burned lime in a tight barrel or tub, pour on sufficient hot water to cover the lumps of lime and keep well stirred clear to the bottom. A piece of iron pipe makes a good stirring stick. If the lime is very "quick" two persons may be required to slake it, one to pour on the water as it is needed and the other to stir it. The adding of the water and the stirring should be kept up from the time the lime begins to slake until it is reduced to a smooth paste. It is not absolutely necessary that hot water should be used but unless the lime is very "quick" hot water facilitates the operation and results in more thorough slaking.

2. The thorough slaking of lime is an important operation and should be done with care. When lime is allowed to slake without being stirred the results is, generally, that a portion of it has not come into contact with the water at the right time and the white wash made from it will be full of small, hard lumps which were not slaked. Lime that is "burnt" or "drowned" in the slaking process is loose or flakey in texture when applied.

3. In preparing the surfaces of a room for whitewashing all loose flakes of old whitewash, dust, cobwebs, mold, etc. should be carefully brushed or scraped off, so as to leave an absolutely firm surface upon which to apply the lime. It is advisable to have the whitewash quite hot for the first coat, more especially if there be the least suspicion in the cracks or crevices of the ceiling, walls or floor. The whole surface should be carefully covered with lime. If the first coat does not cover completely, or if it be applied upon a surface upon which there has been a growth of mold, another coat should be applied as soon as the first has become dry.

4. We strongly recommend every creamery to keep on hand a supply of well slaked lime and to use it not only for the purpose of occasionally whitewashing the storage rooms and the interior of the creamery but also in the daily cleansing of churn and other utensils and in the scrubbing of floors. A small quantity of well slaked lime mixed and used with the hot wash water will effectively remove sour and disagreeable smells from utensils and floors.

5. In washing the churn with lime care should be taken to have it thoroughly rinsed shortly afterwards with clean boiling water so as to remove the undissolved lime, as otherwise it will form a crust on the inside surface of the churn and possibly afterwards become mixed with the butter which, of course, should be avoided.—C. L. Marker of Alta in Farm and Dairy.

The Cotswold.

The Cotswold sheep takes its name from a range of bare hills in the counties of Gloucestershire and Worcestershire, England, which it has inhabited for a very long period. It is said that the hills take their designation from the sheep rather than the sheep from the hills. They derive their name from 'cote,' a sheepfold and 'wold,' a naked hill. Historians of the breed describe the original stock as being long-necked, rangey, square of build with strong bone and clothed with fine, soft wool. As early as 1464 sheep of the Cotswold breed were by royal consent exported to Spain to the great advantage of the Spaish flocks. This and other evidence seems to point to a fine-woolled breed quite dissimilar to the long-woolled specimens of modern years. For a period subsequent to the date mentioned there seems to be nothing definite written about them. Two or three centuries later Professor Low, writing of the Cotswold sheep, gives the impression that they are the offshoot of the Midland long-woolled breed inhabiting the level lands.

From the accounts of the various writers it appears safe to infer that the blood of the original fine-woolled Cotswold and the longer-fleeced Midland sheep were fused in the Cotswold of the eighteenth century. Then the blood of the Leicester was introduced which worked a great improvement in the breed from a mutton standpoint. About this time many of the old pastures were being broken up, turnips and cereals began to be cultivated, bringing about conditions favourable to an increase in weight of carcass and length and strength of wool. Cotswold breeders have for a long time preferred and bred for a bold and open curl in the fleece rather than the close spiral of the Leicester. In the early years of the breed grey or light brown speckles on the face or shanks were not looked upon with disfavour, and even at the present day these markings are to be seen in individuals of many of the best flocks, although the Cotswold is looked upon as a white-faced breed.

Whatever the origin of this sheep it is certain that for the past seventy years at least it has been kept pure, so that the type has long since been thoroughly fixed. The Cotswold may be described as a big, upstanding sheep. Compared with the Leicester the Cotswold is somewhat larger and stronger of bone. It is not so broad in the back but possesses greater depth of body. In addition the hind quarters are more squarely developed. A distinguishing characteristic of the Cotswold is the topknot or fetlock which is never shorn close to the face, extending in some cases to the point of the nose. The fleece is heavy, wavy and rather coarser than that of the Leicester, and should weigh from 10 to 15 pounds of fairly clean but unwashed wool. It should cover

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The strongest, neatest and best Cow Tie made. Combines the good qualities of both neck chain and wooden stanchion as it gives the cow perfect freedom to move and turn her head, but does not let her step forward into the manger or back into the gutter. Easy to open and easy to close.

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FOR CHRISTMAS

Interesting Pages in Brown's New Jewellery Catalogue

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Pages 35 & 36.—Smokers' articles, Pipes, Tobacco Pouches, Cigar and Cigarette Cases, Gold Headed Canes, Shaving Sets and Stands.

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We are offering at a very low figure the Holstein Bull (Victor of Fairmead) rising four years old, weight over 1800, Sire Jacob Van Voran, (twice Grand Champion, Charlottetown, over all Dairy Breeds), Dam Beauty of Fairmead, a Show Cow. "Official" record made five days after calving, 455 lbs. 14 oz. milk and 17 1-2 pounds of butter in seven days—gave 12000 lbs. of milk this year on ordinary feed.

This bull won 2nd in class of five at Charlottetown this fall, and is an exceptionally fine animal in every way. Write for particulars to

LEA & CLARK,
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the body in all parts. As a rule the best specimens are clothed to the fetlocks of the hind legs. Like in the Leicester the head is carried quite erect. The neck is rather longer and in many cases shows lack of plumpness, giving a 'ewe necked' appearance which should be reduced as rapidly as possible wherever it is found to exist.

The Cotswold breed stands in high favour both in Great Britain and abroad. Numerous flocks of pure-breds and grades are to be found in France, Germany, Australia, New Zealand, the United States and Canada. They are quite hardy and sufficiently prepotent to stamp their characteristics upon their offspring when crossed with other breeds. The average weight of a mature Cotswold ram in good flesh is about 250 to 30 pounds, and of a ewe 190 to 225 pounds. Highly fitted show-yard specimens reach higher weights than these. They require good pasture but do well on moderate elevations that are not too rugged. The mothers are, as a rule, good nurses and are, therefore, adapted to the production of lambs for the early market. The fattening qualities of the breed are good although the flesh is only moderately fine in grain if allowed to reach more than maturity. As a rule stock that is not to be kept for breeding should be fattened and marketed before they are fifteen months old.

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At many places along the line of the Intercolonial Railway spruce saplings intended for Christmas trees are being delivered for shipment to cities in the United States. The shipment of trees for the little ones of the neighbouring republic has become an industry during the past few years, and it is evident that the forest resources in the States will not supply the demand, so the Americans have to look to Canada for their Christmas decorations. The trees being green and flexible are packed on flat cars in large quantities and sent to dealers in Boston, New York, Chicago, Detroit and even as far as St. Louis.

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OF THE

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ON

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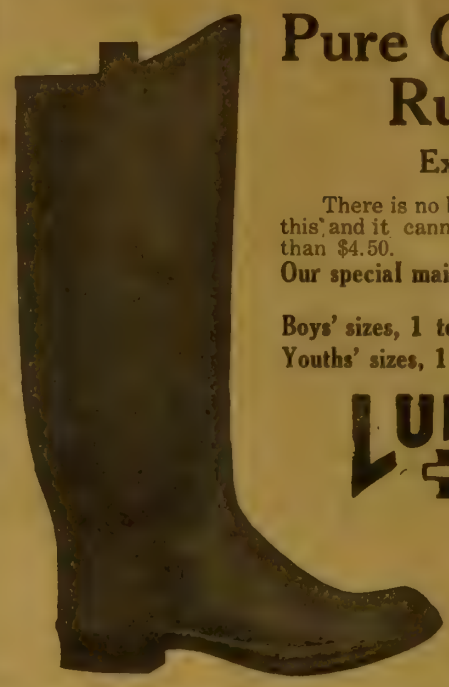

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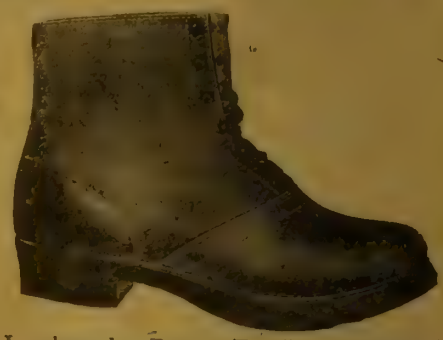
Made of fine Grain Kip uppers lined with thick brown felt, as the name suggests the soles are made of wood, which keeps the feet dry and warm. FROST PROOF AND WATER PROOF.

For Farmers, Drivers, Fishermen, Builders, Dairymen, Sailors and all out door workmen, they are worth four times the price.



No. 2C. Men's 2 Buckle Lumbersole, Brown Felt Lining, sizes 5 to 11, at $1.75

No. 34 1-2C. Laced with one Buckle, unlined, Lumbersole, cut from selected Grain Kip skins $1.98

No. 12C Men's Grain Kip Laced Lumbersole Boot, Whith Felt Lining, sizes 5 to 11, at $2.25

No. 14C. Men's Leg Boots, Lumbersole, Brown Felt Lining. We guarantee all feet warm and dry with our Lumbersole Boots no matter how low the temperature. A great boot for deep snow . . $2.95

No. 4C Men's Grain Kip 3 Buckle, high cut Lumbersole, Brown felt lining, size 5 to 11, at $2.15

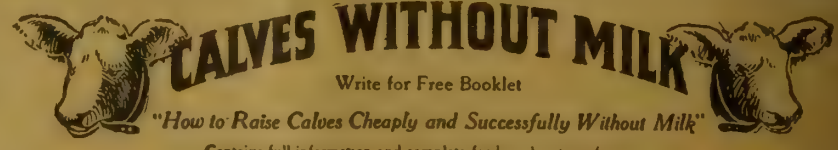
Shoe Packs.

Made from best quality Oil Tanned Beef Hides, Ballows Tongue.

No. 233 Men's, sizes 6 to 12, $1.75
No. 234 Boy's sizes 1 to 5 $1.35
No. 235 Youth's, sizes 12, 13, 1 $1.25
No. 236 Lads', sizes 8, 9, 10 98c

Sent to any address in Canada. Ask for our Catalogue of Bargains in Shoes and Clothing, and Free Premium Lists.

C. B. PIDGEON, MAIN STREET ST. JOHN, N. B.


CALVES WITHOUT MILK
Write for Free Booklet
"How to Raise Calves Cheaply and Successfully Without Milk"
Contains full information and complete feeding directions for using
Blatchford's Calf Meal—The Perfect Milk Substitute
Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.
A. A. ARCHIBALD, - TRURO, N. S.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

horthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.S.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake NB.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

"Hillside Stock Farm"

Hillside Ayrshires won in 1911, first for herd at Chatham and Fredericton also Male Champion at Halifax and Chatham, and Female Champion at Fredericton. Write or come and see us. At present offering four yearling bulls, and females all ages.

PRESCOTT BLANCHARD, Truro, N.S.

Dyke View Farm.

We offer for sale 1 Guernsey Bull, No. 322, 2 years old in January, 1912, of superior stock, also 2 young Bulls, 1 dropped the 4th of March and 1 the 11th May, 1911 and 3 registered cows, 8, 6 and 5 years old, to freshed in January, February and April, 1912. Agricultural Societies please note.

William Cox, & Son.

L. D. 'Phone Canard, Kings Co., N. S.

MEADOW BROOK STOCK FARM

Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

FOR SALE.

20 Brown Leghorns, S.C.Cockerels, Both matings from $1.00 up. 15 Brown Leghorn S. C. Pullets from $1.00 up both matings. Single and Rose Comb R. I. Red Cockerels and pullets. 2 Brown Leghorns S. C. Cocks, both show birds. Price $2.00 and $3.00 each.

W. H. HENRY,
Shubenacadie, N. S.

SPECIAL POULTRY SALE.

Columbian Wyandotte cock, 2nd prize at Fredericton, $3.00; Columbian Wyandotte hen, 1st Amherst, 3rd at Fredericton, $2.50; Columbian Wyandotte cockerel, 1st at Halifax, $1.50; Barred P. Rock Cock from McDonald college, $1.50; White P. Rock cock, grand utility bird $1.50; S. C. White Leghorn Cock, 2nd ckl.at St. John 1900, $2.00; S.C. White Leghorn hen, 2nd pullet at St. John 1910. Buff Orpington hen, Clark's strain, $1.50. Also one Pure Bred Yorkshire Sow pig 8 weeks, $3.00. ORCHARD HILL FARM, Brown's Flats, N. B.

Send 15c for our New Book

'Experience in Poultry Raising,'

Maritime Poultry Supply Company,

MONCTON, New Brunswick.

C. H. WISENER

Orpingtons and Brown Leghorns

PICTOU, - N. S.

B. P. ROCKS

High class breeding Cockerels and Pullets in trios and pens for sale in both Matings. Also, a few Yearling Cocks at close of Winter Fair.
Prices given on application.
CRAIG BROS.
Box 447. Amherst, N. S.

Broad View Farm

Now offers for sale a lot of choice pure bred Barred and White Rocks, Rose Comb Reds, and Buff Orpington Cockerels and pullets at $1.00 each to make room. Order now.

EGBERT DeYOUNG,
Box 120, Dartmouth, N. S.

MAPLE GROVE FARM

Leicesters and Jerseys.

Young stock for sale. Special bargains in a 5 months bull calf out of Sylvia of Maple Grove, 1086, who qualified for C. R. of R. in milk and fat with a large margin making a yearly profit of almost $90.00. This calf is a bargain at any price but will be sold reasonable. Apply to

WM. CLARK & SONS,
North Wiltshire, P. E. I.

For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111,
"Sunnyside Stock farm," Sus N. B.

Trees That Will Grow.

Reliable men wanted to work during the winter; part time or steadily. Should average $25. weekly. Special salesmen wanted for the fruit belt. Our trees will grow; there's a reason.

THOS. W. BOWMAN & SON Co., Ltd.,
Ridgeville, Ont.

Spring Brook Farm Ayshires.

Headed by two imported Bulls. Stock all ages, for sale. Exceptionally fine lot of young Bull Calves from cows that won at Amherst 3rd in aged cow class. 1st and 4th in three year olds, and 5th in two year olds.

McINTYRE BROS.
Inspection invited. Sussex, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

Rosebank Farm Jerseys.

We have for sale three heifers by Pogis 40th of Hood Farm due to calve this fall to Foxhalls St. John O'Dreamwold. And some bull calves from one to seven months old. Also some pure bred Yorkshire sows three months old.

JOSSELYN & YOUNG
St. John, N. B.

CEPHAS NUNN

Lot 33 Winsloe Road, P E. I.

Breeder and Importer of Shropshire Southdown and Hampshire Sheep.

Some good animals of either sex of the above breeds for sale at reasonable prices. Inspection invited.

You Can Earn More Than 3% on Your Savings

By Investing in a Good Reliable Bond

We can offer municipal bonds to yield from 4 1-4 per cent. to 4 3-4 per cent. with absolute safety
If you are interested in earning more than 3 per cent. on your money, drop us a post card for list of our offerings.

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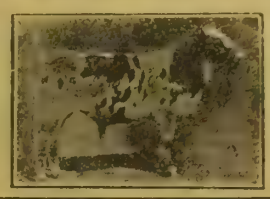
MAPLE FOREST STOCK FARM.

YORKSHIRE SWINE.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

Glen View

Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns.

Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

GLEN VIEW POULTRY YARDS, - SUSSEX, N.B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

SHEEP MEN ATTENTION!

Those who desire to purchase some of the best blood obtainable in all the leading breeds of sheep will do well to write me for prices. I have a car of beauties coming from Ontario which I intend to exhibit at the Maritime Fairs. Make a point to see my exhibit and be convinced I have the goods and that they may be bought right. Special attention paid to Farmers' Societies.

JAS. A. TELFER, Sunny Brae Sheep Ranch, Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

Milking Shorthorns Shorthorns For Sale

I have to offer, 5 Shorthorn Bulls, fit for service. Dams excellent milkers. Sire ¾ Cruikshank blood.

BLISS M. FAWCETT.
Sackville, New Brunswick.

We have sold eight pure-breds and have a choice lot of roan and reds left, ages from 13 to 26 months. Also a large red bull, 3 years old.

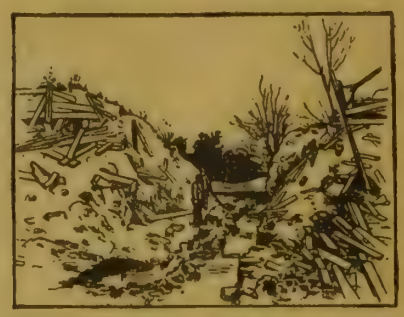
C. C. H. EATON,
Canard, N. S.

PEDLAR Nestable Corrugated Galvanized CULVERT

Is The Strongest, Most Practical, Durable and Easiest Laid Culvert Made

YOU ought to show this advertisement to your township reeve or warden. Get him to write for the free book about Pedlar Culverts, or write for it yourself and tell him about this new Culvert—the quickest, most economical, strongest for any use any culvert can serve.

See How It Saves Farmers' Money, Betters Roads, Lowers Taxes



This picture is from a photo of a washout fourteen feet deep in the Township of Darlington, caused by use of cement tile for drainage purposes. The township authorities have replaced that with Pedlar Perfect Culvert, forty feet in length by three feet in diameter; strongest, easiest laid and most durable they could get.

This picture of the Pedlar Perfect Culvert assembled and ready to lower into place, shows the immense strength and rigidity of these Culverts. Though forty feet long with a bearing of only a few feet at the centre it does not give one-sixteenth of an inch. See how easily Pedlar Culvert can be lowered into place. No skill needed.

Here you see the Pedlar Culvert doing its work of drainage twenty-five minutes after being put in place. It would have taken three times as long and cost three times as much to have installed any other type of culvert. Yet this Pedlar Culvert will last far longer and give no further trouble of any kind.

This view shows the Pedlar Culvert after the fill-in was completed. The Culvert has to carry a dead weight of several hundred tons of earth, as well as the live weight of traffic passing overhead. But that can't strain Pedlar Culvert, which will neither give nor spring. It stands what no other culvert can.

Write For My FREE Book No. 60 and Sample

And get a correct idea of what makes a good Culvert. Learn how Pedlar Culvert can be used on your farm.

The PEDLAR PEOPLE of Oshawa

411 Address nearest place.

HALIFAX 16 Prince St.	ST. JOHN, N.B. 42-46 Prince William St.	MONTREAL 321-3 Craig St. W	LONDON 86 King St.
OTTAWA 423 Sussex St.	TORONTO 111-113 Bay St.	CHATHAM 200 King St. W.	QUEBEC 127 Rue de Pont
REGINA 1901 Railway St. S.	WINNIPEG 76 Lombard St.	PORT ARTHUR 45 Cumberland St.	
CALGARY 1112 First St. W.	VICTORIA 434 Kingston St.	VANCOUVER 821 Powell St.	

G. K. Pedlar

Our Wish is That You Enjoy **A Very Merry Xmas.**

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

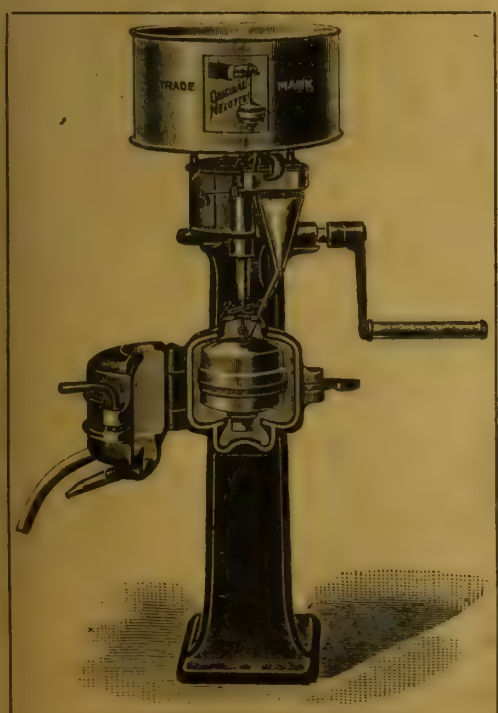
Vol. 17. ST. JOHN, N. B., DECEMBER 12, 1911 No. 5

25 YEARS' USE

In the Dairies of Half a Million Customers Demonstrates that

THE MELOTTE

is the MOST EFFICIENT, SERVICEABLE and PROFITABLE CREAM SEPARATOR ever constructed



Cap. 280-720 lbs. per hour

The "Melotte" pays its original cost within 12 months from date of purchase in EXTRA CREAM alone and there is NO COST for repairs.

The "Melotte" skims more milk with LESS POWER in LESS TIME, and, under all conditions MORE EFFECTIVELY than other Cream Separators.

"MELOTTES" are ALWAYS READY to separate. Ask your neighbor to prove this statement.

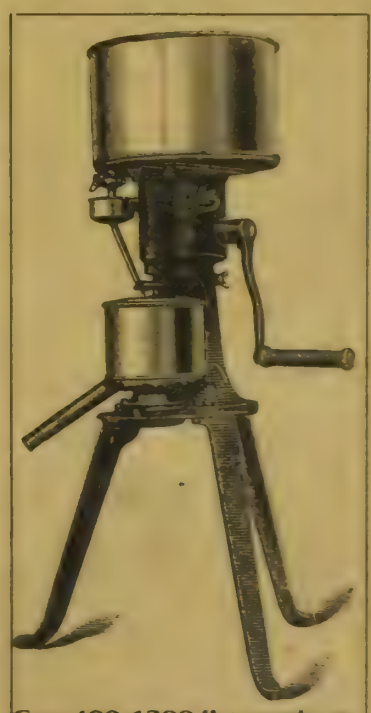
If you want a Cream Separator, TRY A MELOTTE, then you'll buy it and be a SATISFIED USER.

It's a Time-Saver, Money-Earner, Satisfaction-Giver, all the year round

MELOTTES are all GUARANTEED to give entire satisfaction, and every machine can be operated before being purchased when in doubt.

Write for New Recommendation Booklet which is All Truth

Address "Sales Manager"



Cap. 400-1300 lbs. per hour

R. A. LISTER & COMPANY, LIMITED,

82 Water St., ST. JOHN, N. B., or 62 Stewart St., TORONTO

One of the Many Letters We are Receiving Daily

Monastry of Our Lady of Charity,
Ottawa, Ont., Aug. 11th, 1911

Asepto Soaps, Ltd., St. John, N. B.

Dear Sirs :---Please accept our Sincere thanks for having so promptly sent us the premiums asked for. We are delighted with them, they are so beautiful. We remain,

The Sisters of Our Lady of Charity.

Do you realize how quickly you can procure a beautiful premium from us? and that all of the following articles carry coupons that count together on the same premium?

List of Articles That Carry Coupons With Them

Asepto Soaps

Asepto Soap.
Asepto Soap Powder.
Asepto Woollen Soap.
Asepto Carbolic Soap.
Asepto Hand Cleaner.
Asepto Potash or Lye.
Asepto Ironing Wax.
Asepto Bluing.
Asepto Gloss Starch.
Asepto Scouring Soap.
Asepto Black Harness Soap.
Naptho Soap.
Venus Floating Soap (toilet)
Scott's Scouring Powder.

Specialties

Bay Rum
Bees Honey
Turpentine
Salts
Talcum Powder
Banner Cocoa
Senna
Household Ammonia
Sulphur
Banner Sweet Chocolate
Banner Bitter Chocolate
Banner Soda or Saleratus

Ebony Shoe Polishes

Ebony Lustre - - $0.25
Success Lustre - - 10
Ebony Combination in Black Tan or Oxblood, 10c and 25c sizes
White Canvas Polish
Little Coon Stove Polish
Ebony Paste Polish

Oils

Banner Axle Oil
Camphorated Oil
Cod Liver Oil
Heavy Machine Oil
Oil of Tar
Fish Oil
Carbolated Oil
Castor Oil
Harness Oil
Sweet Oil
Neatsfoot Oil
Olive Oil
Sewing Machine Oil

Veterinary Dept.

Pendleton's Colic Cure
Pendleton's Condition Powders
Pendleton's Gall Cure
Pendleton's Hoof Grower
Pendleton's Horse Liniment

Banner Spices

Cream Tartar
Ground Cloves
Whole Cloves
Allspice
Nutmeg
Mustard
Ginger
Pepper
Cinnamon
Mixed Spice
Cassia

Banner Fruit Syrups

Strawberry
Lemon
Orange
Raspberry
Pineapple
Cherry
Lime Juice

Banner Extracts

Lemon
Peppermint
Strawberry
Wintergreen
Vanilla
Pineapple
Almond
Cinnamon
Rose

Patent Medicines

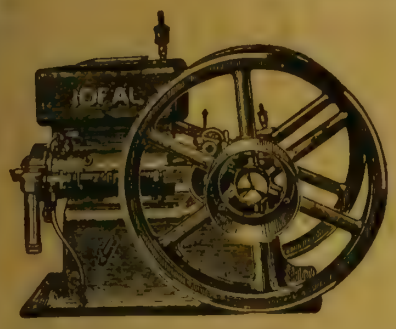
Beef Wine and Iron
Carbolic Salve
Corn Cure
Cure-a-cold Tablets
Dr. Eric's Dysentry Tablets
Herner's Dyspepsia Cure
Emulsion Cod Liver Oil
Jamaica Ginger
Pansy Healing Cream
Pendleton's Curative Bitter
Pendleton's Panacea
Scott's Quinine Pills
Dr. Scott's White Liniment
Dr. Scott's Pills
Dr. Scott's Honey Balm
Scott's Worm Syrup
White's Pine and Tar
Scott's Witchazel Cream
Scott's Pure Extract Witch-azel
Friar's Balsm
Glycerine
Paragoric
Spirits Nitre
Carbolic Acid
Scott's T. A. Gum

Send For Premium Book

ASEPTO SOAPS Ltd., ST. JOHN, N.B.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

WEAR TAYLOR'S

Anti-Rheumatic Shoe For Men and Women

And get Ria of Your Rheumatism.

MADE BY

The Robert Taylor Co. Limited

HALIFAX, Nova Scotia

Christmas Diamonds . . . At . . . BROWN'S

The Ideal Gift, the Gift always Welcome to Wife and Sweetheart. The Gift of Beauty and always Increasing in Value.

Seventy ears connection with the world's Diamond markets, importing direct from the Cutters only the finest quality Stones — mounting them in our own Factory, has increased our business till today we are one of the largest Diamond Importers in Canada.

Some of the Diamond Values taken from our Catalogue,

70123
Fine Diamond Solitaire
18 Carat Tiffany Setting
$50.00

70122
Fine Diamond Solitaire
18 Carat Tiffany Setting
$75.00

70121
Fine Diamond Solitaire
18 Carat Tiffany Setting
$100.00

Our Catalogue shows a Magnificent range of Diamond Rings in single stone from **$15** to **$225.** Three, four and five stone from **$35** to **$400.** Also a large range of colored stone. Signet, Birthday and Children's Rings from **85c.** upwards

All Diamond Rings of $50 and over supplied in Solid Silver Presentation Case — with the Initial Engraved on the Cover.

M. S. BROWN & CO., LTD., JEWELLERS

Established 1840 HALIFAX, NOVA SCOTIA

If 1/4 Your Advertisement was in this space for just one issue it would be read by 50,000 Farmers.

THE DeLAVAL SEPARATOR CO.
173-177 Williams St,, MONTREAL
VANCOUVER - - WINNIPEG

DURABILITY

" Although I am only in the prime of life, I am satisfied my

De Laval Cream Separator

will last longer than I will."

H. TREBELL,
Cannington, Ont.

That's only one of the things you get in De Laval quality

Send for Catalog. Agents Everywhere.

Short Courses at the Agricultural College

TRURO, NOVA SCOTIA

January 2nd to 12th, 1912

The next Short Course for farmers and farmers' sons will embrace all the features in connection with Soil Cultivation, Live Stock, Horticulture, Dairying, Poultry and Veterinary Science that have made the previous Courses so valuable and popular. In addition, instruction in the running of Gasoline Engines will be added, for which purpose the various manufacturers will have their machines on exhibition. Particular attention will be given to Power Sprayers.

The Short Course for Ladies, held on the same dates, promises to be the most largely attended yet. The subjects taught will be Dairying, Horticulture, Poultry, Domestic Science, and students may attend selective classes from the above Courses.

Tution to students from all the Maritime Provinces FREE.

Board will cost from $3.50 to $4.00 per week.

All Railways gaant SINGLE FARE privilege.

For full particulars write

M. Cumming, Principal Agricultural College, Truro, Nova Scotia.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, DECEMBER 12, 1911. Number 5.

Eleventh Annual Maritime Winter Fair

Still it Grows.

Col. H. Montgomery-Campbell
President Maritime Stock Breeders' Association.

DECEMBER fourth, fifth, sixth and seventh, the dates on which the eleventh annual Maritime Winter Fair was held, were busy days in Busy Amherst.

Breeders of purebred and grade, beef and dairy cattle, sheep, swine and poultry as well as breeders of elite, hand selected and general crop seed grain and potatoes were out in strong numbers. Beekeepers and fruit growers were also well represented. Although several of the veteran exhibitors were absent, and they were missed, still we were pleased to note that any breach in numbers formed in this way, were more than filled by young and enthusiastic exhibitors.

The weather was mild and balmy, making it agreeable for exhibitors and visitors alike to move around with comfort and enjoy the educational demonstrations in the various departments of the fair.

Col. H. Montgomery-Campbell, the president of the Maritime Stock Breeders' Association, Secretary Manager, F. L. Fuller and their assistants in the various departments of the fair did everything in their power to make matters both pleasant and profitable for the visitors and exhibitors.

The citizens of Amherst noted the cramped condition of the dairy stables last year and went to work with their characteristic progressiveness, and built an additional ell, which they fitted up for more accommodations for dairy cattle. It was well this extra amount of stabling space had been provided as the Dairy Test is one of the most popular features at the fair, and one in which there is an awakening interest among the exhibitors themselves, so much that the number of entries were almost twenty per cent. greater than last year. The cold storage room has also been enlarged to accommodate larger numbers of dressed carcasses of beef, mutton, lamb and pork.

The rapidly increasing number of entries in the poultry department calls for a further extension of that musical and attractive section. All available coops were taxed to their utmost capacity. The poultry men look for extended cooping space before next year in order to avoid decking which would detract from the appearance of the show.

THE JUDGES

of the respective classes were :—Beef Cattle, W. R. Elliott, Galt Ont.; Dairy, W. A. McKay, Scotsburn, N. S., Mr. Porter of the N. S. A. C. staff and D. Drummond, Ottawa ; Sheep, John Guardhouse, Highfield, Ont., and C. M. McRea, Ottawa; Swine, C. M. McRae; Poultry, F. C. Elford, St. Anne, Dr. Bellevue, Geo. Robertson, Ottawa, and Seth Jones, Sussex, N. B.; Seed, L. H. Newman, Ottawa, and S. J. Moore, Truro, N. S.; Dressed Carcasses, W. R. Elliott, C. M. McRae and John Guardhouse ; Honey, W. A. Colpitts, Petitcodiac, N. B.; Fruit, S. C. Parker, Berwick, N. S. These gentlemen are past masters in their respective branches and the judging was done with all possible speed. The large number of entries in the open classes of the poultry department made it a difficult matter for the judge to get through with his work as rapidly as he and the exhibitors would like. The class is far too heavy for one man to judge in so short a time.

F. L. Fuller
Secretary-Manager Maritime Winter Fair, Amherst, N. S.

THE PUBLIC OPENING.

After the Stock Breeders' annual dinner on Monday evening, the public opening took place in the Auditorium. Col. H. Montgomery-Campbell presided and before introducing the speakers gave a short outline of the fair from the time of its inception. He eulogized the public-spiritedness and progressiveness of the citizens of Amherst and thanked them for their generous policy in regard to the Winter Fair and Horse Show.

For the fourth time in the history of the fair, His Worship Mayor Lowther said he was pleased to have the opportunity to say "welcome to the visitors and exhibitors at the Winter Fair." As Amherst continues to grow the Winter Fair building would also grow space, but when Amherst would cease to grow the Fair building would also cease to grow. Prospects were bright in Amherst ; the factories were taxed to their utmost capacity and Amherst properties were well worth looking forward to as safe investments for the citizens' slogan is "15,000 in the next few years." To show their faith in their slogan and to keep pace with other improvements, a school building costing in the vicinity of $50,000 was being erected. He told the visitors that the doors of industry in the town were open to them and advised each and everyone to visit the various lines of industry and see for themselves how the various lines are conducted that justify for the town the name Busy Amherst.

Warden Purdy of Cumberland extended a welcome to his county, a county on which nature has bestowed natural gifts of fertile soils, abundant forests and extensive coal areas which, coupled with a central location made Cumberland one of the best counties in the Maritime Provinces.

C. S. Sutherland, President of the Amherst Board of Trade, in referring to the Winter Fair said its success was due to its educational principles. He thought the time had arrived when the citizens of the town and the general public should look toward the erection of permanent buildings in which to accommodate the Fair. He thought the Maritime Provinces might combine to ask the Government to place their next Dominion exhibition grant at the disposal of the Maritime Stock Breeders' Association for the purpose of building a permanent home for the Maritime Winter Fair.

The manufacturers' and farmers' interests were so closely hinged together that the success of the one had an uplifting influence on the other.

Hon. O. T. Daniels, Attorney General for Nova Scotia was present and said he was delighted with the spirit of good cheer and co-operation that seemed to prevate the Fair. He would like to see this spirit of co-operation extended to other lines. He spoke strongly in favor of Maritime Union and said that in all probability, if such a union were to be consummated, Amherst, as the most central point in the Maritime Provinces, might become the new capital. He also referred to the good work that is being done by the Nova Scotia Agricultural College. In the upkeep of the N. S. A. C. as well as in Technical Education there was no just reason why the Maritime Provinces could not unite. Mr. Daniels set forth a plea for a spirit of optimism and boom to help invite immigrants to our civilization after which he declared the Eleventh Annual Maritime Winter Fair formally opened.

W. W. Hubbard, Secretary for Agriculture for New Brunswick replied to the addresses of welcome and in behalf of the visitors present thanked the citizens of Amherst for their kind treatment and hospitality. He also spoke very highly of the work that had been done by Messrs. E. B. Elderkin and W. W. Black in organizing the Fair.

Hon. E. H. Armstrong, Commissioner of Public Works for Nova Scotia also eulogized the spirit of co-operation that was so much in evidence at the Fair. The money spent in conducting the Show was well spent and he would gladly support any measure that would tend to the betterment of the Fair.

While he was not sure of the practibility of Maritime Union still he felt that there were many lines in which the three Provinces could co-operate, especially in Agriculture, for on it the prosperity of all classes depends. They could also combine to have their representation in the Federal House maintained as they have no means of expansion by acquiring new territory as the other provinces have. The Maritime Provinces were, as it were, tied down by the British North American Act and every effort to maintain the Maritime representation should be put forth even if the B. N. A. Act must be changed. He asked his hearers to do all in their power to advance technical education in Maritime Canada and ended his address by paying a high tribute to Professor Cummings' work at the N. S. A. C. in imbuing our young men with a sense of the great and good natural heritage we posses.

Rev. Dr. Ganthier of Prince Edward Island brought greetings from the Garden of the Gulf. He added his tribute of respect to the good-will and optimism of the citizens of Amherst. He also referred to the self-sacrifice of the P. E. I. exhibitors and the inconveniences experienced by them in trans-shipping their stock to and from the Fair. There should be more co-operation between the three Maritime Provinces in matters of common interest. The question of Immigration was an important one, but not so important as the emmigration of our own blood, our young men and our young women.

Measure should be adopted to keep our young people at home. Agricultural and general education would be a great factor in solving this perplexing problem. The N. S. A. C. at Truro was already shaping the destiny of our young people towards rural life and the farmers of the Maritime Provinces could not be too loyal or too patriotic to the College and its popular principal, Professor Cumming.

R. S. Carter, M. P. P. was pleased with the evidences of progress made by the Fair and pledged his support whenever opportunity offered.

J. L. Ralston, M. P. P. said the success of the town of Amherst was not due to its central location but owing to the spirit of optimism of its citizens. He touched on the problems of Immigration and Emmigration and said there was not much gain in trading comfortable eastern homes for western inconveniences. He wanted his hearers to stand up for the East, boast for the East and make the next decade that of the Maritime Provinces.

BEEF CATTLE.

The beef cattle classes were out in strong numbers and with fewer culls than on previous occasions. Some of the younger classes, although possessing good quality in abundance would have stood a little better fitting particularly in the grade lines. The total number of animals shown in the Shorthorn, Hereford and Grades classes numbered 132 only three less than last year.

HEREFORDS were shown by W. W. Black. As usual his white faces were in good, even, level shape and would merit stronger competition. The familiar figure of the late Wm. Robertson was greatly missed from the show ring. Since his demise, Mr. George Retson, of Truro, has been in charge of Mr. Black's herd and is proving his ability as a feeder, fitter and exhibitor.

The honor for female championship in the Hereford class went to the well covered, heavily fleshed, smooth Sylvan III of Amherst.

The honor for grand championship over all breeds went to Cup-bearer a two-year-old pure-bred, Hereford steer of great depth and thickness carrying a great amount of flesh on a magnificent back and loin.

SHORTHORNS were exhibited by Messrs. J. R. Coates & Son and J. McCully Pipes, Nappan, N. S.; Harold and Hazen Etter, Westmorland Point, N. B.; E. P. Anderson, Sackville, N. B.; Edwin and Chas. W. Forrest, Amherst Point, N. S.; Geo. M. and Fred T. Holmes, Amherst, N. S.; J. E. Baker & Son, Barronsfield, N. S.; C. A. Archibald, Truro, N. S. and R. A. Snowball, Chatham, N. B.

The winner of the female championship and sweepstakes for best animal any age in this class was Lady Ruler, by Royal Ruler a Guardhouse bred bull. Lady Ruler captured the M. J. O'Brien Cup which was won n 1909 and 1910 by C. A. Archibald. For the first time in the history of the Cup it has been won by a New Brunswick exhibitor. Lady Ruler is very evenly fleshed, possessing a well filled wide loin and great depth but a trifle weak back of the shoulder. The best steer was shown by J. R. Coates & Son.

The reserve champion in the Shorthorn class was a Snowball calf which was brought out in exceptionally good shape, and which also won the Blatchford Calf Meal Special prize. The Snowball herd was out in excellent condition and reflected great credit on their owner as well as on the efficient herdsman, Mr. John Bennett and his assistant, Mr. Don Mc Intyre.

C. A. Archibald had some magnificent cows and heifers, his winnings will be found in the list of awards.

GRADES—The Grade classes were a good uniform lot. The Pugsley Cup, won for the third time in 1910 by W. W. Black was put back in competition by Mr. Black under conditions as formerly viz: Championship in the Grade Beef class. This cup was won by Mr. E. T. Anderson, Sackville, N. B. with a senior calf steer that gives evidence of developing into an ideal beef animal of excellent smoothness.

The Dressed Beef Carcásses were seven in number. The first prize going to Edwin Forrest on the first prize two-year-old Shorthorn grade steer. The second prize carcass was that of the first prize three-year-old Hereford grade steer. C. W. Forrest's second prize two-year-old Shorthorn grade cow and his second prize, two year old Grade heifer, dressed out as third and fourth prize carcasses respectively. The fifth prize carcass was from Harold Etter's fourth prize two-year-old grade Hereford steer while the sixth prize went to J. R. Coates on his first prize two-year-old pure-bred Shorthorn steer.

The younger exhibitors were out to win and had their stock in better shape than ever before.

THE DAIRY TEST.

On another page of this issue will be found in tabulated form a full report of the achievements in the dairy test. This department of the Fair, as an educational feature, is rapidly gaining prominence. There were 86 matronly cows on hand to show what they could do. Last year's test included 72 cows. The highest score made last year was 149 points, made by a grade Holstein cow owned by T. W. Keillor, Amherst Point, N. S. The highest score this year was 157.54

The T. Eaton prize for the best herd went to A. McRae & Sons, Charlottetown as the highest scoring herd, Dickie's, had won an Eaton prize on a previous occasion.

The Holstein-Frieeian Association's prize for the highest scoring three-year-old cow in the test as well as the Henry Birkes & Sons' Cup went toS. Dickie & Son. Fowler Bros., Amherst Point, N. S. had the champion cow in the Grade class and won the Holstein-Friesian Association's Cup.

RULES GOVERNING DAIRY TEST.

56. All cows shown in pure-bred classes must be recorded in Canadian Maritime or reputable English or American records, and certificates produced. The name of the breeder and the age and record number of the animal must be given at the time of making entry. In the case of grades a statement giving the number and kind of crosses; and if from a pure-breed sire, the name and number of the sire must be given at the time of making entry.

58. The cows in the test shall be milked dry in the presence of the judges at 1 p. m., December 3rd, and the test will conclude at 1 p. m. on December 5th. The percentage of fat in the milk will be determined by the Babcock milk tester and the percentage of solids not fat will be determined by ascertaining the specific gravity of the milk and then estimating the amount of solids not fat, by the use of the authorized formula for the purpose.

59. Cows entered in this test must be in the building not later than Saturday evening December 2nd.

60. The standing of the respective cows will be computed on the following scale: 25points for each pound of fat; 3 points for each pound of solids, not fat; 1 point for each ten days in milk after the first 30 days. Limits ten points.

61. No cow four years old or over, shall win first prize that does not produce at the rate of 10 pounds of butter per week, or a 2nd or any other prize that does not produce at the rate of 8 pounds of butter per week. No three year old cow shall win a first prize that does not produce at the rate of 9 pounds of butter per week, or a second or any other prize that does not produce at the rate of 8 pounds of butter per week, No heifer two years shall win a 1st prize that does not produce at the rate of 8 pounds ol butter per week, or a second or any other prize that does not produce at the rate of 6 pounds of butter per week. No heifer one year old shall win first prize that does not produce at the rate of 7 pounds of butter per week, or a second or any other prize that does not produce at the rate of 5 pounds of butter per week.

62. An affidavit may be required from each exhibitorin the Dairy Test stating the number of days his exhibits have been in milk; also stating that each cow is shown in her proper class and that she is the animal named on the registration certificate produced.

SHEEP.

The Sheep exhibit was a hummer, as a large exhibit of grand quality was out. Many of the individuals shown would do well at the larger fat stock exhibitions, so good was the quality and the fit in which the shepherds or owners brought them out. Best of all to enjoy was the enthusiasm with which the various exhibitors entered the fray.

Leicesters, as usual, in these provinces, were strong leaders in the long wool class, the exhibitors being: Messrs. Albert Boswall, Pownal, P. E. I.; Retson Bros., Truro, N. S.; Samuel C. Lane, Pownal and Jas. A. Telfer, Sussex, N. B. The fight lay between Messrs. Retson Bros. and Albert Boswall. Telfer having only one entry.

The lordly Lincolns were out in full force and some beauties there were. Here the prizes were very evenly di. vided amongst the exhibitors, who were: Messrs. Jas. A. Telfer, Albert Boswall, Jr., French Fort, P. E. I. and a new exhibitor, Mr. C. W. Pugsley, Barronsfield, N. S.

Cotswolds were few in numbers. Mr. Telfer having sold his prize winners previous to the Fair. Retson Bros., Truro, N. S. contested against Mr. Telfer for the honors of the class while in the fat section Mr. Albert Boswall, Jr. held the winner.

The Cheviot, that bright and active mutton sheep, had an ardent champion in Mr. Chas. Symes, Minudie, N. S. There is room for more of these sturdy mountain sheep on the hills of the Maritime Provinces.

Horned Dorsets were a strong class. Some excellent specimens shown, being brought out in great form by their owners, Messrs. Geo. L. Boswall, French Fort, P. E. I.; Hartland Poultry Yards and Jas. A. Telfer.

Southdowns, that little big sheep, from which we get the best mutton chops, etc., were well brought out by their respective exhibitors, Messrs. J. E. Baker & Sons, Barronsfield, N. S.; Cephas Nunn, Winsloe Road, P. E. I. and Oliver C. Saunders, Trilby, P. E. I.

Shropshires, the nobby rent payers were, as usual, out in full force and some splendid specimens of the breed were amongst the number. Our veteran feeder, Mr. Jas. J. Stewart, Amherst Point, N. S. was there with a broad smile upon his face as he led his pets into the ring and with Cephas Nunn, Geo. L. Boswall and Jas. A. Telfer there was a good honorable fight.

In Hampshires, Mr. Telfer led in the fray with Cephas Nunn a close second.

In the Oxford classes, the gallant shepherds, The Baker Boys did battle with Mr. Robert Kidney, the untiring and ever pleasant shepherd of the Hartland Poultry Yards.

Suffolks, the great English mutton breed, were exhibited by Mr. Albert Boswall, Jr.

FLEECE JUDGING.

One of the newer features in the sheep classes was a fleece competition. The various exhibitors and their friends donated a handsome purse which was divided in first, second and third prizes, in each class ol the sheep department. The judging was done by W. A. Rich, wool expert of the Department of Agriculture, Ottawa, and C. M. McRae. This was a competition in which the sheep men took an active interest and from which they derived much valuable instruction on judging wool.

SWINE.

The Yorkshire, Tamworth, Berkshire and Grade Swine classes had strong competitions in every section. In the Chester White class Leonard Court and Thos. J. Etter had everything their own way with a nice, smooth bunch of porkers.

J. W. Callbeck, Summerside, P. E. I. Roper Bros., Charlottetown; A. A. McBeath, Marshfield and W. C. Black Salem, N. S., championed the Yorkshire breed, Messrs. Callbeck and McBeath leading the way witb deep sided, smooth shouldered, even backed specimens.

The Tamworths were also a good lot and were exhibited by the veteran exhibitors from Prince Edward Island, Messrs. W. J. Gibson and Roper Bros. Most of the plums in the class going to the Gibson herd.

There were six exhibitors of the trim and ever popular Berkshires. Peter Brodie, A. A. McBeath and W. J. Gibson were over from Prince Edward Island to vie with Messrs. Logan Bros., Fowler Bros. and Jas. J. Stewart of Amherst Point, N. S. Their respective winnings will be found on another page of this issue.

W. J. Gibson had the Grand Champion individual and won the Atlas Stock Food Co's. Silver Cup.

The Percy B. Evans Silver Cup for the Grand Champion Pen was captured by A. A. McBeath.

With the exception of 10th prize all the prizes in the Dressed Carcass competition went to Island exhibitors; J. W. Callbeck's Yorks in first place closely followed in second place by Brodie's Berks.

LIVE STOCK JUDGING COMPETITION.

This feature has been growing in prominence, from year to year. In every respect the competition of 1911 was most satisfactory. Thirty-five young men, under twenty-five years of age competed in the judging of Dairy and Beef Cattle and Sheep. Two classes each of these sections were selected by the judges of these departments, D. Drummond, W. R. Rlliott and C. M. McRae. Possible score per section 200 points.

The prizes in the Dairy Class were contributed by Messrs. R. S. Carter, M. P. P. and J. L. Ralston, M. P. P. The Beef prizes were contributed by the Amherst Boot and Shoe Co. and Stanfields, Limited, Truro contributed the Sheep judging prizes.

Following are the results:—

SHEEP—1st, O. Schafheitlin; 2nd, J. G. Archibald; 3rd, H. Secord; 4th, A. Tattrie; 5th, Jas. Easton.

BEEF—1st, Jas. Easton; 2nd, G. Hubbard; 3rd, M. A. Steward; 4th, W. M. Chisholm; 5th, Jas. Campbell.

DAIRY—1st, Jas. Easton; 2nd, H. P. Munro; 3rd, W. Smythe; 4th, H. Grimmer; 5th, E. Boulden.

Prof. Cumming's Silver Cup for the person making the highest score in the above classes was won by Mr. W. M. Chisholm, a second year student at the N. S. A. C.

The M. S. B. A. Cup for the person, not a regular student of the Agricultural College making the highest score, was won by Mr. Jas. Easton, who has had long experience in competitions and who, we are pleased to say, won a Cup in 1910.

The possible score for the above cups was 600.

Following are the scores made by the five highest contestants, Jas. J. Easton, 483; W. M. Chisholm, 405; D. Moore, 403; V. Durling, 387; E. Moreash, 385.

The educational value of the contest is readily estimated by the keen interest shown in it by the spectators. All young farmers should prepare themselves for such competitions as through them they gain, not only confidence in their own judg-

POULTRY.

The Poultry show was the largest in the history of any show ever coop-ed in the Maritime Provinces.

In a few cases the quality was a little disapointing but nevertheless there was an abundance of good birds. Not a few good birds were turned down on account of careless preparation and neglect on the part of the exhibitor. The lessons taught in this way will, no doubt, react to the credit of future shows. A good judge likes to see the birds brought out in the pink of condition and it galls him to have to pass over a good bird that would be placed at the top of the list if properly exhibited.

The Asiatic varieties were out in larger numbers than ever before. This was particularly noticeable in the Black Langshans, Buff Cochin and Light Brahma classes.

Dorkings, the favorite English breed, were better represented than on any previous occasion.

Barred Plymouth Rocks made a splendid display, although not so numerous as we have seen them at Amherst, yet the quality was away up. Craig Bros. were the heavy winners in this class, capturing the 1st and 2nd cock prizes; 1st and 6th on hens; 2nd, 3rd, 4th and 6th on cockerels; 2nd and 6th on pullets as well as first on a pullet mating breeding pen and 2nd on a cockerel mating pen in the open classes and 1st and 3rd pens, 1st and 3rd pairs of pullets and 3rd pair of cockerels in the utility class. The first cock, hen and cockerel were worthy of special mention. L. H. D. Foster, Glenview Poultry Yards and Watson Lutz were strong exhibitors in this class, Mr. Foster capturing first prizes on cockerel and pullet as well as some other prizes.

There was a big class of White Rocks, some of which would look better had they been introduced to the wash-tub.

Some excellent Buff Rocks were shown.

Wyandottes, particularly the Silvers were more numerous than on previous occasions. Buffs were few in numbers. Whites were only about half as numerous as last year but some good ones showed up. For the first time in several years the first prizes in all four sections of the class were won by one exhibitor, Mr. A. C. Reid. Columbians made a good showing in numbers and in quality.

Minorcas came out in great numbers, in fact they were one of the largest classes in the show and they had quality to burn. The first cock, hen, cockerel and pullet were almost ideal.

White Leghorns were not as strong a class as we have seen at the Maritime Winter Fair.

Brown Leghorns were the largest class in the show and the quality was excellent. The first cock, hen, cockerel and pullet were fit for any company.

The Buff Leghorns were very nice.

Games were fair.

Hamburgs a good class.

The Buff Orpingtons were a classy lot and fit to show at Boston or one of the larger shows.

The White Orpingtons showed up well but a few cock birds were disqualified.

Rhode Island Reds were a big class of fairly good quality.

Turkeys, Geese and Ducks were out in large numbers and the best quality in the history of the show. No better class of Bronze Turkeys ever came together in one show in Eastern Canada.

The Dressed Poultry Room presented a fine showing. The improvement since last year was very noticeable but some cases of bad bleeding caused the turning down of otherwise good stock.

J. P. Landry the popular poultry Superintendent at the N. S. A. C. superintended the show and it is needless to say that he did his work to the satisfaction of all concerned and in his usual prompt and obliging style.

ment, but also the educational value. The N. S. A. C. is the best place for such preparation as may be seen from the above results, where 76 per cent. of the prizes and one Silver Cup goes to College trained but otherwise inexperienced men.

FRUIT.

The fruit department contained some plates of excellent specimens of apples from the New Brunswick Counties of Albert, Queens, Charlotte, St. John, Sunbury, Kings and Victoria. The Nova Scotia Counties of Cumberland, Antigonish, Colchester, Queens, Pictou, Kings, Hants and Annapolis were also well represented as were Kings, Queens and Prince the three Prince Edward Island Counties.

The banner collection was shown by Hants County, N. S. The color and selection throughout the whole exhibit was extremely good and we were pleased to note that even the poorest collection was quite presentable. The New Brunswick exhibit consisted of 15 collections while Nova Scotia had 21 collections and Prince Edward Island 6 collections.

The Nova Scotia Agricultural College had a booth at the Fair presided over by Prof. Landells who was ready to talk drainage question with any person interested in that subject. He had working models and simple instruments used for laying out drains as well as samples of Tile. By the number of visitors who congregated around Prof. Landell's booth we would judge that the drainage question is a live one with our Maritime Province farmers.

APAIARY PRODUCTS.

There was a fair display of Apaiary products, but not as extensive as it might be owing to last summer being a poor honey season.

THE SEED FAIR.

Held in connection with the Stock Show had several new features of especial interest to those interested in seed improvement viz:

Exhibits from the first prize winners in the Nova Scotia and New Brunswick Field Crops competition and an exhibit of Seed Corn, the first ever exhibited at the Winter Fair. The total number of entries were about the same as last year. In the threshed grain exhibit the entries were fewer in numbers but the grain exhibits were the largest in the history of the Fair. Allowing for the extreme heat of the past season the quality was very satisfactory indeed and showed that improvements are belng made from year to year. The main factors causing this improvement is the almost unusual treatment for smuts, and the system of hand selection practiced by the exhibitors. There is a lesson in this for every farmer even if he never intends to exhibit grain.

Mr. Robert McKay, Millville, N. S. the winner of the Steele Briggs Cup, open to members of the Canadian Seed Growers' Association, in 1910, was again successful in capturing the trophy this year. Mr. McKay's exhibit was of a very high character, indeed, and deserves all due credit for his success.

The Wm. Ewing Cup went to the Garden of the Gulf, being carried thither by Mr. Ernest Bulman, one of the prominent seed grain growers of Rusticoville, P. E. I.

It was pleasing to note the interest farmers displayed in all matters pertaining to the improvement of seed for general use. It is a most hopeful sign of future crop improvement in Maritime Canada. There is not a shadow of a doubt, in the minds of anyone, that this interest has been largely stimulated by the efforts of the C. S. G. A.

THE CONVENTIONS.

The Seed Growers' Association, The Poultry Association, The Beekeepers' Association, The Guernsey Association and the newly organized Sheep Breeders' held very profitable annual meetings during the Fair season to which we will refer later.

ON TUESDAY EVENING.

Vice President C. A. Archibald occupied the chair in the Auditorium while Prof. M. Cumming gave an interesting address on "What the Season of 1911 has Taught Us regarding Conservation." L. H. Newman, Secretary, Canadian Seed Growers' Association spoke on the subject of "Some Lessons from Scandanavian Agriculture and Messrs. C. M. McRae and W. A. Rich delivered addresses on "The Sheep Industry in the Maritime Provinces and on Wool."

ON WEDNESDAY EVENING.

The following programme was carried out:

Address by F. C. Nunmick, Agriculturist of Commission on Conservation; address by D. Drummond, Ottawa, on "Improvement of Dairy Herds"; address by W. R. Elliott, Galt, Ont., on "Beef Production"; address, John Guardhouse, Highfield, Ont., on "Production of Mutton."

ON THURSDAY EVEEING

the presentation of special prizes was ably made by Mr. W. W. Hubbard. One of the pleasing features was the presentation to Mr. Percie Johnson, St. Johns' Newfoundland of a pen of magnificent Minorcas, a gift from the poultry men in recognition of Mr. Johnson's interest in awarding a handsome Silver Cup in the poultry classes of the Fair.

Jas. A. Telfer.

Secretary-Treasurer Maritime Sheep Breeders' Association.

Maritime Sheep Men are up and doing. Realizing that in union there is strength and encouraged by Mr. W. A. Rich, the wool expert of the Federal Department for Agriculture, the shepherds and other interested sheep men, who were present at the Winter Fair, banded together and formed themselves into a Maritime Sheep Breeders' Association. The annual membership fee is $1.00 and the officers for the ensuing year are:

President—S. A. Logan, Amherst Point, N. S.; Vice-President—Albert Boswall, Jr., French Fort, P. E. I.; Directors—D. Innis, Tobique River, N. B.; T. B. Calhoun, Calhoun's, N. B.; Barry W. Baker, Barronsfield, N. S.; E. J. Johnson, George's River, N. S.; Oliver C. Saunders, Trilby, P. E. I.; Frank Glydon, Margate, P. E. I.; Secretary-Treasurer—J. A. Telfer, Markhamville, N. S.; Constitution Committee—The Officers of the Association, Col. H. Montgomery-Campbell and W. W. Hubbard.

Results of the 48 Hours Dairy Test at the 1911 Winter Fair, Amherst, N.S.

				1st 24 hours.					2nd 24 hours.					48 hours.				
Breed	NAME.	Class	Section	Days in Milk	Lbs. Milk 1st 24 hrs.	P. C. Fat	Lbs. Fat	P. C. Solids Not Fat	Lbs. Solids Not Fat	Lbs. Milk 2nd 24 hrs.	P. C. Fat	Lbs. Fat	P. C. Solids Not Fat	Lbs. Solids Not Fat	Total Lbs. Milk	Total Lbs. Fat	Total Solids Not Fat	Score	EXHIBITOR.	Award
Shorthorn,	Miss M. H.	11	1	7	41.0	4.2	1.7	9.4	3.85	42.3	3.7	1.56	9.7	4.10	83.3	3.28	7.95	105.85	Geo. M. Holmes	1
Shorthorn,	Valiant Bessie	11	1	27	30.3	4.1	1.23	8.9	2.69	30.2	4.0	1.20	9.1	2.74	60.5	2.43	5.43	77.04	Fred T. Holmes	2
Sgorthorn,	Lady S.	11	2	115	21.2	4.7	.99	9.8	2.07	26.5	4.5	1.19	10.0	2.65	47.7	2.18	4.72	76.66	Geo. M. Holmes	1
Shorthorn,	Valiant Lass	11	3	34	22.9	3.8	.87	9.1	2.08	23.7	3.9	.92	9.4	2.22	46.6	1.79	4.30	57.65	Fred T. Holmes	2
Shorthorn,	Miss Amherst	11	4	59	14.4	4.0	.57	9.2	1.32	19.9	4.1	.81	9.4	1.87	34.3	1.38	3.19	46.07	Geo. M. Holmes	2
Ayrshire,	Bella C.	12	1	122	51.7	4.0	2.06	9.1	4.7	52.9	3.8	2.01	9.3	4.91	104.6	4.07	9.61	139.58	McIntyre Bros.	1
Ayrshire,	Ocean Girl	12	1		51.2	4.0	2.04	9.3	4.76	48.4	4.1	1.98	9.5	4.59	99.6	4.02	9.35	128.55	Retson Bros.	2
Ayrshire,	Princess Bell	12	1	39	50.9	4.2	2.13	9.4	4.78	46.7	3.1	1.44	9.4	4.38	97.6	3.57	9.16	116.73	Retson Bros.	3
Ayrshire,	Lady Minto	12	1	117	44.2	3.8	1.67	8.6	3.8	45.7	3.7	1.69	9.0	4.11	89.9	3.36	7.91	115.73	McIntyre Bros.	4
Ayrshire,	Dairy Miss	12	1	16	42.8	4.2	1.79	9.5	4.06	41.5	4.2	1.74	9.7	4.02	84.3	3.53	8.08	112.49	A. McRae & Sons	5
Ayrshire,	Alice	12	1		41.0	4.3	1.76	9.5	3.89	42.3	4.0	1.69	9.4	3.97	83.3	3.45	7.86	109.83	Chas. Symes	
Ayrshire,	Lady White	12	1	88	36.3	4.4	1.59	9.4	3.41	35.4	3.8	1.34	9.7	3.43	71.7	2.93	6.84	98.77	McIntyre Bros.	
Ayrshire,	Milkmaid 7th	12	2	77	55.9	3.8	2.12	9.0	5.03	55.6	3.8	2.10	9.2	5.11	111.5	4.22	10.14	139.92	A. McRae & Sons	1
Ayrshire,	Emma S. B. F.	12	2	93	42.6	3.8	1.61	9.8	4.17	45.6	3.5	1.59	9.9	4.51	88.2	3.20	8.68	112.04	McIntyre Bros.	2
Ayrshire,	Janet of S. V.	12	2	16	59.8	3.4	2.03	9.2	5.5	62.6	3.2	2.00	9.2	5.75	86.0	3.13	8.12	102.61	Fred S. Black	3
Ayrshire,	Molly B.	12	2	30	41.8	3.2	1.33	9.2	3.84	42.6	3.6	1.53	9.0	3.87	84.4	2.86	7.71	94.63	A. McRae & Sons	4
Ayrshire,	Rose of S. B. F.	12	2	122	23.4	4.6	1.07	9.7	2.26	23.0	4.4	1.01	10.0	2.30	46.4	2.08	4.56	74.68	McIntyre Bros.	5
Ayrshire,	Belvidere Princess	12	3	20	41.7	4.2	1.75	9.4	3.91	42.5	4.4	1.87	9.3	3.95	84.2	3.62	7.86	114.08	A. McRae & Sons	1
Ayrshire,	Dew Drop	12	3	2	37.0	4.1	1.49	9.7	3.58	39.6	4.0	1.58	9.9	3.92	76.6	3.07	7.50	99.25	McIntyre Bros.	2
Ayrshire,	Bonny Jean	12	3	18	34.5	3.5	1.20	9.4	3.24	36.9	3.4	1.25	9.5	3.50	71.4	2.45	6.74	81.47	Retson Bros.	3
Ayrshire,	White Rose	12	3	68	31.6	3.6	1.13	9.0	2.84	32.0	3.6	1.15	9.2	2.94	63.6	2.28	5.78	77.34	McIntyre Bros.	4
Ayrshire,	White Lady	12	3	77	25.3	4.1	1.03	9.9	2.50	26.4	4.0	1.05	9.8	2.58	51.7	2.08	5.08	71.24	McIntyre Bros.	5
Ayrshire,	Emma of S. B. F.	12	4	120	26.5	4.1	1.08	9.1	2.41	27.8	3.8	1.05	9.3	2.58	54.3	2.13	4.99	77.22	McIntyre Bros.	1
Ayrshire,	Queenie	12	4	138	23.4	3.8	.88	9.5	2.22	24.1	3.2	.77	9.5	2.28	47.5	1.65	4.50	64.75	Chas. Symes	2
Holstein,	Maple Grove Bella	13	1	16	68.4	3.0	2.05	9.1	6.2	67.9	2.9	1.96	9.0	6.11	136.3	4.01	12.31	137.18	R. L. Hicks	1
Holstein,	Piet 6th	13	1	55	52.7	3.6	1.92	9.2	4.9	56.7	3.4	1.92	9.1	5.15	109.4	3.84	10.05	129.15	Logan Bros.	2
Holstein,	Ona T. Q. 2nd	13	1	32	55.8	2.4	1.78	9.0	5.02	55.6	2.7	1.50	9.1	5.05	111.4	3.28	10.07	112.21	Logan Bros.	3
Holstein,	Lilac	13	1	20	56.3	2.9	1.63	8.5	4.78	57.8	2.5	1.44	8.6	4.97	114.1	3.07	9.75	106.00	S. Dickie & Son	4
Holstein,	Lottie La Honda	13	1	20	54.9	2.4	1.31	8.6	4.72	58.7	2.9	1.70	8.8	5.16	113.6	3.01	9.88	104.89	S. Dickie & Son	5
Holstein,	Miss La Honda	13	2	8	70.1	3.5	2.45	9.6	6.7	70.2	3.2	2.24	9.6	6.73	140.3	4.69	13.43	157.54	S. Dickie & Son	1
Holstein,	Ornie Rooker Posch	13	2	12	64.3	3.0	1.92	8.9	5.72	68.8	2.6	1.73	9.3	6.39	133.1	3.65	12.11	127.58	S. Dickie & Son	2
Holstein,	Maple Grove M.	13	2	42	58.0	3.4	1.97	8.7	5.04	55.7	3.3	1.83	8.7	4.84	113.7	3.80	9.88	125.64	R. L. Hicks	3
Holstein,	Artis Rosie	13	2	10	57.2	3.2	1.83	9.4	5.23	59.5	2.6	1.54	9.5	5.65	116.7	3.37	10.88	116.89	S. Dickie & Son	4
Holstein,	Countess Waterloo	13	2	13	46.6	3.6	1.67	9.2	4.28	45.6	3.2	1.45	9.4	4.28	92.2	3.12	8.56	103.68	Logan Bros.	5
Holstein,	Annie Rooker	13	2	8	47.1	2.7	1.27	8.9	4.19	47.8	2.5	1.19	8.9	4.25	94.9	2.46	8.44	86.82	Logan Bros.	6
Holstein,	Barker La Honda	13	3	15	45.8	3.7	1.69	9.5	4.35	44.6	3.4	1.51	9.5	4.23	90.4	3.20	8.58	105.74	S. Dickie & Son	1
Holstein,	Countess H. DeK	13	3	9	47.0	3.1	1.45	8.8	4.13	48.3	3.3	1.59	9.0	4.34	95.3	3.04	8.47	101.41	Logan Bros.	2
Holstein,		13	3	57	37.8	3.9	1.47	9.1	3.43	36.6	3.4	1.24	9.1	3.33	74.4	2.71	6.76	90.03	R. L. Hicks	3
Holstein,	Ida R. 3rd	13	3	66	28.2	3.2	.90	8.7	2.45	27.8	2.7	.75	8.8	2.44	56.0	1.65	4.89	58.92	Logan Bros.	4
Holstein,	Jamouth L.	13	4	8	46.4	3.4	1.57	9.2	4.26	46.9	3.1	1.45	9.4	4.40	93.3	3.02	8.66	101.48	Logan Bros.	1
Holstein,	Korndyke	13	4	23	46.3	3.2	1.48	8.9	4.12	47.5	2.9	1.37	9.1	4.32	93.8	2.83	8.44	96.07	Logan Bros.	2
Guernsey,	Dolly of Willow	14	1	54	42.5	4.8	2.04	9.6	4.08	43.1	4.6	1.98	9.5	4.09	85.6	4.02	8.17	127.01	Roper Bros.	1
Guernsey,	Dolly of the Villet	14	1	60	34.4	4.0	1.37	9.6	3.30	35.3	4.0	1.41	9.5	3.35	69.7	2.78	6.65	92.45	Roper Bros.	2
Guernsey,	Beauty of Willow	14	1	62	26.6	5.2	1.38	9.9	2.63	27.8	5.3	1.47	10.4	2.89	54.4	2.85	5.52	90.81	Roper Bros.	3
Guernsey,	Beauty Bell	14	2	32	40.9	5.7	2.33	9.5	3.88	43.2	5.8	2.50	9.6	4.14	84.1	4.83	8.02	144.81	Hugh A. Dickson	1
Guernsey,	Beauty	14	2	90	23.3	5.5	1.28	9.5	2.21	31.6	5.9	1.86	9.7	3.00	54.9	3.14	5.27	100.31	Roper Bros.	2
Guernsey,	Myra 3rd	14	3		38.9	4.3	1.67	9.4	3.65	38.1	4.6	1.75	9.5	3.61	77.0	3.42	7.26	107.28	Roper Bros.	1
Guernsey,	Jaffery of Willows	14	3	50	35.5	3.8	1.34	9.1	3.23	35.4	3.9	1.38	9.5	3.36	70.9	2.72	6.59	89.77	Hugh A. Dickson	2
Guernsey,		14	4	74	26.8	4.5	1.20	9.5	2.57	29.6	4.8	1.42	9.6	2.84	56.4	2.62	5.41	85.73	Roper Bros.	1
Jerseys,		15	1	40	33.6	4.2	1.41	9.3	3.12	34.7	4.9	1.70	9.8	3.40	68.3	3.11	6.52	98.31	J. E. Baker & Son	1
Jerseys,	Brampton L. B.	15	1	132	25.4	5.6	1.42	9.6	2.43	25.0	5.8	1.45	9.8	2.45	50.4	2.87	4.88	96.39	H. S. Pipes & Son	2
Jerseys,	Brampton M. O.	15	1	83	29.9	4.7	1.4	9.8	2.93	29.9	4.3	1.28	10.1	3.02	59.8	2.68	5.95	89.85	H. S. Pipes & Son	3
Jerseys,	Brampton B. S.	15	1	104	29.2	4.0	1.16	9.3	2.71	29.4	4.3	1.26	9.3	2.73	58.6	2.42	5.44	83.82	H. S. Pipes & Son	4
Jerseys,	Babbit	15	2	89	26.9	5.6	1.51	9.6	2.58	31.5	5.7	1.79	10.3	3.24	58.4	3.29	5.82	99.71	H. S. Pipes & Son	1
Jerseys,	Olive Blue	15	2	22	27.9	5.5	1.53	9.7	2.70	26.8	5.5	1.47	10.0	2.68	54.7	3.00	5.78	92.34	H. S. Pipes & Son	2
Jerseys,		15	3	36	35.8	4.2	1.5	9.2	3.29	31.1	4.5	1.39	9.3	2.89	66.9	2.89	6.18	90.79	J. E. Baker & Son	1
Jerseys,	Amherst D. B.	15	3	38	23.3	6.0	1.39	9.5	2.21	24.4	5.9	1.43	10.0	2.44	47.7	2.82	4.65	84.45	H. S. Pipes & Son	2
Jerseys,	Ruby	15	3	17	27.9	4.4	1.22	9.5	2.65	27.2	4.4	1.19	9.9	2.69	55.1	2.41	5.35	76.30	H. S. Pipes & Son	3
Grades,		16	1	22	68.	3.6	2.44	9.2	6.25	70.4	3.3	2.32	9.1	6.40	138.4	4.76	12.65	156.95	Fowler Bros.	1
Grades,		16	1	51	57.9	3.8	2.5	9.0	5.2	54.2	4.2	2.27	9.2	5.02	112.1	4.77	10.22	151.91	R. L. Hicks	2
Grades,	Fanny K.	16	1	16	80.6	2.7	2.17	8.5	6.85	82.1	2.4	1.97	8.3	6.81	162.7	4.14	13.66	144.48	T. W. Keillor	3
Grades,	Doll	16	1	15	58.4	3.6	2.10	8.7	5.10	58.7	3.9	2.28	8.7	5.10	117.1	4.38	10.20	140.10	T. W. Keillor	4
Grades,	Annie	16	1	16	61.2	3.7	2.25	8.4	5.14	61.7	3.1	1.91	8.4	5.18	122.9	4.16	10.32	134.96	T. W. Keillor	5
Grades,	Spotless	16	1	16	59.8	3.4	2.03	9.2	5.5	62.6	3.2	2.00	9.2	5.75	122.4	4.03	11.25	134.50	F. S. Black	6
Grades,	Annie	16	1	16	53.0	4.0	2.12	9.4	4.98	49.3	4.0	1.97	9.4	4.63	102.3	4.09	9.61	131.08	W. N. Boomer	
Grades,	Betsy	16	1	18	43.9	4.8	2.10	9.9	4.3	43.7	4.5	1.96	10.0	4.37	87.6	4.06	8.67	127.51	Chas Etter	
Grades,	Rose	16	1	44	54.2	4.0	2.16	9.1	4.93	52.3	3.2	1.67	9.4	4.91	106.5	3.83	9.84	126.27	W. N. Boomer	
Grades,	Molly	16	1	44	41.1	4.7	1.93	9.3	3.82	40.2	4.5	1.80	9.7	3.89	81.3	3.73	7.71	117.38	Hugh A. Dickson	
Grades,		16	1	13	45.	3.6	1.62	9.1	4.0	47.9	3.1	1.48	8.8	4.21	92.9	3.10	8.21	102.13	W. W. Black	
Grades,	Rose Bud	16	2	16	64.2	3.4	2.18	8.5	5.45	60.8	2.9	1.76	8.7	5.28	125.0	3.94	10.73	130.69	W. N. Boomer	1
Grades,		16	2	43	46.5	4.1	1.86	9.0	4.10	45.7	3.9	1.78	9.3	4.25	91.3	3.64	8.35	117.05	A. McRae & Sons	2
Grades,	Sue	16	2	23	50.3	3.1	1.55	8.2	4.12	51.0	3.6	1.83	8.4	4.28	101.3	3.38	8.40	109.80	Fowler Bros.	3
Grades,	Cherry	16	2	93	29.8	4.8	1.43	9.4	2.8	33.3	4.4	1.46	9.8	3.26	63.1	2.89	6.06	96.43	Roper Bros.	4
Grades,	Daisy	16	2	12	44.3	3.2	1.41	9.4	4.16	45.6	3.1	1.41	9.5	4.33	89.9	2.82	8.49	95.87	W. N. Boomer	5
Grades,	Dora	16	2	115	33.6	3.9	1.31	9.7	3.25	35.4	3.7	1.30	9.8	3.46	69.0	2.61	6.71	93.38	McIntyre Bros.	6
Grades,	Beauty	16	2	54	30.9	3.6	1.11	9.3	2.87	32.4	3.3	1.06	9.1	2.94	63.3	2.27	5.81	76.18	Chas Etter	
Grades,	Daisy	16	3	13	49.5	3.9	1.93	9.6	4.75	51.1	3.3	1.68	9.7	4.95	100.6	3.61	9.70	119.35	S. Dickie & Son	1
Grades,		16	3	8	37.6	4.0	1.50	9.2	3.4	47.9	3.7	1.77	9.3	4.45	85.5	3.27	7.85	105.30	W. W. Black	2
Grades,	Jewel	16	3	39	51.3	2.7	1.38	8.1	4.15	47.8	2.7	1.29	8.4	4.01	99.1	2.67	8.16	91.23	T. W. Keillor	3
Grades,	Milley	16	3	40	40.1	3.8	1.52	9.1	3.64	38.4	3.2	1.22	9.3	3.57	78.5	2.74	7.21	91.13	W. N. Boomer	4
Grades,		16	3	9	33.3	3.2	1.06	9.0	2.09	37.4	4.0	1.49	9.2	3.44	70.7	2.55	5.53	80.34	G. M. Holmes	5
Grades,	Ida	16	3	37	34.3	3.3	1.13	8.8	3.01	34.1	3.0	1.02	9.0	3.06	68.4	2.15	6.07	71.96	Fowler Bros.	6
Grades,	Lily	16	4	22	42.3	3.4	1.43	8.9	3.76	41.0	2.8	1.14	8.9	3.64	83.3	2.57	7.40	86.45	Fowler Bros.	1
Grades,	Darkey	16	4	40	30.8	3.0	.92	8.8	2.7	32.1	3.0	.96	8.7	2.79	62.9	1.88	5.49	64.47	Fowler Bros.	2

Editor's Note:—There is food for thought in the above records. Note the difference in milk yield, butter fat, solids not fat and total score of the various cows. Every dairyman should be conversant with the production of each and every cow in his herd. Section 1 contains cows four years old or over, section 2, cows 3 years old, section 3, heifers two years old and section 4 heifers 1 year old.

Feeding and Developing a Dairy Herd.

A Successful Dairyman's Methods.

By W. R. Clarke, North Wiltshire, P. E. I.

Editor The Maritime Farmer:

In compliance with your request I am sending you the following notes re: The methods we have adopted in the upbuilding of our dairy herd:

Many years ago, when the live stock industry and dairy interests were still in their infancy, a large majority of farmers depended on the raw products of their farms for the wherewhithal on which to live.

When the movement of keeping live stock and feeding to them the raw products and selling the finished article and returning most of the fertility to the soil, was advocated the older member of our firm saw the reasoning back of this idea and at once took steps toward that end.

Being naturally inclined more to dairying than to beef raising he decided to follow his inclinations. As he was located too far from a town to retail milk, he was through force of circumstances obliged to engage in the home manufacture of dairy prints. Time has proven that branch of the dairy industry can be made a profitable one, providing one manufactures a grade of butter that will make and keep a market for itself. As this was prior to the days of co-operative dairying, a market for the finished product was sought and found in the nearest town.

Of course pigs had to be kept to take care of the skim milk and turn it into prime bacon.

Since it was butter and lots of it that was wished for, his choice of a breed of cows fell on the Jerseys. After a long experience with this breed we find no reason to regret his choice but we do find many reasons to be pleased with the selection. Were we to start over again and be obliged to choose a breed of cows for milk, butter or cheese production our choice would be the same rent-paying breed from the Channel Isles.

We have always found that quality comes before quantity in the dairy business.

The foundation of our herd was not laid by the large purchase of expensive stock. A pure bred bull was the first purchase and in this way scrub cows were followed in succession by grade and high grade Jerseys until further advancement was made by the purchase at various times of pure bred cows, two or three being all that we ever purchased. By the continued use of pure bred sires and the selection of the best female progeny we have been successful in establishing a first-class herd at small expense, and which, from the very beginning has always paid a handsome yearly profit.

We consider this is the best plan for any farmer wishing to enter the pure bred stock business to follow. The purchase of a large number of expensive animals for a herd foundation is almost invariably followed by disappointment and loss. We would advise our fellow dairymen to put their faith and money in the best pure bred sires they can buy, and be content with a moderate investment in females. Everybody is familiar with the saying: "The bull is half the herd," and every breeder knows this to be a truism.

We have always made it our constant aim in our breeding operations, to increase the feed consuming capacity of our cows. That we have met with a fair measure of success is evidenced by the fact that we are told by competent and widely experienced judges, that our Jerseys are the largest they have met. But while we have increased the size we have not lost the high testing qualities of our cows. We believe the most short-sighted and serious mistake a breeder can make is that of breeding the heifers too young, as what will be gained by an extra year in milk is completely offset by the lack of development and the consequent decreased future capacity of the cow. The heifers must be given a chance to develop so that they may have strength to withstand the great strain put upon them when they come into milk. Increased capacity and an increased number of years of usefulness is the result of such a policy. We aim to have our heifers drop their first calves when they are from two and one-half to three years old. Up to that time we give them ordinary good care, feeding a meal ration for several months before calving, making them almost fit for the butcher's block at calving time. The meal ration is discontinued about two weeks before and until, at least, a week after calving, to avoid udder trouble. After that, if the heifer is doing nicely, we resume to feed the meal ration, gradually increasing the quantity until she is taking all she will eat up clean.

We believe all heifers should be forced to their full capacity, with a fair margin of safety, during their first milking period. They thus acquire the habit of giving a good flow of milk that is if they use the food for that purpose. Should they use the food for the purpose of laying on flesh and fat where the butcher wants it, that personage will, no doubt, be glad to handle them and nothing will be lost either way—the herd will have an increase in aberage quality if not in quantity, and as already stated, "quality before quantity" should be every dairyman's aim.

We make the first milking period a long one, milking to within a month at most, of calving. This system teaches them to be persistent milkers, and, as the breed we are handling are naturally persistent milkers we sometimes find it rather difficult to get some cows dry at all. We generally allow them a dry period of about a month. Heifers treated in this manner will become large, strong, heavy feeding, heavy producing mature cows, capable of standing the heavy strain of extended milking periods.

So much for our breeding, selecting and developing practices. We must now take up the feeding end of the business, which is of even more importance than the former.

We do not belong to that class of darymen who use all their available land to grow roughage and provide pasturage for their herd and then buy all their concentrates in the shape of bean, shorts, oilcake, cotton seed, meals, etc. While we grow all the roughage our herd consumes, we grow also the largest part of the meal ration in the shape of grains, the principal one being oats, of which we have a couple of thousand bushels each year, all of which is consumed on the farm. Therefore, $125.00 to $150.00 will easily cover the cost of all the meals we buy in the course of a year.

We believe that this is a more profitable plan, when possible, than to keep such a number of cows as to take all the farm to grow roughage and provide pasture for them and buy all the meal required. It is certainly so when the price of meals is as high as it has been in recent years. Crushed oats form the largest part of the meal ration with us, supplemented with bran, oilcake or cotton seed. We are feeding very little bran this winter as its price has gone away beyond its feeding value. We consider cotton seed meal better value at present prices. Oilcake is a splendid feed but it also has gone beyond its value. Having always plenty of crushed oats, which is a great milk producer, we do not feel the effects of the high price of concentrates as we otherwise might.

For dry roughage we have clover and timothy hay, generally having enough clover to put the herd through. Once in every four or five years, generally speaking, the clover gets completely killed and we have to depend on timothy alone. In that case, we have to increase the meal ration. We also allow them to pick over all the oat straw, which is afterwards used for bedding. For succulent feed we depend mostly on turnips and mangels. The latter keep longer and are reserved for the last month in the spring after the turnips are gone.

We consider that turnips are better milk producers than mangels and turnip tops hauled from the field, while they last, are better than either. This may seem strange to most farmers but it is, nevertheless, a fact. We have heard other dairymen say that turnip tops increase the flow of milk and it bears out our own experience. Turnips and turnip tops must be fed immediately after milking to avoid flavoring the milk.

For soiling crops, we provide peas, oats and vetches, sown at intervals, and fodder corn. We commence feeding the green feed about the first of August. When this is finished we follow it with the fodder corn, of which we have enough to last for a month. It is fed from the stook besides what we feed as we cut. We do not favor corn for ensilage as our fall weather is generally too severe on this crop and if cut early is not matured enough to make good silage.

We would advise every dairyman, handling pure bred stock to enter some of his cows in the Canadian Record of Performance test. Nothing will make a dairyman a good feeder quicker than to be feeding a cow in a test of this kind. As he watches the milk sheet he finds that every extra pound of feed increases the milk flow and he acts accordingly.

But it is only going half way to weigh only the milk. Means must be taken so that a pretty close estimate of the feed consumed can be made. A large cow, with great capacity for feed, may consume enormous quantities of feed and give a large flow of milk, and still make a smaller profit than a smaller cow that consumes less feed and gives less milk but makes a more profitable use of her feed.

While we have had a fair measure of success in our breeding and feeding, we have still a long distance to travel before we will have reached that perfection which should be the aim of every breeder, although he may never reach it. We each must be satisfied to add our small quota to the march of progress towards better cows and more profitable dairying.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

Subscription Price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate when subscribing are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definite order for discontinuance is given.

The date after your name on the little green label on front page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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DECEMBER 12, 1911.

DATES OF ISSUE.

December ..... 12—26
January ..... .16—30

A CALL TO THE COLLEGE SHORT COURSE.

On another page of this issue will be found a call to the 1912 short courses at the Nova Scotia Agricultural College. The courses will open on January 2nd. Men, women, boys and girls from Nova Scotia, New Brunswick and Prince Edward Island are cordially invited to attend. The course for farmers and farmers' sons will embrace all the features in connection with Soil Cultivation, Live Stock, Horticulture, Dairying, Poultry, and Veterinary Science that have made the previous courses so valuable and popular. In addition, instruction in the running of gasoline engines will be added, for which purpose the various manufacturers will have their machines on exhibition. Particular attention will be given to power sprayers.

The short course for ladies, held on the same dates, promises to be the most largely attended yet. The subjects taught will be Dairying, Horticulture, Poultry, Domestic Science, and students may attend selective classes from the above course.

Tuition to students from all the Maritime Provinces free. All railways grant "single fare" privilege. Board will cost from $3.50 to $4.00 per week. The courses will be in session from January 2nd to January 12th. Knowing these facts all persons who propose attending the college may figure the cost before they leave home.

The cost is trifling compared with the value of the benefits you will receive in the form of instruction and a broader view of your profession through coming in contact with so many of your colaborers in agriculture, the peer of all professions. These benefits will go with you to the end of life. In years to come we feel safe in saying, you will look back, through the years, to the ten days, shall we say you "spent," no! that you "used to improve your opportunities" by attending the short courses at the Nova Scotia Agricultural College, as one of the brightest spots in your memory.

The benefits that have already come to the farmers of the Maritime Provinces through the ideals set forth by the Nova Scotia College of Agriculture can never be estimated in dollars and cents. Its uplifting influences are seen and felt on every hand.

To know the various members of the college staff is to respect them for all time to come. Each and every one of them are friends to the farmers and are ever ready to do anything in their power to help the farmers' best interests on to fruition.

CO-OPERATIVE STORES.

The following is taken from an interesting article in a recent issue of the "Toronto Saturday Night." The article was illustrated by a cut of James Mitchell, Stellarton, whom it designates The Father of the co-operative movement in Canada.

The oldest form of co-operation in the Dominion of Canada is retail store-keeping, which is older than Confederation. The home of co-operation in Canada is found among the miners in Nova Scotia, who brought the seed over from Great Britain. The oldest co-operative store in Canada to-day is situated at Stellerton in the county of Pictou on the mainland, where it was set up nearly half a century ago; but most of the early ventures were in Cape Breton. These workers in iron and coal have had many failures, but they have never lost heart; and to-day there are more co-operative stores in the little island mining camp than in any other entire province in the Dominion.

The Stellarton store, the oldest in Canada, so far as I have been able to learn, bears the name of "The Union Association, Limited." As its letter-heads announce, it deals in dry goods and groceries, meal, boots and shoes, hardware, etc." It commenced business on October 1, 1861; and the present manager, Mr. James Mitchell, was then appointed secretary. At the opening there were about 30 members and a capital of about $1,000. On March 1, 1910, the latest returns available, there were 214 members; the capital had grown to $16,283; and a yearly business of $60,000 was done, of which $45,225 was with members. Interest at six per cent. is paid on capital stock, and the rest of the profits are divided among the shareholders according to their purchases. The rate of the dividend on purchases had fluctuated a good deal. Mr. Mitchell became manager in 1876. The first year of his management the rate was 6 per cent., but the next year it fell back to 3 per cent. From that point the growth had been steady till the last half dozen years. For seven years about the end of the last century the dividend rate was 12 per cent., but last year was only 10 per cent. The business of the store is now triple what it was when Mr. Mitchell became manager thirty-five years ago.

The oldest co-operative store in Cape Breton—and the second oldest co-operative store in the Dominion—is the "Sydney Mines Provident Society, Limited.' It was started in 1863, and continued in operation till 1905. This store was brought down by a series of misfortunes. Its first and basic weakness was that it neglected a generally recognized principle of co-operation and kept no reserve. Consequently when it got into troublous times, it had no untouched resources to draw upon. And the troubles came inevitably. A mining population is a floating population. The miners began to move away and to take their capital with them. The conditions of trade began to change, and the management did not keep pace with the alterations in demand. Finally the store was destroyed by fire, and the society never recovered. But even then, it had lived and done business for forty-two years.

There are still a half dozen of these stores at work among the Cape Breton miners. One of the most successful is the Workmen's Co-operative Store Company, Limited, at Dominion. It was organized nine years ago with thirty-six members, and in 1909 its membership—that is, the number of its shareholders—was ono hundred and ninety-three. During the half year ending August 22 last, its sales were valued at $40,000, an increase for the half year of $1,583. During the same period its profits were $4,563, of which ten per cent. or $456, was placed in the reserve fund—a feature now of all Cape Breton societies—and that fund totalled $4,187. The regular rate of interest—six per cent—was paid on capital; and dividend of ten per cent. was paid on purchases. The total capital paid into the company in its eight years career is given as $14.019. On this interest has been paid in dividends on purchases and $4,187 set aside as reserve. Thus the total profits earned by the society in eight years have been $40,908.

NEED OF INDUSTRIAL TRAINING.

Seventy-five of the high school girls in the city of Roswell, New Mexico, petitioned the superintendent of city schools asking that they be excused from taking domestic science. They stated, in effect, that they believe dishwashing to be degrading and not conducive to mentality; that they are not accustomed to such work at home and that they do not care to learn the art of cooking.

That these girls do not "do such work at home" is perhaps unfortunate and it is all the more important that they learn how to do common every day-work at school, since they have never been taught at home. That "dishwashing" or any other work in maintaining the home and making life pleasant for their parents should be regarded as degrading is perhaps not their fault, since they have never been taught the dignity of labor and the opportunities for happiness in keeping the home in order. It shows how the training of our girls is being neglected in the home and explains the urgent need of industrial training in our public schools such as is given in the Roswell city schools.

Whether these girls are fortunate (?) enough to have servants to do the degrading (?) work that they consider antagonistic to mentality when they are responsible for a home, or whether they must do the work themselves, they are apt to regret their aversion to the course in domestic science. They do not know the advantages this knowledge gives in meeting the trials and vicissitudes of life; they do not realize the trials, cares and responsibilities of those who must make or wreck a home.

To make our schools efficient in qualifying boys and girls for the responsibilities of every-day life, teachers must have the cooperation of parents. Children are not capable of deciding what they should study and how they should be trained and when parents repudiate the teacher because the course of study does not conform to the child's idea of "mentality," our social, economic and moral institutions will be weakened.

No man ever raised himself by tearing down his fellow man. Get up yourself and lift up your fellow man with you.

What Students Say About the N. S. A. C.

T. H. Manzer, Aroostook Junction, Victoria Co., writes:As to my opinion of the course, I was much pleased with it, and I only regretted that more from these upper counties were not present to take advantage of it. I think the majority of farmers here are making a mistake selling so much low-priced material off the farm. Personally, I have got quite largely into potatoes, which are a very risky crop. I think the greatest difficulty farmers have to contend with is the scarcity and high price of labor. I have never tried foreign labor, as I consider they would not understand our conditions, and would not suit me, as I only need one permanent man. I have dropped dairying since the factory failed in Andover, as it is impossible to get indoor help. Many have gone into potatoes and are buying large quantities of expensive commercial fertilizers, which this year will take the whole crop (and in many cases more) to pay for it. It might be a help if we could get a factory started on the cream gathering system, as was done in Woodstock the past season.

It would be a good thing if you could send Mr. Moore through the country districts here on the seed question, and it is a question which every farmer here is interested in. We received instructions at Truro which proved the great advantage of grading up and using the very best seed. This year I intend planting only large potatoes of good shape. If Mr. Moore could come in March or early in April, I would be glad to accompany him to some of the meetings.

William McDougall, East Glassville, Carleton Co., writes:In regard to the college at Truro, N. S., I think that it is a great help to the young men who attend it, as it gives a course of instruction that he cannot get at home, and he also can get practical information there that he can make use of on his farm. I think that farming would pay better if the farmers would adopt more modern ideas and get out of the old rut. The difficulties that the farmers have to contend with are the cost of transportation and the charges of the "middlemen," as well as the scarcity of farm help at certain seasons of the year. If more settlers could be induced to settle on the vacant farms that are in Aberdeen it would help the situation.

Rev. J. S. Gregg, Young's Cove, Queen's Co., writes:I was able to spend one week at Truro. I enjoyed the classes very much. Already I believe an interest has been awakened in agricultural interests in my parish. I enclose bills for railway fares. I will not ask for more. I wish to stand on same ground with any farmer. I am well satisfied that these short courses are better than anything yet undertaken for young farmers. I am sending a letter to-day to Wesleyan Church Paper, Halifax, N. S.

Mr. Moore, inspector of seeds for Maritime Provinces, hopes to give us here two days in March at farmers' meetings. I hope his duties will permit of this.

Clarence Robinson, East Glassville, Carleton co., writes: In regard to the college at Truro, I think that it gives a good course of instruction for the young men and older ones too who intend to farm, as we get practical information there that we cannot get at home. You ask what the principal difficulties are the farmers have to contend with. I would say that the cost of transportation to markets and the high rates of the C. P. R. The latter, we hope, will soon be reduced, as the G. T. P. will soon be hauling freight through the eastern part of Aberdeen parish.

Why not Profit as they have Profited?

Extracts from the New Brunswick 1910 Report on Agriculture.

W. M. Starkey, Starkey's, Queen's Co., writes: I took in all of the courses and thought they were all right. I think that every farmer should have a little of every kind of stock and raise a lot of turnips, grain and potatoes. Corn, I think, is a splendid thing. I have a silo built and have been growing it two years, and find it a great saving on hay, and also it seems to be good for all kinds of stock. The principal thing I see about farming is that our land is lacking of humus, and I think we will have to get growing clover and plough it under to try and build up the soil. I also think we should grow more green stuffs for our cows to feed on after grass gets short. We should keep more pigs, and haul in lots of black mud or marsh mud, and all of the rough stuff we can find. If some people have got this stuff, they could go to the woods and gather leaves; they are a splendid thing. We have got to get to work at something soon, or else get out or starve, and stop buying so much feed from the West.

Henry Kirtley, Welsford, Queen's Co., writes: In regard to the instructions I received while attending the Short Course, I may say that I spent a very profitable time, and I received valuable information in regard to farming in general; and I feel amply repaid for my trip. As to what are my intentions for the future, I may say that dairying is my first aim, and raising as much pork as I can profitably handle. In regard to the principal difficulties farmers have to contend with, I think a great deal rests with the farmer himself. If farmers would give a little more careful study to their work, carry on a more systematic rotation on their land, more intensive cultivation, and keep only the best animals that can be had to suit his needs, I do not see what is to prevent a farmer from getting a comfortable living.

J. H. McCrea, Shannon, Queen's Co., writes: Regarding the course I attended, I must speak very much in favor of it. It is a grand institution. I am very sorry New Brunswick has not a similar school to educate the farmers. While I must commend the government for the steps they are taking to encourage farming, I think we should have just such a school in N. B. I think a greater interest would be taken. Of the 40, some long course students, I learned only one was from New Brunswick. I think that is a very small per cent. You spoke of the difficulties we N. B. farmers have to contend with. I can only speak for myself. That is the production of a sufficient quantity of hay on high-land farms. I would not consider it any trouble to farm if I could have one head of cattle for every two acres of land I possess; that is what they told us was necessary at the N. S. A. C. This difficulty can be overcome to a certain extent, I think, by the growing of roots in large quantities, or corn if it could reach a state of maturity.

Harry C. Cochrane, Bloomfield Station, King's Co., writes: You asked for my opinion of the course, and what I thought was the chief difficulty of farming here. Well, I liked the course fine. I think it is just the thing for the farmers of the Maritime Provinces, but I don't think it is advertised nearly enough. I think it ought to be advertised in the daily papers a while before it opens. The majority of farmers know nothing about it. As to the chief difficulty of farming here, I cannot answer, but think one of the main reasons is that the majority of the farmers do not know enough about scientific farming.

G. F. Flewelling, Perry's Point, King's Co., writes: I am rather young in the business of farming to say much of farming and its difficulties, as I have never really done any of it myself, but it is my intention to take it up. I would like stock raising better than any other branch of farming, and it is the branch of farming that is most needed in the Maritime Provinces in my idea. There is certainly on the average a very poor lot of stock.

As to the difficulties of farming, I think a great deal lies with the farmers themselves. Most of them, instead of trying to help their neighbors or learning something from them are finding fault with everything they do, whether it be good or bad, or whether it be on the farm or in the school, church or other affairs. I think that if the farmers would drop this method and co-operate more, help one another along, either by forming agricultural societies or by two or three helping one another by clubbing together and buying some of the improved machinery, which would not only save labor, but would do the work quicker and better. One man I met while in Truro was getting up courage to go out, as he knew he would be the laughing-stock of his neighborhood when he got home. He said that he had almost to skip out at night to get clear. The people around, he said, thought it an awful thing to go to college to learn how to farm—why anybody could farm. I think the farmer should have as good an education as anybody, especially in bookkeeping, so that he can keep an exact account and tell just where he stands. Ask business men what each branch of their business is doing and which is doing the best, and he can tell you exactly where he stands by looking at his books. Ask a farmer where he stands or what he is doing and he has no idea. This is where the business man gets ahead of him, and I think that great stress should be laid upon the education of the future farmers. Again, the business men work together and know what each other are doing, while the farmers try to keep what they are doing to themselves. Thus it is that business men are so much more wealthy than farmers, as they see what others are doing, and take advantage of improvements that may come out. Until the farmers see their folly and try to change their ways I don't think they will get along as well as they might.

The course at Truro was everything one could look for. It was practical and was carried on so that one could not help receiving a great deal of benefit from it. Every branch of agriculture was taken up in the way that it was thought that we would receive the most benefit. It was certainly a fine course, and I really do feel sorry for those unfortunate enough to miss it.

H. Allen Dickson, Jubilee, King's Co., writes: I consider the course at the Truro College a great benefit for the length of time spent there, and if more farmers would take advantage of it they would find it a great benefit.

I think the principal difficulties our farmers have to contend with are need of a better knowledge of the fertility of the soil, and management of the dairy herd.

W. P. Fowler, Hammond Vale, King's Co., writes: In my opinion the course of instruction at the Truro College would be hard to beat. I know it was of great benefit to me, so much so that it is possible I may take the full course beginning next fall. The time was so short that the instructors could only hit the high places, so to speak. The courtesy and attention which the short course men received at the hands of Prof. Cumming and his staff was boundless. I propose to farm mainly to beef and draught horses. I believe there is more money in dairy cattle if one is in close touch with a cheese factory and creamery. But as I am not so situated, I will have to do the next best thing. I should like to keep sheep, but on account of the number of dogs it is impossible here. Some of my neighbors do, and every year they lose a good percentage of lambs and ewes. I consider weeds, the greater part of which we import from Ontario in our clover and grass seed, to be one of the greatest drawbacks to our New Brunswick farmers. Also, from what I have seen, I believe the majority of our farmers do not know how to care for and feed live stock correctly. I did not before I went to Truro. If the other fellows know, there are mighty few of them practice their knowledge. I should say that these and all other troubles which we farmers have in New Brunswick could be overcome by your Department getting busy and starting a college and farm on similar lines to those at Truro by the N. S. government. I think that the move would be backed by every farmer with brains in the Province.

W. C. Campbell, Salisbury, Westmorland Co., writes: I think the course at Truro is just the thing that we farmers want. It gives a man a chance to see improved methods and get new ideas, and it impresses a man with the importance of more thorough work in all lines of farming. I intend to raise some more turnips, clover and grain feed. The latter to be fed in August and September and improve the dairy herd. The chief difficulties are lack of knowledge and lack of interest, and not taking good care of our stock, especially the cow. I think it would be well to advertise the college at Truro more, for once a man goes there he will take more interest in his work of farming.

Lee Tingley, Moncton, writes: The course of instructions I attended was principally on stock. I got an insight on many points, especially regarding the dairy cow, which is perhaps the most essential part in New Brunswick. I think a few pure bred cows in each district would help farmers to work into a better lot of stock, as we now have mostly a mixed class of cattle of a general purpose type.

WAS TROUBLED WITH HEART DISEASE AND NERVOUSNESS

SEVERAL DOCTORS COULD DO HER NO GOOD. THREE BOXES OF MILBURN'S HEART AND NERVE PILLS COMPLETELY CURED HER.

Miss Mary Lebeau, Edison, Sask., writes:—"I was troubled with heart disease and nervousness for over two years, and was so bad at times I had to sit up at night being unable to breathe, and every little noise would make me shake and shiver. I tried several doctors, but they were unable to do me any good. A neighbor then advised me to try a box of Milburn's Heart and Nerve Pills. As soon as I began to take them I began to feel much better, and by the time I had used the third box I was completely cured. I would advise anybody suffering from heart disease and nervousness to try these pills. They will save quite a bill in doctor's fees."

Milburn's Heart and Nerve Pills cure all heart and nerve troubles by their restorative influence on every organ and tissue of the body.

Price 50 cents per box, or 3 boxes for $1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

HORTICULTURE.

Selling Apples in English Markets.

The English apple crop this year has been very large, and the quality has been of unusual excellence. This fact, with the larger offering of apples from other sources, has naturally caused a lower range of prices on Canadian apples than was secured last year. However, prices cannot be considered unsatisfactory owing to the large quantities disposed of, and the condition and quality being generally excellent will leave very little shrinkage on net results consequent on defective packages.

CANADIAN APPLES PRAISED.

The fruit brokers and merchants in Liverpool and Manchester are loud in their praises of the improvement of grading Canadian apples. So far this season there is not in evidence the complaint of many years past, i.e.:—Canadian apples as No. 1 when they are really No. 2. All interested in the trade express their appreciation of the thorough manner the Canadian Government follow up those guilty of infraction of the law, and they approve of the system of publishing the names of all persons guilty of dishonest grading. These names are freely distributed in the trade, and results were shown before the end of last season in improved grading, which has continued this year. One shipment of about 15,000 barrels which was loaded at Halifax, called at another port for general cargo, and arrived at Liverpool on October 12th in a pretty bad state. The softer varieties were dead ripe on arrival here, and the extra delay at port of call did the fruit a lot of harm.

STATEMENT OF ARRIVALS.

The arrivals to November 4th, this year are 236,677 barrels, as against 208,649 barrels for the same period last year.

The receipts of apples at Manchester up to the 31st October this year are as follows:—

	Barrels. Boxes.
Ontario..... ....15,844 506	
Nova Scotia..... 608	
United States of America.... 7,871 268	
Total..... ....24,323 774	

The quality of Ontario fruit received in Manchester has been satisfactory in every respect. The receivers here say that the grading and packing is—generally speaking—first-class. Apples have been arriving in a fairly advanced state of maturity and therefore rather soft. However, the landing conditions have been good, and the proportion of 'slacks' in Ontario fruit being exceptionally light.

During the last week of October, the decline in prices was specially marked being fully 2s. to 2s. 6d. lower than the ptevious week. However now that the bulk of the English grown crop has been disposed of, the general opinion is that the market for Canadian apples will recover almost immediately.

BRITISH APPLE IMPORTS.

The following countries are exporters of apples to Great Britain, and will show that Canada does not hold a monopoly of the British market, i. e.:—

Canada, United States, Belgium, France, Germany, Holland, Portugal, Tasmania, Denmark, Italy, Madera, Norway, Australia, New Zealand, Channel Islands and Newfoundland.

PUBLIC FRUIT SALES IN LIVERPOOL.

It may be of interest to Canadians to know under what regulations the fruit trade is conducted in Liverpool and Manchester. The bulk of the Canadian apples which are shipped to Liverpool and Manchester are sold by public auction, and it may be of interest to Canadians to know how these sales are conducted.

Liverpool and Manchester have each a large sale room where an association of fruit brokers conduct public sales on fixed market days with occasional special sales. Regular sales days in Liverpool are Monday, Wednesday and Friday, and in Manchester on Tuesday and Thutsday.

The sale rooms in Liverpool and Manchester are constructed with seats facing a pit which is below and in front of the auctioneer and which has a double elevator for raising and lowering samples from or to the basement below. Printed catalogues are furnished to buyers which give a description of the fruit to be sold, and also includes mark or name of shipper, number of barrels, etc., in lot, variety or varieties of apples, apparent condition, such as tight, slack, wet, slack and wet, etc.

SAMPLES OF LOTS FOR SALE.

Samples are taken from the dock (wharf) by the brokers, and no sample is admitted into the saleroom which has been opened or tampered with in any way. The packages (barrels or boxes) are not opened until ready to be raised into the saleroom, so that even the auctioneers have no idea of the quality of the fruit beyond what can be told before packages are opened, thus tights or slacks are told by sounding on end of barrel, wets or slightly wet are told by the outside appearance of package.

In both Liverpool and Manchester it is customaey to turn the sample shewn into large baskets before the buyers, so that there is nothing but a bad reputation to be gained by facing barrels with choice apples.

CONDITIONS OF SALE.

1. All fruit and produce is offered on the condition that the price paid be regarded by the buyers as the value of the sound goods contained in any package, whether the whole of such contents be sound or only a part thereof, and as regards such of the contents as are spoilt, damaged, or otherwise defective, so as to be fit for human consumution, such defective goods are not intended by the brokers, or purchased by the buyers, for the food of man.

2. The highest bidder (in due time) shall be the purchaser, unless the lot shall be withdrawn; and if any dispute arise, the manner of settling such dispute shall be decided by the selling broker.

3. The goods shall be taken away at the purchaser's expense, as soon as possible after sale, and any goods not rejected by purchaser during the day following sale shall be considered as accepted by buyer, according to the re-selection of selling broker's men, and shall afterwards remain on quay or in warehouse at the buyer's risk and expense.

4. Payment shall be made by cash before delivery, if required. No discount to be allowed. A deposit of 25 p.c. shall be made (if required by the selling broker) at the time of sale.

5. Each bidding not to be less than ½d. under 3s., 3d. under £1, and 6d. over £1.

6. It shall be at the discretion of selling broker to take or refuse the biddings of persons who have been defaulters.

7. Both seller and buyer shall be bound by the signature of the selling broker to the catalogues with buyer's names and prices affixed.

8. In the event of non-fulfilment of any of these conditions, the deposit shall be forfeited, and the fruit may be re-sold at the seller's discretion, either by public or private sale; and the seller shall be under no obligation to give notice of such second sale, but the loss, if any, shall be borne by the defaulter.

9. Buyers not taking delivery of samples by noon on the day following sale, will incur a charge of 3d. per package per day.

REGULATIONS OF SALES, TURNS OF SELLING, ETC.

1. That sales (called regular sale days) shall commence at a fixed hour and on certain fixed days as arranged by the brokers on which days the turns of brokers shall follow the order of the rotation card previously drawn up and agreed upon.

2. That sales on other days (called extra sale days) shall commence as arranged at special meetings of the brokers, and turns shall on such extra sale days follow the order of the regular sale day immediately preceding.

3. That on regular sale days the first turn of each broker shall not exceed forty minutes, second turn thirty minutes, and subsequent turns fifteen minutes; but on extra sale days, or when the time for selling on regular sale days is changed to any earlier hour, the first broker shall have one full hour for his first turn, after which the turns shall be the same as on regular sale days; when an extra sale is held on same day in consecutive weeks, extension to one hour for first sale shall not be conceded.

4. That no broker is obliged to commence a sale unless he has at least ten minutes before the dinner hour, and the broker whose turn expires within ten minutes of the dinner hour may continue to sell if broker next in turn does not choose to do so.

6f That any lot shall be considered small if consisting of less than 20 packages of any produce except tomatoes and mandarins in packages of 14 lbs., gross or under, which being in lots less than 40 shall also be considered small.

7. That a lot once passed be not offered again same turn, the selling of samples to constitute another lot. —W. J. Egan, Canadian Trade Commissioner, Manchester, England.

Storage of Apples.

A cold storage plant means to most farmers a huge commercial affair with various uses, one of them being to prolong the life of fresh fruit, especially apples.

Undoubtedly there are many advantages in the commercial storage center, to which growers can ship their fruit, to be stored until they see fit to sell it. More ideal conditions of storage are attained in the big concern than are possible in the ordinary fruit-cellar.

A storage-house, properly managed, maintains a uniform low temperature of about thirty-two degrees. It has the proper degree of humidity, a point at which fruit will not shrivel, nor yet be liable to molds and mildews. It has a continuaus circulation of air to all parts of the chamber, to insure an even refrigeration. Finally, it has constant change of air, in order to remove impure gases arising from decaying vegetable matter. The cold-storage plant of to-day usually does furnish these conditions, but nevertheless there are very great advantages in having a small storage of one's own.

The time that elapses between pick' ing and storing fruit may be several weeks, if the fruit must be shipped to a distant storage. If the picking is done in warm weather, the delay in getting to the storage may be very disastrous, especially to early apples. If the grower had storage for the perishable summer and fall apples, the customary glutted market in August and September would disappear, and failure would certainly be turned to success.

To get the best results in keeping all varieties of apples, several points should be adhered to most rigidly:

1. Store only A No. 1 fruit. Allow no wormy, diseased, or bruised specimens to slip in.

2. Pick apples that are still hard, but that are fully developed in size and color.

3. Wrap in unprinted newspaper. If the cellar is apt to be either very dry or very moist, another wrapper of oiled paper should be wrapped over the newspaper.

4. Have fruit cool throughout the package before it enters the cool cellar. Usually the smaller and tighter the package is, the better will the fruit keep.

A very cheap and suitable cellar for storing apples can be made of concrete, preferably with a hollow wall. The walls should be as far as possible under the ground, so as to be naturally cooled by the earth. The cellar is cooled by ventilation, also. In warm weather usually the inlet and outlet valves are opened only at night, and in cool weather they may be opened during the day. In order to have the air somewhat tempered before entering the cellar, the inlet is placed seventy-five feet or more away from it, and connects with it by means of a tile pipe laid several feet below the surface of the ground. The inlet proper is at the top of a pipe standing perpendicularly eight or ten feet above ground. It consists of a revolving hood attached to the pipe. The wind controls this hood and creates a forced draft through the tile pipe into the cellar. The warm air passing through will be cooled, and much moisture of condensation will remain in the pipes, instead of entering the cellar. The outlet should be through the roof, and should be larger in cross-section than the inlet. With a little experience one can learn to operate the ventilator so as to secure an even low temperature at practically no cost.—A. J. Rogers, Jr.

HAVE YOU a Lump in the Breast, or a Growth on any part of the body, or a Sore that will not heal?

If you have, write, describe the trouble, and mention this paper and we will mail FREE in plain envelope, particulars of the

Painless Home Treatment

Write to-day.

THE CANADA CANCER INSTITUTE, Limited
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STAMMERERS

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to 11

THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

SAVE MONEY THIS WINTER

Your horse will relish his feed,—get every ounce of benefit from it and keep in better condition this Winter, if stomach, blood and bowels are kept in good order with

Pratts

Animal Regulator

It is a sure preventive of constipation due to dry fodder and lack of exercise. It is a necessity for keeping horses and cattle right up to the mark. Mix it every day in their feed and you won't have weak, rundown animals.

There is not a month in the year that you will not find Pratts Animal Regulator making money for you, both in saving feed and in increasing the efficiency of your horses, cows and hogs.

Satisfaction Guaranteed or Money Back

You do not risk a cent when you buy Pratts Animal Regulator, the 40 year old conditioner, tonic and digestive. If you tell your dealer that you are dissatisfied, he will promptly refund purchase price without a question. Start saving *now.*

25 lb. pails $3.50; also in smaller packages and 100 pound bags.

If your dealer can't supply you, write us. Ask for our valuable FREE Live Stock Book.

Pratt Food Co. of Canada, Ltd. Dept. 93 Toronto

Black Knot.

On page 150 of the report on agriculture by the government of Nova Scotia for 1910, H. W. Smith B. Sc., Biologist Agricultural College, Truro, says:—

Black Knot.—"This disease of plum and cherry is caused by a fungus. The spores find entrance at any time during the growing season into the tender bark where it grows and eventually bursts the bark, producing a light swollen spot. From this spot are shed multitudes of small spores during the season; then dark colored bodies arise in the spot causing the well known black knots. From these knots ascospores are produced which will also cause the disease when they fall in a suitable place on the young limbs."

While this may be true, it is no more than theory; and other causes than the one here stated, may bring about that condition in plum trees which proves so destructive to plum orchards all over the country.

If I understand what Mr. Smith says, he confirms the operations of the spores of black knot to the bark of the plum and cherry. I here beg to differ from my learned friend. I venture to assert that black knot is not merely a SKIN disease but a BLOOD disease as well. Experienced fruit growers will agree with me that black knot is in the sap and is therefore constantional. It does not always make its appearance in the fruit first.

In this connection I venture the assertion that where the soil is adapted to the growth of plums, with thorough underdrainage, thorough cultivation, proper and judicious pruning, black knot is not any enemy worth fearing. I should like to say that [illegible] are scared by such thing as black knot, and fear to plant trees; but the conditions that produce this disease are caused by the treatment given that tree by the planter and cultivator.

All theories are not absolutely correct, and the spores of black spot on apples may not be what scientists claim. Spraying, which is now claimed to be such a necessity for insects, may also tend to diminish black spot in apples; but the conditions that produce black spot must be looked for elsewhere than on the tree.—M. D. Currie, Grand Mira, So. C. B.

Hillcrest Orchards.

The finest and most up-to-date lot of apples which we have ever seen came from the famous Hillcrest Orchards to the Railway station, last Monday, for shipment to Scotland. The lot which was but a part of the shipment comprised 437 boxes, each containing one third of a barrel. The boxes were neatly made and one end of each covered with a large, three-color lithograph of three big apples with the inscription "Nova Scotia apples, grown and packed by Hillcrest Orchards Co., Ltd." and also the orchard brand "No. 1 Kings" or "selected." The fruit itself was probably unexcelled on this continent. The enterprising manager Mr. R. S. Eaton certainly knows how to grow apples by scientific culture and also to prepare his shipments in a way that cannot fail to capture the market wherever they are sent. The fine half-tone cuts of Hillcrest which were put inside of each box, were at once a splendid advertisement and a beautiful prize. Up to Oct. 12th this and 9,000 barrels, including about company had harvested between 8,000 2,000 barrels of Gravensteins, which is probably the largest crop harvested, this year in Eastern Canada. Hillcrest is a striking illustration of what can be done, with efficient management and scientific methods of culture, in apple raising in this valley.—Western Chronicle.

Rhubarb for Winter.

It is now time to dig up a few clumps of rhubarb to have them in reserve for winter forcing. This winter rhubarb is far more brittle and delicious than what we can grow in open air in its regular season. Leave plenty of soil on the clumps, and leave them outdoors under a shed or in some place where we can easily get at them later on, even after a deep snowfall. After the clumps have become frozen solid, they can be used for forcing at any time. A dark corner in a warm cellar is a good place. A spot three or four feet square will give you quite a number of messes during the winter. Pack the clumps in rather closely together, upon a layer of soil, and cover with soil to the depth of at least a few inches over the crowns, and then let them grow. If not dark enough, put a box around the bed, and cover it so as to exclude the light. Try half a dozen plants in this way, anyway.

Double the Egg Yield of Your Flock!

The poultryman who has been feeding grain and who starts feeding fresh cut green bone, can cut his feeding costs in two and double his egg yield—to say nothing of being able to raise better table fowl. The

PEERLESS GREEN BONE CUTTER

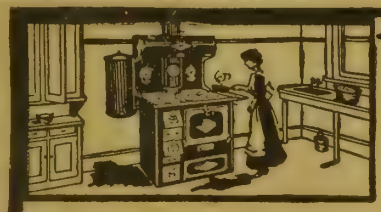
will enable you to feed at a cost of 1/16¢. per hen per day—to get more eggs—a greater percentage of fertile eggs—more sturdy new-hatched chicks—to push your pullets to earlier maturity—to have younger layers—to send your fryers and broilers sooner to market and get higher prices on a lessened feeding cost; in fact, to make more money in poultrying.

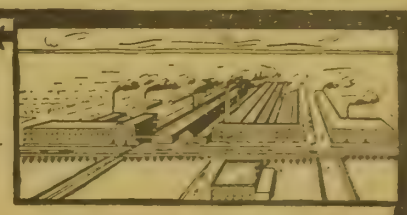
Send for our FREE book that tells all about green bone feeding, how to buy, cut and feed green bone RIGHT. The correct feeding of green bone is the foundation of poultry success—send a postal to-day for the book.

Send a Postal To-day for the Book

102

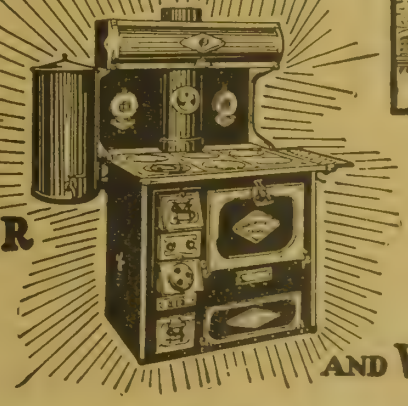
LEE MANFG. CO. LTD. 103 Pembroke Rd. PEMBROKE ONTARIO -- CANADA





DIRECT FROM FACTORY TO KITCHEN

SAVE OVER $25 WHEN BUYING YOUR RANGE THIS FALL.



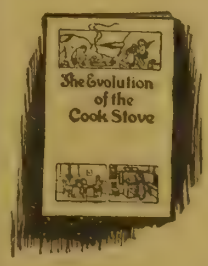
$41.00 TO $49.00 AND WE PAY THE FREIGHT

You Can Buy "DOMINION PRIDE" RANGE At Factory Price

Direct From The Largest Malleable Range Works in Canada

IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



"The Evolution of the Cook Stove"

TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of tough, strong, malleable iron and the best blue polished steel—materials which will not warp, crack or break.

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it saves over 30% of fuel, burning either wood or coal.

WE PAY THE FREIGHT

A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41.00 to $49.00 according to size, or to the four Western Provinces for $44.50 to be sent with order. Freight to be paid when the Range is delivered at your station. If not convenient to pay cash we will arrange to accept your note.

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

When writing it will be a distinct favor to us if you will mention this paper. 7

DAIRYING.

A New World's Record.

Editor Maritime Farmer:—

During the month of March, 1911, there appeared in your columns the records for five years of the Holstein cow "Flora Wayne of Riverside" (2414), owned by the Nova Scotia Agricultural College, Truro, N. S. Readers will remember not only her tremendous persistent milk flow, but also the great weight of her calves at birth, the average for five years being nearly 120 pounds.

A three year old daughter of above cow "College Flora" (9586), bred and raised by the N. S. A. C., which weighed at birth 136 pounds dry, dropped her second calf on November 28th, 1911, the same weighing 145½ pounds dry; a world's record, so far as we can ascertain. This is an exceptionally promising bull calf by their herd bull "Count Mercena Paul" (6827), a son of the noted cow "De Kol Pauline Sadie Vale" (5944), owned by James Rettie, Norwich, and twice female champion at Toronto National.

"College Flora" (9586), under adverse circumstances, made a 2 year record of over 8,000 pounds of milk. Her first calf, a heifer by the only son of "Helbon DeKol" (5631), Canadian Champion for 7 and 30 day tests and also for 3 year Record of Performance over all breeds, is a very promising yearling. The N. S. A. C. Farm has also bred and raised several other yearling heifers by this great bull. The total Holstein herd, now numbering 35 head, is making a splendid showing, and, even with the severe summer of 1911, is in A 1 condition.

The Ayrshire herd, of equal size, is doing fully as well. The famous cow "Annie Laurie of Norwich," 13 years of age, during the year 1910-11, in 365 days, made 9213 pounds of 4 per cent. milk and dropped a promising heifer calf. Her last calf, a yearling bull, is going to a very progressive Agricultural Society in Cape Breton.

The three year old heifer "College Merry Maid" is completing her Record of Performance test with 8315 pounds of 3.96 per cent. milk. A row of Ayrshires 2 year old, imported and home bred, give great promise as producers.

Other breeds are doing equally well and live stock interests are booming in Nova Scotia.—E. S. Archibald, Truro, N. S.

Cream Cheese.

Owing to the number of inquiries received lately for information on the subject of soft or cream cheese, Miss G. Bagnall, instructor of dairying at Macdonald college, has, at the request of the dairy commissioner, Mr. J. A. Ruddick, prepared the material for a very helpful and instructive bulletin, which has just been issued by the department of agriculture. It is as follows:

$15.95 AND UPWARD
AMERICAN SEPARATOR
SENT ON TRIAL, FULLY GUARANTEED. A new, well made, easy running separator for $15.95. Skims hot or cold milk; heavy or light cream. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from ST. JOHN, N. B. and TORONTO, ONT. Whether dairy is large or small, obtain our hand-some free catalog. Address,
AMERICAN SEPARATOR CO. Box 1212 BAINBRIDGE, N. Y.

The process of manufacturing this particular variety of cream cheese is inexpensive and simple, and the cheese is so profitable that farmers should encourage their wives and daughters to follow these instructions, so as to be able to furnish their tables with a good wholesome and nutritious article of diet. If made from fairly rich cream it will contain from 40 to 50 percent. of butter-fat. Butter-fat is more easily digested than other fats, and should therefore, prove most beneficial to invalids. With or without butter it is most palatable, and makes delicious sandwiches. During the three years that this cheese has been made at Macdonald college, the demand has increased from four dozen to sixty dozen per month.

ITS MAKING SHOULD BE ENCOURAGED BECAUSE:

1. It is profitable. The cream from 100 pounds of average milk will make twenty-five cream cheese, which retail at 15 cents each, or equal to $3.75 per 100 pounds of milk.

2. The return is quick, the cheese being marketable in three days, thus saving the expense of storage.

3. The initial cost for equipment is very small. A cream cheese mould, which may be bought for fifty cents, and a few yards of butter muslin are about the only extra needs in a well equipped farm house.

4. In a clean, airy room, with an even temperature, it is almost impossible to go wrong, and thus have a loss.

5. The demand is greatly on the increase, and as soon as it becomes more universally known it will be extensive.

An airy and easily cleaned room with an even temperature that can be maintained between 60-65 degrees F. is necessary. The influence of heat and cold on the texture, flavor and yield of cheese is very important. If the temperature of the room is too high, the yield will not be so large, and the quality of the cheese will be impoverished owing to a loss of fat, while on the other hand, should the temperature fall much below 60 degrees F. the draining process will be retarded, resulting in a bitter flavor in the cheese, instead of the clean, nutty flavor that is desirable.

Cream containing 15 percent. butter-fat is sufficiently rich for this cheese. It may be taken from the separator at this thickness, or else richer cream may be brought to the above fat content by adding skim-milk. As a rule. four gallons of milk, testing 3.7 percent. butter-fat, will be found to give one gallon of cream containing 15 percent. butter-fat.

The requirements are as follows·

A little fresh buttermilk or clean sour skim-milk, will make a good starter.

Rennet may be used in either the extract or tablet form. Where only small quantities are used, the tablets are best, as they are more easily obtained fresh in small quantities, and they keep better. Rather less should be used than is recommended in the directions for junket, as for this cheese a soft curd is wanted, which will take from two to three hours to coagulate. Rennet tablets may be procured at most drug stores.

Use pure dairy salt, which will dissolve readily.

Ordinary white enamel pails, holding from two to three gallons each are very suitable for holding the cream; white enamel bowls are of the most convenient shape for holding the cloths, while ladling the curd.

A thermometer is an absolute necessity where uniformity in cheese-making is required. Those made of glass only are best.

Either huckaback, or fine linen towels, about 30 inches square, should be used. A texture, not too coarse nor too fine, is necessary to allow of easy drainage without loss of fat.

Cream Profits That Stay in Your Pocket

Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

Frictionless Empire

Empire Line
Of Quality Separators

they can get not only the style and size separator they want, but also the one that nets the greatest return for the money invested for the longest term of years—the one that makes profits that STAY in their pockets.

Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

Let us also PROVE that Empires turn easiest, are simplest, most sanitary, highest quality and most satisfactory. Write postal now.
We also handle Gasoline Engines and Rock Island Dry Batteries. Write us for prices first mail.

Empire Cream Separator Co. of Canada, Ltd.
Sussex, - - New Brunswick.
Farm Agents Wanted in Unrepresented Districts.

When rennet extract is used, it is well to invest in a small drachm glass for measuring the rennet. These glasses can be got from any chemist, graded to show the number of drops. They cost 25 cents each.

Either a table, or sink with a slope is required, from which the whey can readily escape while the cheese is pressing between boards.

A cream cheese mould, which may be round, square or oblong. gives the cheese a more uniform appearance, and hence more marketable. Should the cheese be required for the home table, it can be made up into balls with the butter paddles.

Ordinary white butter muslin. One yard muslin, 36 inches wide, will cut into 49 pieces, each five inches square, which is the correct size for the round cream cheese mould.

A perforated skimmer is necessary for ladling the curd from the pails into the cloth.

Grease proof parchment paper will be required to wrap the cheese in if it is to be sent to market. It can be obtained from any dairy supply house. Cardboard packages can be had from any of the folding box manufacturers, and cost from three to five dollars per thousand.

AGE FOR MARKETING.

Cream cheese is best eaten fresh. Its weight being four ounces only, it will naturally dry up very easily. They should not be sold over a week old, and they should be on the market in three days from the day of starting their manufacture.

Requirements for ten cheese:—

One gallon cream (15 percent. butter-fat).

One tablespoonful of starter or buttermilk.

Twenty drops of rennet extract, or equivalent in tablets.

Dairy salt.

Thermometer.

A pail, bowl, skimmer and spoon.

Two huckaback towels and some string.

Cream cheese mould and some muslin.

THE METHOD OF MAKING.

1. Put the cream and starter into a clean vessel and mix.

2. Get the temperature between 80 and 84 degrees Fahrenheit.

3. Dilute the rennet extract with five times its bulk of water, in order to facilitate mixing. Add it to the cream stirring gently and thoroughly for two minutes.

4. Cover with a cloth to retain the heat, and let it stand for two or three hours, or until a nice, soft curd is formed.

5. Spread one of the cloths in the bowl, then with the skimmer gently ladle the curd from the pail into it, being careful to take thin slice, and to break it as little as possible.

6. Gather up the cloth and tie with a string, without crushing the curd, then hang it up to drain on a stick placed between two chairs, or in some other convenient position, with the bowl placed underneath to receive the whey. Let it drain from 12 to 24 hours.

7. When sufficiently drained, turn with salt to taste, and knead in the cloth to thoroughly mix the salt.
the curd into a clean cloth, sprinkle

8. Then fold the cloth neatly over the cheese and place between two boards to press, with a brick on top, and leave for a few hours or until the cheese is of the constituency of newly churneh butter; it should, however, be less sticky, and of a more mealy texture than butter.

9. Cover the lid of the mould with a piece of muslin, and place another piece of muslin (6-inch square) in the mould. Put four ounces of the cream cheese curd into the mould. Put the lid on the mould and press with the hands; by this means the curd takes the form of the mould. Fold the ends

Used in Canada for over half a century —used in every corner of the world where people suffer from Constipation and its resulting troubles—

Dr. Morse's Indian Root Pills,

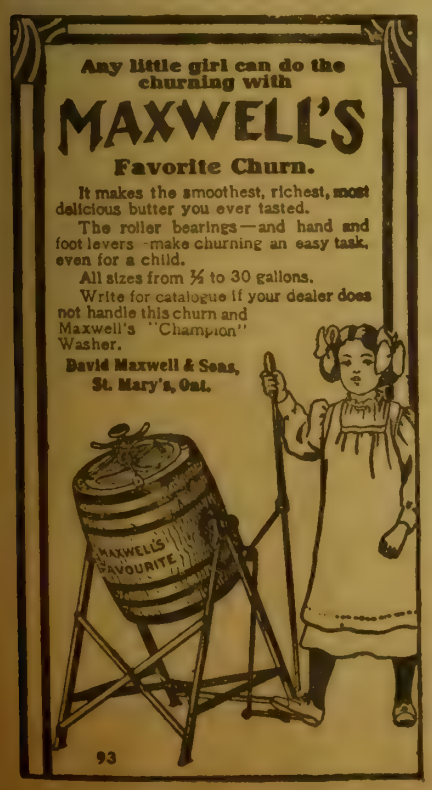
stand higher in public estimation than any others, and their ever-increasing sales prove their merit. Physicians prescribe them. 8

25c. a box.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited


Any little girl can do the churning with
MAXWELL'S
Favorite Churn.
It makes the smoothest, richest, most delicious butter you ever tasted.
The roller bearings—and hand and foot levers -make churning an easy task, even for a child.
All sizes from ½ to 30 gallons.
Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.
David Maxwell & Sons, St. Mary's, Ont.
MAXWELL'S FAVOURITE
93

of muslin over the curd and press again, when the cheese may be taken from the mould and wrapped in parchment butter paper.

The weight of each cheese should be four ounces, and the retail prices should be fifteen cents per pound.

A copy of this bulletin, No. 30, may be had upon application to the department of agriculture, Ottawa.

Advertising Butter.

Vice Consul General Henry D. Baker, on special service in New Zealand writes in Daily Consular and Trade Reports:

Co-operative effort has lately been made by dairy interests of New Zealand to promote the sale of their butter in England through a comprehensive plan of advertising in English newspapers. Since the first of this year about $15,000 has been spent on this campaign.

One full-page advertisement that has come to my notice mentions that "New Zealand butter is made under the strictest Government supervision, under ideal conditions, from cattle grazed on the grandest pastures of the world," and that "the steamship Tainui has just arrived with 3,345,644 pounds of this splendid butter, and it is now on sale by grocers and provision merchants throughout the United Kingdom." A list was given of nearly 900 dealers in London who had undertaken to make a special display of New Zealand butter in their windows on the day the advertisement was printed. It is stated here that the English retailers have reported splendid results from this scheme of advertising.

The National Dairy Association of New Zealand now has an agent in London especially to look after the promotion of the butter and cheese business, and the Minister of Agriculture of New Zealand has just announced that he will appoint an officer, who is a dairy expert, to special service in England to further the dairying interests of the Dominion.

Suggestions on Calf Feeding.

Nature has provided something in the first milk that is very essential in getting the calf's digestive machinery started right, and I think it should be permitted to have it. We usually leave the calf with the cow a couple of days, until it is nicely straightened up, then comes the most important time in the life of the calf, when we take upon ourselves its feed and care; and here is where we want to exercise a lot of kindness and gentleness, for if we are impatient and rough in our treatment with them they will distrust and fear us, and the chances are they never will forget those first lessons and impressions. A cow never will do her best unless she has perfect confidence in us.

It is an old saying that you can catch more flies with molasses than with vinegar; so you can do more by caaxing than driving. When teaching the calf to drink, don't push its head into the pail; wet your fingers in the milk and let it suck, and coax its head into the pail, and usually the second or third time it will drink of its own accord.

ESSENTIALS.

These are three essentials at this time: The quantity of milk, the temperature, and quality. Calves are injured more by not observing carefully these rules for the first few weeks of their lives than any other way. At this age their little stomachs are not strong, and a little care exercised at this time often means the difference between an unprofitable and a profitable animal.

The amount of feed at this time will depend largely on the calf and somewhat on the nature of the milk. This amount must be determined by the feeder, but this precaution is always advisable—better to begin carefully and work up to what they can handle, rather than to begin with a large amount and get them off their feet and then have to commence all over again.

DON'T GUESS AT THE FEED.

The amount to be fed should not be determined by guesswork, but by actual weighing or measuring, for I find it so easy to overestimate.

No artificial heating of the milk is so good as the natural animal heat, which is about 100 degrees, and we try to retain this temperature as near as possible. The mother also furnishes the milk in a sanitary condition, and we should try to follow her example in this respect and see that the pails are kept in a cleanly condition.

We also notice that quite early in life the calf will begin chewing on something, possibly a straw or piece of hay. Now is the time to educate it to eat oats, and a few minutes in getting its head into a basin or box is time well spent. Oats are nourishing and invigorating and the chewing process has a tendency to start the saliva, which, when mixed with the gastric juices of the stomach, makes the digestion easier and more complete.

A little nice, clover hay should be reserved for them, and when they are nicely started on these, then skim-milk can be substituted for whole milk; but when changing over, make the change gradually, by taking out a little whole milk and substituting skim in its place till the whole milk has been changed over, possibly requiring a week's time.—Extract from an address by F. H. Scribner, Wisconsin, U. S. A.

Dairy Thoughts.

Sell your bull calves as soon as you have decided on the number of beasts you can carry. Always keep a heifer in preference.

Though the rule is that the milk after the third calf is the best, many cows give as good a yield with their first as with later calves.

It is surprising what a change in the appearance of the cows and of the dairy is presented when the flanks of the milch cows are clipped.

Keeping a record of the yield of the cows enables you to decide quickly which of the progeny to keep on the place and which to send to the butcher.

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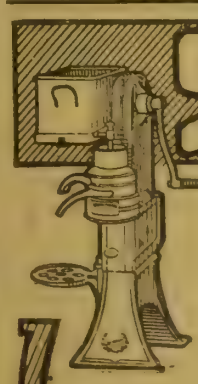

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THE RENFREW MACHINERY CO. LTD.
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LIVE STOCK.

Mange in Cattle.

There are at least three different forms of mange in cattle, but the most common one is "Psoroptic Scabies," and the essential cause of this disease is a small parasite known as the "Psoroptes bovis," which is much of the same appearance as the mange in the horse or sheep, but it has this difference, that the parasite which causes mange in cattle will not live on any other animal, and if they are transferred from, say, the cow to the horse, they only live a short time.

It is well known by all those who are familiar with this disease that when stock is turned out to pastute in the spring the irritation largely if not entirely, ceases; it being maintained that the freer secretions derived from the young and succulent grass supply the wants of the parasite in summer, so that it does not care to bite. It has been stated that in the summer months these parasites disappear entirely, but this is far from being the case, as observations have proved that the parasites were still there and that they were to be found in large numbers at the base of the horn and on the neck. But although they invest the animal, they do not appear to cause any great irritation at this time of the year, as they seem to feed on the hair and surface of the animals, whereas later in the fall, as the weather gets colder, they begin to burrow into the skin and cause intense itching.

The parts of the animal which appear to be most infected are the root of the tail, the thighs, and often the neck and withers. The symptoms of the disease is an intense itching, the animal rubbing itself against all possible objects, often causing bleeding of the parts effected.

A careful examination of a freshly attacked spot shows the presence of small elevations of the skin about the size of millet seeds, which may become confluent and are killed with serum. These break and agglutinate the hair, and drying, form crusts of increasing thickness which become very adherent, and which gradually increase in size, number and extent. Underneath these crusts, particularly around the margins of the same, may be found the multiplying Psoroptes which can be detected by the naked eyes, or better by means of a lens when the crusts are placed on a sheet of black paper in the warm sun. The skin loses its hair and becomes dry, thickened, and marked with crevices or cracks particularly in the region of the neck, shoulders or the chest. The affected animals gradually pass into a state of cachexia, becoming emaciated and eventually dying from mal-nutrition.

MANGE NOT LICE.

It sometimes happens that lice and other affections have sometimes been mistaken for mange. Lice will produce violent itching, and also cause loss of hair. Of course lice are easily recognized, and they are generally to be found at the base of the horns, the upper portions of the neck, and the root of the tail. At the same time it must be borne in mind that where you find mange you generally also find lice, but the treatment of mange is generally very effective in the case of lice.

Ringworm, found frequently upon calves or it even may be upon adult cattle, produces a well defined circular, scaly lesion, the favorite locations in cattle being in the neighborhood of the eyes and ears. A positive diagnosis of mange can of course be obtained only by the recognition of the Psoroptes bovis. For this purpose crusts from the affected portions are to be teased out over a piece of black paper in the direct sunlight and examined preferably with a lens magnifying from ten to twenty-five diameters.

TREATMENT OF MANGE.

There have been quite a large number of various kinds of dips and solutions, used in trying to cure or eradicate this disease, but many of them, like the coal tar and kerosene dips, while perfectly effacious in curing scab in sheep can by no means be recommended to cure the same in cattle. Mercurial and arsenical dips are to be avoided, as the danger of poisoning through skin absorption or the habit that cattle have of licking themselves, is too great. The best results have been obtained through the use of tobacco and sulphur, or lime and sulphur preparations. In the tobacco and sulphur dip, there should be sufficient extract of tobacco or nicotine solution to give a mixture containing not less than 5-100 of one per cent, of nicotine, and sufficient sulphur to give a two per cent. solution.

The lime and sulphur dip contains more lime than when made up for the treatment of sheep scab. It should ontain 12 pounds of unslacked lime and 24 pounds of flowers of sulphur to 100 gallons of water. The lime is to be placed in a mortar box and sufficient water added to slack the lime and form a sort of paste or putty. To this the finely sifted sulphur is added and the mixture thoroughly stirred.

This is then placed in a boiler, 30 gallons of water added and the mixture boiled for at least two hours with frequent stirring, occasionally adding fresh water to retain the original quantity. This is then placed in a cask or other receptacle and allowed to settle for several hours. When fully settled the clear liquid is drawn off into the vat and sufficient water added to bring the total quantity up to 100 gallons. Owing to the labor involved in preparing the tobacco and sulphur, and lime and sulphur dips, many prefer to make use of some one of the proprietary products. The purchaser should, however, assure himself that the dip he contemplates using has the approval of the Department of Agriculture, as shown by a label stating that the manufacturers of that dip guarantee the contents to be of the same composition as the sample submitted to the Department of Agriculture.

In those cases where failures have been reported following the use of either of these dips when properly prepared and used, it can readily be shown to have been caused through returning the dipped animals to infested corrals, yards, etc., or from re infection from other cattle on the range.

Irrespective of the kind of dip employed the following general directions should be adhered to:

1. The temperature of the dipping vat should be constantly maintained at from 103 degrees F. to 105 degrees F.

2. Animals very badly affected should be hand dressed, by scrubbing the affected areas with a stronger solution of the dip. Where lime and sulphur is used, this has the effect of softening the scab and allowing the solution to penetrate.

3. Each animal should be kept in a vat for two minutes, and completely dipped twice.

4. All animals which have been in contact with the diseased ones should also be dipped.

5. The dipping should be repeated in ten days to destroy the parasites that may have hatched subsequently to the first dipping.

6. Dipped cattle should not be returned to infested stables or corrals.

The type of vat to be employed will be largely governed by conditions. Where only a small number of animals is to be treated the dip can be successfully applied by means of a brush or a spray pump. For larger numbers the cage type of vat costing from $125 to $200 may be employed. In this type of vat two or three animals are crowded into a cage which is then lowered into the vat. In many places, however, the swimming type of vat has been more generally used. The animal is crowded forward on a trap which is then sprung, precipitating it into the vat, through which it swims, emerging by an inclined plane to the dripping floor.

By the method of treatments briefly outlined mange has been eradicated in many parts of the States. In this western country, when an outbreak of mange occurs, with open range conditions, eradication is quite difficult. A strict quarantine of the undipped or exposed herds can hardly be kept. Again possibly one man may have dipped his cattle, and done all in his power to stamp out the disease, but his neighbor, whose cattle have also been exposed to infection, neglects to dip, or does not do it thoroughly, and thus the one man's newly dipped cattle are liable to fresh infection. However, these cattle may be compulsorily dipped on an order or certificate by the veterinary inspector of the Department of Agriculture. The regulations relating to animal quarantine, and the special mange order for Saskatchewan and Alberta, authorized by order in council June 8, 1911, in which the infected areas are specially defined, and under which stringent regulations governing the movements of infected cattle, and their transit through free areas, are set forth, should do a great deal within a short time to eradicate this pest from western Canada.—Farm and Ranch Review.

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Prolificacy and Milk-Producing Capacity in Sows.

It is a grand thing to own a breeding sow that is prolific, but it is no great advantage to possess a prolific sow that is not also a good mother, and by a good mother is meant ore that produces an abundant supply of rich milk, or one that, as the pigman expresses it, "does" her family well.

An extraordinary farrow in point of numbers is really a nuisance, unless there happens to be a sow with a small litter that has farrowed down about the same time, able to take to them; for most breeders (unlike Mr. Sanders Spencer, who tells us that he has killed as many as forty superfluous little innocents within one week) are very reluctant to destroy any of the too numerous progeny, and there must either be an attempt to rear them by hand—which is a troublesome and costly business—or all do badly and exhaust the sow.

BIG LITTERS.

For a sow to have more pigs than teats is of very little good to the owner, and it is much better for her to have half-a-score of strong, healthy pigs, or at most a dozen, for which she can provide sufficient nourishment, than to have farrows of from seventeen to twenty, or even more, the whole of which do badly. Breeders often hasten to record, and are apt to boast of the extraordinary prolificacy of their sows, but we very seldom see what the results of these large litters have been, for the very simple reason that at the finish there is not a deal to brag about. A sow regularly producing moderate litters to which she does justice is a much more valuable animal than one producing unusually large litters which she does not nourish properly. Prolificacy within reasonable limits is good, but extraordinary milking capacity is better, and when a sow exhibits this, and does her pigs well, she should be valued accordingly. Is not the milking habit as capable of cultivation in the sow as in the cow, and ought not more attention to be paid to it?

MILKING CAPACITY.

Mr. Sanders Spencer says that "this quality of milk-giving is not sufficiently studied by many pig-breeders, who take it for granted that well-nigh every sow which will produce pigs will, as a matter of course, furnish the latter with a good supply of lacteal food. This is an entire mistake, as there is nearly as much difference in the milking qualities of sows as in those of cows." As in cattle, so with pigs—the milking habit runs in families, and is susceptible of cultivation. But no cowkeeper would think of fattening his heifers intended for milkers or to produce milkers, and so the pig-breeder who desires to cultivate the milking of his sows should not fatten them while young, for it is rare that a young sow that is fattened almost from birth to maturity gives enough milk to raise her litter successfully. After the milking qualities have been established, the pig-breeder should bestow on his young sows the same care that the cattle-breeder takes in looking after the udder of his heifers,

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A SPEEDY CURE

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Messrs. C. Gates, Son & Co.,

Gentlemen,—This is to inform you that I have been a sufferer for the last fourteen years from kidney and stomach trouble, brought on by severe colds. Having been laid up every winter during that time. Last year I was laid up for seven months, so that I could not go out of the house. Dropsy set in, and my stomach swelled so that I was six inches larger than my usual size, had two doctors in attendance, but I grew worse and they were going to tap me—my friends despaired of my life. At this time I was recommended to use Gates' Life of Man Bitters and Invigorating Syrup No. 1. and in one week after commencing their use, my size was reduced two inches, and in four weeks was reduced to my usual size, so that I went to work in my mills, and have been able to continue it ever since. By continuing the use of your BITTERS and SYRUP, I hope to get a cure of the kidney and stomach trouble so far as it is possible, as it always helps me when I take it. You may make these truths known for the benefit of sufferers.

Yours very gratefully,
John W. Margeson.

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and the same class of food should be given to promote the flow of milk.

WHEN TO DISCARD A SOW.

With reference to gilts which at their first farrowing leave something to be desired, both in the number of pigs produced and in the yield of milk for their sustenance, it must be remembered that there is no domesticated animal that so steadily increases in value as a breeder as the sow, and that, within reasonable limits of age, a sow may be expected to do better with each succeeding litter. A sow of good family that exhibits these valuable qualities as a mother ought to be kept for breeding as long as she produces even litters and rears them successfully and it is a mistake, although it is practised by some, and has even been recently advocated by an American professor to convert her into low-class or low-priced pork after taking one or two farrows from her, or in other terms, killing her before she has reached her prime as a breeder. A gilt that has produced only a small, unsatisfactory litter, or that has not done them well, may be allowed another trial, but if at the second venture there is no marked improvement, she should certainly be sold, or fattened out of the way, and room made for a better animal.

With further reference to the cultivation of the milking habit, as a rule little pigs are weaned, or rather removed (for to wean means to accustom gradually), too early, generally by quite a fortnight. The sow's milk being the cheapest and best food the pigs can have, they should not be weaned while she gives a reasonable quantity, and shows no sign of the youngsters being a drag on her, and a good sow will generally give a supply of milk for two months.—Pateley Bridge in Farm and Home.

Wisdom on Calf Rearing.

The care of the pen makes quite a difference about keeping the calf's digestion right.

The calves require more bedding than other stock. If they are permitted ta lie on a cold, damp bed, they take cold and that they are out of condition is shown by their rough staring coat, running noses and genetal unhealthy appearance.

Nature provides an abundance of sunlight, good ventilation and chance for exercise. Look out for all these things, as they all mean something to the dairy calf in keeping the digestion right and the building up of a good, strong physical frame.

The good old song "Let the blessed sunshine in," is just as applicable to our cow stables and calf stables as our Sunday Schools.

Young animals need especial care, as their growth and development require all the nourishment there is in feed.

Don't forget the exercise. Where calves are kept in a little four by six pen, with conditions just the reverse of what they should be—dark, damp, gloomy, ammonia-filled air to breathe, no chance for exercise—is it any wonder that the average production of our cows is so low when they have been brought up under these adverse conditions?

The fall calves usually make the best growth; possibly one reason being that we are around the barn more and notice their condition and can give them proper attention at the right time.

One quite common trouble with the spring calf is that we want to get it out on pasture altogether too soon, and skimmilk, grass, flies and hot weather make a mighty poor combination. We would rather keep them in through the summer, feeding them on good oats and clover and milk, and by paying attention to the stable conditions and exercise, they will make a better growth than if turned out.

A SMALL CROP IS A WARNING

A small crop is proof that your land is run down—it is a warning to fertilize promptly.

Manure is the ideal fertilizer because it contains the very elements that crops have extracted from the soil. To get 100 per cent value from the manure you spread, you must use a good manure spreader. The pitchfork method is wasteful, entails hard, disagreeable work, and takes too much time.

When buying a spreader, be sure you get one that will last. You can make sure of the quality, efficiency and durability, by investing in one of the

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These spreaders are used on thousands of farms. Their strength, simplicity, and durability are matters of record. Why not look into the matter?

When investigating, remember that the power transmitting mechanism used on I H C machines is the most durable used on any line of spreaders. This results from the fact that the beater gears are held in a single casting which prevents them from springing out of alignment and cutting the teeth. The teeth are long and chisel-pointed to insure positive pulverizing of all manure. There is no wedging of manure against the beater bars. The teeth do not rim the bars. The beater is large enough in diameter so that it does not wind. You will find many other striking advantages which will convince you of I H C superiority.

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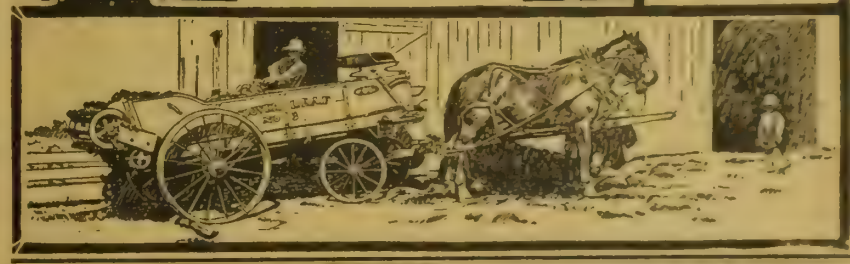
The Bureau is a clearing house for agricultural data It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others, Send your problems to the I H C Service Bureau.



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THE HORSE.

Care of Colts.

To successfully grow and develop young colts requires some time and attention to weaning, feed, shelter, exercise, etc. Owing to the large number of colts on the farms in the Middle West many farmers are interested in the matter of feeding and care of the colts during the Fall and Winter. It is advisable to feed in such a way as to keep these youngsters in good flesh and growing rapidly. This is a matter of great importance, as a large number of colts begin to decline and go down in flesh at this season of the year. Every horseman knows that, from the time of weaning on through the first Winter is a critical period in the life of a young colt. Stockmen generally recognize the importance of retaining the baby fat on any growing animal, but many good farmers have not learned this fact, and, as a consequence, lose much time and money in growing the colt.

Colts should be taught to lead and eat grain before weaning. If they are eating well at weaning time, which, on the average farm, will be when the colt is from five to seven months old, that dam should be taken away and placed in a stall where she cannot hear the colt. With many mares it is better to keep the colt away altogether when weaning, while with others the milk should be taken away gradually. When the mare is a heavy milker, and especially if she has been running with the colt continuously, the colt may be allowed to suck three times a day at first, then twice daily and eventually the milk taken away entirely. This practice is also recommended where the colt has not been taught to eat before weaning. During the first few days it is well to keep the colts in a tight box-stall, which should be clean, airy and darkened to keep the flies out, in fly season, allowing them to take exercise in a yard or paddock where there is no possibility of injury from barbed wire or poor rickety fences, some time during each day of their confinement. Where there is one colt on the farm it is well to turn it in with some quiet horse that will not be inclined to fight or injure it in any way. After they have become accustomed to the new conditions they should be turned into a good pasture where there is plenty of water. If the flies and mosquitoes are bad it will be profitable to keep them in a darkened box-stall during the day and then turn them out at night; in either case they should have a small feed of grain (oats and bran) once or twice a day, depending on the age and condition of the animal, pasture, etc. Aim should be to keep the youngster growing right along, as the time to make a good horse is when the colt is developing bone and frame for the future. As the pasture becomes short the grain should be increased, and some first-class roughage supplied. Where blue grass or clover is abundant, this, with a slight grain ration will suffice until freezing weather, although the stalk field, if cleaned early will make a desirable run for the colts after the corn has been picked out by the cattle.

As the Winter comes on warm shelter should be provided where the colt may go in and out at will during the day and be shut up on severe, stormy nights. The stable should be kept clean and well bedded. Abundant exercise in the open air and sunlight are very essential to the best development of the colt. Nothing is more detrimental than the lack of exercise. A good blue grass pasture, where the grass has grown up rank in the Fall, is the ideal place for colts to run in the Winter.

The Winter feed for colts should be given care and attention if the best results are desired, as the first Winter of the colt's life is likely to have much to do with the future development of the animal. If kept growing and in good condition a strong and vigorous animal with plenty of bone and muscle will be the result. But if it is stunted and starved, much of its prospective usefulness is likely to be lost. The feed should be rich in protein and mineral matter, as these constituents are essential to the development of bone and muscle. It should also be furnished sufficient bulk to develop digestive capacity and keep it in a thrifty vigorous condition. Where draft horses are being fed it is very important that as much size and weight as possible be secured during the first two or three years of the colt's life. Early maturity in this class of colts is an important factor in determining the value of the horses. Size is all essential in first-class horses.

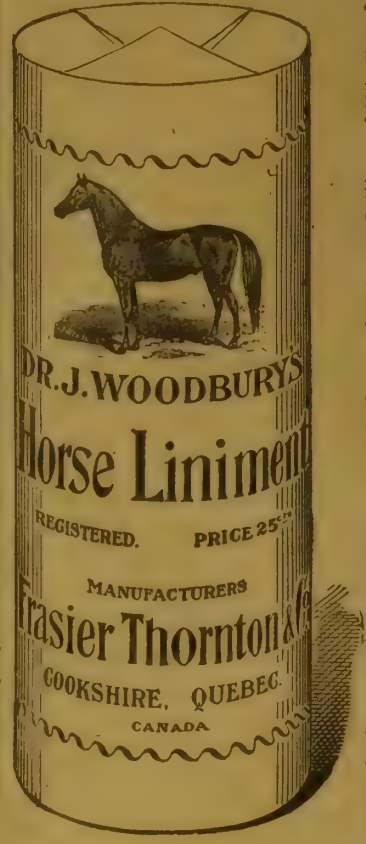
The bulk of the grain ration for colts should be oats. With this some corn, a limited amount of bran and a small quantity of oil meal may be fed. For roughage bright clover hay, free from dust, may be fed in racks in the yard or field, with good mixed hay in the stall at night. Bright oats, straw and corn stover will serve to give variety, which is of great importance in the ration of any animal. The quantity of roughage, should be controlled. Feed liberally, but never keep it constantly before the colts. Frequently it is cause for indigestion and disorder in the colt. A most frequent cause of disorder, poor condition, and lack of growth is the presence of lice. These are found especially during the Winter and Spring months. They should be destroyed when first found, if the weather is not severe. This may be done by washing thoroughly with a two per cent. solution of any of the recognized coal tar dips. The stalls should be whitewashed and sprayed with some antiseptic solution. Care should be taken to guard the animal against taking cold. If the Winter is open and rainy it is important that the legs and feet of the colts be kept free from filth and mud or scratches may develop and in such case will make serious trouble. In summing up it may be said that to successfully handle colts during the Fall and Winter months attention must be given to the matter of feed and water, exercise and shelter together with constant attention on the part of the owner, in order that none of the common ailments come in and seriously affect the growth and development of the animal.—Indiana Farmer.

DR. J. WOODBURY'S Horse Liniment.

INFALLIBLY THE REMEDY.

For the removal of Splints, Bog Spavins, enlargements of any and every description it has no equal. Given internally, it will promptly relieve and remove any and every character of Cough, Enlargements of the Glands, Affections of the Kidneys. For distemper, Strangles and colic it is infallibly the remedy.

All horses that are stabled should have an application of Dr. Woodbury's Horse Liniment to the hoofs of the for fe eet to prevent their becoming feverish, dry, brittle. hard, contracted or otherwise injured.



Insist on having Dr. Woodbury's Horse Liniment. We warrant it to effect that for which it is recommended when used according to directions.

Its beneficial effects are so prompt and decided that it has excited the admiration of the leading horsemen of the Dominion and secured their highest confidence.

Bear River, N. S.

DEAR SIRS—We do not hesitate in recommending your Dr. Woodbury's Horse Liniment. We have used it in the woods for coughs, colds, distemper and cuts, and would say that no lumbermen should be without it. Yours truly, CLARKE BROS.

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DEAR SIRS:—I have used Dr. J. Woodbury's Horse Liniment in my stable for years and consider it the best liniment on the market for both internal and external use Yours truly, C. C. McLEAN.

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This is to certify that I have used Dr. J. Woodbury's Horse Liniment with the very best results for colds, coughs, distemper, and all lung diseases. It is the best thing to give horses in the spring to keep them in condition It purifies the blood, cleanses the lungs from impurities, which may exist, and gives the system healthy action.

NEWTON LEE, Owner "All Right" 5817.
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DEAR SIRS:—Kindly send me 6 dozen bottles Dr. J. Woodbury's Horse Liniment. I have not a bottle in the store and it is the only kind my customers will take. Yours truly,
ELMSDALE MERCANTILE Co.,
Elmsdale, N. S.

DEAR SIRS:—I cured my horse with Dr. J. Woodbury's Liniment. It was a bad case of distemper. I always recommend this liniment to my friends as the best for all diseases of the horse. Yours truly,
H. R. WHITEHEAD.

DEAR SIRS:—One of my horses had a bad cough and I made a complete cure with three bottles of Dr. J. Woodbury's Horse Liniment. The cough was of twelve months standing. In my large experience with horses, I consider this liniment to be the best made for all diseases in the horse, and I recommend it to my friends.

E. J. ANDERSON, Truro, N. S.

Manufacturers:

Fraser Thornton & Co., Cookshire, Que., Can.

One Line Pulling.

Many years ago I had at one time three horses that pulled to one side. They all pulled to the right. In degrees they differed, but in results they all reached the same goal, viz., aggravation of the driver's temper. One simply pushed gently to the right side of the track, and kept the wheels just enough to the side of the road to make the buggy ride hard. All the time, night or day, I had to ride just a few inches out of the track. It was disagreeable and exasperating. I tried all sorts of tricks with the reins, and even resorted to the cruel practice of jerking her back into the road. Another would strive to get a little further out of road, and failing to do so, would carry her head enough to one side to make her driver very nervous from the fear that she was going into the ditch. The other, a big, raw-boned specimen of the old "fox hunter" breed, made no bones of his efforts to reach the fence upon the right side of the highway. If I gave him the least chance he would dash clear over, and nothing but the fence would stop him. He was so bad that he was not safe to drive in the night. They were all three excellent drivers and good roaders, and it was quite an affliction to me that they should all of them have this same fool notion at the same time. I tried various kinds of bits and various devices, but none of them made any difference. It was a case of "hang to the left line," and I have recollections of becoming so exasperated at one time that I hit old "fox hunter" a hard clip with the whip and broke out singing "Keep to the right, boys." My hand would cramp from hanging to that line, and I would sometimes cross the lines to rest myself.

Now, up to that time I had believed myself to be a good horseman, and I endured the annoyance for some time before I humbled myself to ask for advice. At last I concluded that the fault was in myself, and I made a study of the driver, but a study of self is not usually pleasant, and I concluded to quietly let others drive them a few trips. But they all had the same trouble, and their experience proved that it was not all nervousness or imagination. Then I wrote about it to a horse journal, and as a result I received letters recommending more bits, and I was astonished by the number and variety of things invented to fit the mouth of a horse. Then in my desperation I wrote a very humble request for help and sent it to a well-known medical journal. In a few days my mail increased. I received letters from Maine and from California—good letters, friendly and fraternal letters. They told me of things I had not before considered, and as a result of the advice these letters contained I cured those horses of that vice.

The most common form of advice was in regard to the teeth of my horses. "File their molars," Inspect their teeth," 'Look for sharp edges upon the back teeth and file them smooth," "His teeth cut his tongue when he pulls upon the bit, and he has to hold his head that way to favor himself," "Pulling upon the bit crowds his cheek against a sharp tooth, and you must file away the sharp edge so he can press evenly upon the bit," "Sit on the other side of the buggy," "Hold

(Continued on page 165).

We wish to call your attention to the fact that most infectious diseases such as whooping cough, diphtheria and scarlet fever are contracted when the child has a cold. Chamberlain's Cough Remedy will quickly cure a cold and greatly lessen the danger of contracting these diseases. This remedy is famous for its cures of colds. It contains no opium or other narcotic and may be given to a child with implicit confidence. Sold by all dealers.

POULTRY.

Poultry Waste.

The greatest waste is in having no system of feeding. A particular kind of grain is fed day after day, without a change or variation in any manner, and the fowls apparently thrive on such diet, eat all of the food, leaving none to be wasted, but the poultryman does not see the waste of eggs that occurs simply because the hens are unable to produce them on account of a lack of certain elements that are not contained in the food allowed. A little consideration given the matter of feeding, though it might lead to a slight increase in expenditnre, would add much more to the receipts.

Neglect to repair the poultry house, so as to render it comfortable for the hens, leads to waste, and a rapid one, because it is seldom noticed until much damage is done. The streams of air call for more food to supply the warmth of body, and the poultryman's economy in attempting to make the old house do service without necessary repairs wastes his food, his labor, aud his prospective supply of eggs. The neglect to do his part calls for a neglect by the hens, and he is the one who must foot the losses. Imperfect preparations for supplying the food and water, and failure to clean the houses, are also sources of waste.

Attempting to make the scrub hens pay, when it costs but a dollar or two to procure a male, and improve the stock, is a kiud of waste that is in no manner excusable, for it is one of the most common, and each year's experience teaches the difference between good and infericr stock by simple comparison with the fowls in the yard of some more enterprising neighbor. To waste the time on scrub hens ends in disgust after a short time, the farmer being discouraged over results that should have been better, and which he ascribes to the business, when in fact his own wilful waste of time and food, by a system of extravagant economy, has entailed loss.

There ss a waste in not procuring that which saves time, labor and food, and every ounce of food saved, or time that would be lost, is so much on the profit side of the accounts, and is equivalent to actual cash received, no matter in what shape it may be.

In the matter of feeding, let us look at methods, and endeavor to draw some conclusion in regard to the causes of failure. When the hens do not lay, there is certainly a cause; but so many causes are in the way that to select the particular one is a difficult undertaking, as it demands not only practical experience, but considerable theorizing. Leaving aside the fact that a fowl may be sick or not properly housed, the main consideration is its condition. The kind of food to be supplied depends on the bodily condition of the fowl, and the hardest part of the work of management is to properly observe each fowl in order to judge of its condition, and thus learn how to feed for eggs.

To feed a fowl for market is very simple, but as the laying hen is a producer, like the cow, the object in giving her a place on the farm is not so much in making her valuable in the amount of meat on her body as to have her produce eggs. When the attempt is made to have the hen produce both meat and eggs, she will fail as a producer; but as she is both a meat producer and an egg producer the skill of deriviug either the one or the other lies with the farmer, and the work of the hen will be according to his management. The farmer knows that an egg is almost complete in itself. This fact is made plain because he knows that the egg will bring forth a live chick, complete in itself, with bones, down, fat, lean meat, blood and cartilage.

The chick could not be produced from the egg unless the egg contained all the nitrogen, carbon and mineral matter essential to the production of a living creature. Unless the hen can secure the materials to store in the eggs laid by her, she will be incapable of fulfilling her duty. The mistake mostly made by the farmer is in supplying her with an abundance of one material and an insufficient of another. When the food is mostly grain, the hen is supplied with an excess of carbonaceous matter, a small proportion of nitrogen and almost no mineral matter, as grain is deficient in minerals. The consequcnce is that the hen supplie, first her own bodily requirements, produces an egg whenever there is an accumulation of the needed elements, and finally ceases to lay altogether.

When a hen receives food consisting of grain, mostly, any excess of carbon is stored on the frame of her body as fat, This fat accumulates until she is so clogged with it as to render the passage of an egg very difficult, while all the reproducuve organs are disorganized, Fatty degeneracy of the liver and heart, apoplexy and indigestion result. She has been fed liberally and well cared for, but she has not been feed properly for eggs. Her owner should have fed her on a variety, noting her condition, and withheld any food that caused a predominance of fat, thus feeding her in a manner to have her at all times in good laying condition. —Live Stock World.

FEATHERS WANTED.

We pay highest prices for all kinds, feathers, furs, hides, wool, beeswax, tallow, etc. Prompt returns. Send for price list.

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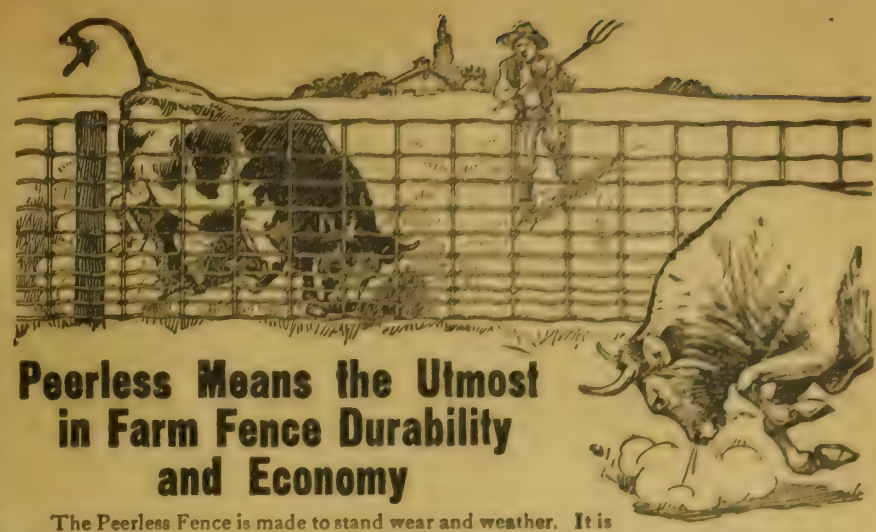

Peerless Means the Utmost in Farm Fence Durability and Economy

The Peerless Fence is made to stand wear and weather. It is made of carefully selected, fully galvanized, spring steel wire. Stays springy and strong, always taut, never sags. Put a Peerless Fence around your farm and you'll get real service.

Read what users have to say about the Peerless:—

Concerning the quality and galvanizing of your fence, I think it perfect. I have compared it with other makes and every person where I put up your fence is well pleased with it and will not have any other fence on the place. I was at a farmer's not long ago and he stated that he was going to have three hundred rods of it in the Spring. I put up ninety rods for his neighbor four years ago and there is no sign of rust or slackness yet. The wire in your fence is tempered so as to suit the cold and warm weather and I have never had to go back to tighten one rod of fence that I have put up yet. I could mention different makes of fence, from firms well known, that their fences have rusted badly inside of three years. The Peerless is the farmers' favorite around here. —P. FOGAL, Cedar Valley.

Wherever I have seen Peerless Fencing that was erected five years ago there was no sign of rust and it seems to be as good as the day I put it up and I know of other fences that havebeen up only two or three years that are very badly rusted. This I am prepared to prove to anyone who wishes to see the fence for themselves, as the fences are here for inspection. I am well pleased with the material that you have used in your fences. —O. M. PASTORIUS, Harrow.

I have been comparing some of the Peerless Fencing that I put up the first year I sold fence and every wire is just as bright as ever, while some other makes put up about the same time have from one to three rusty horizontal wires running through it. I have always found the wire in Peerless Fencing first class. —EZRA FOX, Kingsville.

In regard to the durability of the Peerless Fence for the length of time it is up, I had an examination by myself and the parties I have put it up for, it surpasses any other wire fence for not rusting. Also the people I have dealt with give the Peerless Fence the preference before any other and if they were buying again would buy no other.
—W. H. Van ALSTYNE, Atkinson.

Peerless Fencing is the best galvanized fence and when put up properly is the best fence on the market today. I have some Peerless Fence, put up some four or five years ago, which is as bright as ever and tight, standing O. K.
—HOWARD BRUSH, Pitts Ferry.

Farmers speak well of your fence and I know of no fence that looks better for the years that it has been erected than the Peerless. I have never heard a farmer say that the Peerless showed any sign of rust yet.
—GEO. DAVIS, Clinton.

The best fence for you to put around your farm is the Peerless—it will last longest, give you the most satisfaction and save you money. Write for particulars. Agents wanted in all unoccupied territory.

THE BANWELL HOXIE WIRE FENCE CO., Ltd.
Makers of Farm, Poultry and Ornamental Fence and Gates of exceptional quality
Dept. K, Winnipeg, Man., Hamilton, Ont.

Capons and Caponizing.

Farmers Bulletin 452 of the U. S. Department of Agriculture, treats on capons and caponizing and should be sent for and studied by all producers of capons. It is by Rob R. Slocum of the Bureau of Animal Industry and says in part:

"It is impossible to say just how long the operation of caponizing has been performed. It seems quite certain, however, that the practice was familiar, to the Chinese more than two thousand years ago. Later it was practiced by the Greeks and Romans and, through medieval times, by the people of middle and southern Europe, until in recent times it has been introduced into America. At present capons are most universally known and appreciated in France, although within the last few years the business of producing them has advanced rapidly in this country. Much the larger part of the industry is confined to that portion or the United east of Philadelphia, though increasing number of capons are being raised iu the North Central States. During the winter months capon is regularly quoted in the markets of the larger eastern cities. Massachusetts and New Jersey are the great centers for the growing of capons, while Boston, New York and Philadelphia are the important markets.

"Capons are usually kept till they are about 10 months old. At this time the market is at its best and the birds have made their most profitable gains. The feeds used and the methods of feeding vary greatly, so much so, indeed, that it is futile to try to give specific directions. For several months after the operation a good growing ration and not a fattening ration is required. It may consist of whole grains, ground grains, or a combination of the two, as each feeder finds most profitable and best suited to his locality. As with other poultry, variety must be given for best results. Late in the fall, when the capons have no pasture, green feed, such as cut clover or vegetables, should be provided. A somewhat more fattening ration than that required for laying hens seems to give good results.

"As capons are not usually marketed before Christmas or the first of January they have to be housed during the late fall and early winter. Because of their quiet disposition they stand crowning quite well and have been successfully housed with only two or three square feet of floor space to a fowl. It is better, however, to allow 4 to 5 feet if possible.

"During the last month or month and a half before marketing the corn in the ration should be gradually increased until the fowls are on a full fattening ration. For the last two or three weeks it is desirable to shut them up and feed them in crates, for every possible ounce at this stage adds to the appearance and profit. Machine cramming is sometimes practiced the last week with excellent results.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation. Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.
Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

If you are troubled with chronic constipation, the mild and gentle effect of Chamberlain's Tablets makes them especially suited to your case. For sale by all dealers.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

The Heart of a Friend.

A heart that is glad when your heart is gay,
And true in the time of cares;
That halves the trial of the fretful day,
And doubles the joy that it shares;

A heart that can cheer your heart with its song
And comfort your hour of need.
A heart that is brave and faithful and strong,
Wherever misfortune may lead.

A heart that is yours when the wave seems dark
And yours in sunshine too;
A heart that cares not for rank or mark,
But only the heart of you.

A heart that will shield when others abuse
The name that it knows is fair.
That would rather miss fortune and fame than lose
The love of a friend that is dear.

A heart that will hear no ill of you
But is ever quick to defend;
A heart that is always true, steel true,
Such is the heart of a friend.

Love's Barrier.

(Continued from last issue).

CHAPTER XIII.

THE COURT FARM.

"Dear, dear, what's the matter; why, whatever is the matter?"

Jane came into her own sitting-room, which she shared with the children, and found them both howling dismally. It had been snowing a little, and was so bitterly cold outside thgt she had forbidden them to go out. She had only left them after the early dinner to see to the butter in the dairy, and she re-entered the house had been greeted by their wails.

"I hit Robin and daddy hit me," cried Billy, the elder of the two, rubbinb a pair of fat knuckles into his eyes, and then glaring over them defiantly. "When I'm a big man I'm going to kill daddy, so there!"

"Come, come now, Billy, we won't have this. Wipe your eyes and come and sit by me, and hear about the prince and the five pigs and the lame goose."

She picked up the smaller urchin from the floor and pillowed him on her breast. He was a very little chap with a thin white face and his mother's shrinking spirit. The sob died in his throat, as he nestled close to Aunt Jane's warm breast, and felt her arms closing tightly round him. Her face was very sweet as she leaned her cheek against his fair hair; the mother look was out upon it. She dearly loved the children, else surely she could not have stayed at the Court Farm. These four weeks had revealed to her much that she had not understood in the life of Emily Courtney, and at times she found it difficult to be as courteous as she ought to its master. Billy looked at her with a defiant air, which made his likeness to his father very striking.

"It's a silly old story, anyhow, and I shan't listen," he said rudely, and walking to the window, planted himself on the low seat to watch the falling snow-flakes. But presently his unwilling ear was caught by the low music of Aunt Jane's voice, and in spite of himself he listened. Then after a little he stole across the room, slid down on the floor at her side, and hid his face against her frock. Her free hand went out and touched him tenderly. He was a tiresome child, like the bigger one she had to mother, too, but she loved him; there was something sweet about his wilfulness. She knew what a sad heritage was his: the ungovernable temper of the Courtneys, their stubborn will, and implacable disposition had all found an abiding place in Tom Courtney'a eldest son. Already he had come into conflict with his father, whom he alternately feared and hated.

Jane had been horrified to find such relations existing between Courtney and his baby son. He was only six, and had a face like an angel, but sometimes all the powers of evil seemed to wage within him. It must be her task to try to guide the little one into the more peaceful paths of self-control.

Presently her voice ceased, and she felt herself nodding over the golden head, and then she saw that both the children were asleep. She rose very softly, laid the younger on the old couch, covered him up, and then stooped down over the little figure huddled on the floor. She scarcely dared to lift him lest she should awake him; taking a pillow from the end of the couch she slipped it under his head, covered him with a rug, and stole out of the room. They would be safe and happy there for an hour at least. The room was her own sitting-room, and the children's play place, which she found it advisable to combine. She had no idea that two smal, boys of four and six could be so exacting, or manage to occupy so much of one woman's time. She loved the work and the children, but realised that she could not attend to them and do all the rest that Courtney seemed to require of her.

"Got the brats quietened? It's pandemonium, isn't it?" said Courtney, looking up from his desk when she entered the living-room.

"They want occupying, Mr. Courtney, and I haven't quite as much time as I should like to spend with them. I have been thinking these last few days that if we could get some young girl to come for a few hours each day to teach them some simple lessons, and take them out, it would be good for everybody."

"Do as you like with them. I don't care! I can't manage them. They get on my nerves; then I hit them too hard, don't you know?"

"They don't want hitting at all," said Jane quietly. "It is the very last thing they do want, I assure you. I'll make some inquiries. I don't think there is anybody in Midcar, unless that niece of Ann Coyne's should be coming again. She is a school teacher, and I thought Ann said she was out of health and would stop a term with her to pick up. That would be the very thing. I'll go into Midcar this afternoon, perhaps, if the snow clears off."

"I'll drive you if you like. The mare wants exercising."

"I think I'll walk, thank you; it will do me good. I told Hester Strong we should not want her after next week. Was that right?"

'Anything is right that you do," said Courtney, glibly enough. "I don't want to be bothered about the household arrangements. That was one of Emmy's mistakes; she piled too many trifling details on to me. I've enough without side worries. If this new squire at Mardocks won't meet me in what I want for the Court, I shall leave it. Miss Jane."

"You would surely not do that for a trifle, Mr. Courtney?"

"Depends on what you call a trifle, doesn't it? I want some new barns and a cool hundred taken off the rent."

"I'm afraid they are not very rich, if what my sister-in-law says about them is correct."

"That's got nothing to do with me. He's bought Mardocks, and that took a bit of buying, you bet. Well, well, what about Midcar? Won't you let me drive you?"

"No, thank you, if I go I shall want to stop to tea at the Rectory."

"But I might be capable of calling for you there."

"Oh, yes," said Jane with a smile. "But let us leave it. There's somebody on horseback coming up the drive. I think it is Sir Anthony, Mr. Courtney. I saw him in church last Sunday."

Courtney sprang up and advanced to the window. As he passed her by Jane caught the whiff of the odour she hated and feared.

He had not yet redeemed his promise to her to leave the drink wholly alone, and when she had asked that it might be cleared out of the dining-room for good he had refused. He was better, certainly, but so long as the stuff was there and temptation convenient, she could not be at rest. She had pledged herself to rid the Court Farm of its curse, but with a man of Courtney's temperament she had to walk warily. He was a very fine figure of a man, and well suited his rough-riding garb. There were few to make a better appearance in the hunting field, but he had been absent from it continuously since his wife died. Jane realising that the healthy outdoor life was the salvation of such a man, was trying to persuade him to return to the field. But as yet she had not succeeded.

"Yes, it is Sir Anthony. Don't go," said Courtney quickly. "I particularly wish you to stop here."

"But he will wonder," said Jane with a slight flush. "I am only your housekeeper, and when gentlemen meet to discuss business it is unusual to have a woman present, isn't it?"

"I don't care a damn—you stop," said Courtney. Then she was perfectly certain he had been drinking, and wished it were possible to deny him to the new Squire. There had been a good deal of writing to and fro between the agents and Courtney, who imagined he had been badly treated, and that they were trying to get the better of him. The wholesome nature of the man had gotten a strange twist, and he could not regard any point from the normal view. Jane attributed it all to his abuse of the drink, which she so hated that it would have made her happy to see its sale and consumption prohibited throughout the length and breadth of the land. She could not escape, for at that moment the young house-girl showed Sir Anthony in. He was a well-built man with a military air; but beside Courtney's enormous height, he appeared almost insignificant. He bowed with great affability and offered his hand to Courtney, who stood sullenly by the table.

"Your wife?" said Sir Anthony, looking with approval at Jane's kind pleasant face.

"No," replied Courtney rudely. "My housekeeper."

Sir Anthony smiled genially.

"I had old Luttrell up from Bradfield this morning, Mr. Courtney, and he brought your letter with him. It seemed rather a large order, and I thought the best possible thing would be for me to come over so that we could have a talk about it."

"It's a letter I mean to stick to. These boundaries ought to be seen to, and the barns are a disgrace to any place. And the rent, as things go in these days, is ridiculous."

"But rents don't come down," said Sir Anthony with a shrewd but not unkindly smile. "Luttrell tells me there are half a dozen men after every place as it comes on the market. Doesn't look as if there was nothing but starvation on the land."

Courtney scowled.

"Well, you're welcome to keep it, Sir Anthony. My people have been in Court Farm for three hundred years, but I'm not keen on perpetuating the tenure. I've just about had enough of it, and unless I'm met a little more than half-way, I quit, see, at Lady Day."

The tone was gratuitously offensive, and Jane's colour rose ever so slightly.

"I think the difficulties might be overcome, but hardly in this spirit, Mr. Courtney," said the Squire a trifle more stiffly. "Isn't there any common meeting ground where we can discuss the matter?"

"Luttrell knows my mind on the matter, Sir Anthony. I haven't made a penny of profit on the Court Farm in the last three years."

"Then you would be a fool to keep it. Don't you agree, madam?" said Sir Anthony, with a sudden swift glance of inquiry at Jane.

"I quite agree," she answered unexpectedly, with a nervous glance at Tom Courtney, who stood gnawing his moustache and looking the pic-

MADE WELL AND STRONG

By Lydia E. Pinkham's Vegetable Compound

Toronto.—I gladly give you my testimonial in favor of your wonderful medicines. Last October I wrote to you for advice as I was completely run down, had bearing down sensation in the lower part of bowels, backache, and pain in the side. I also suffered terribly from gas.

After receiving your directions, I followed them closely and am now entirely free from pain in back and bowels, and am stronger in every way.

I also took Lydia E. Pinkham's Vegetable Compound before my baby was born, and I recommend it highly to all pregnant women.—MRS. E. WANDBY, 92 Logan Ave., Toronto, Ont.

Another Woman Cured

Maple Creek, Sask.—I have used Lydia E. Pinkham's Vegetable Compound and Blood Purifier, and I am now in perfect health. I was troubled with pains every month. I know other women who suffer as I did and I will gladly recommend your medicine to them. You may publish this if you think it will help others.—MRS. F. E. COOK, Maple Creek, Sask.

If you belong to that countless army of women who suffer from some form of female ills, don't hesitate to try Lydia E. Pinkham Vegetable Compound, made from roots and herbs.

BRONCHITIS

Was So Choked Up She Could Hardly Breathe.

Bronchitis is an acute inflammation of the mucus membrane lining the air tubes of the lungs, and should never be neglected, for if it is very often the disease becomes chronic, and then it is only a short step to consumption.

On the first sign of bronchitis Dr. Wood's Norway Pine Syrup should be taken, and thus prevent it becoming chronic.

Mr. John D. MacDonald, College Grant, N.S., writes:—"My little girl, seven years old, caught a bad cold which developed into bronchitis. She was so choked up she could hardly breathe. Reading about your wonderful medicine, Dr. Wood's Norway Pine Syrup, I decided to try a bottle, and with such good results that I got another which completely cured her. I cannot say too much in its praise, and would not be without it in the house."

Dr. Wood's Norway Pine Syrup is put up in a yellow wrapper; three pine trees the trade mark; price, 25 cents.

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Receive by return mail post paid two beautiful little dresses like cut in soft warm dress goods in dark red plaid patterns for little girls age 2 to 8, made with waist and skirt trimmed with braid in latest style. Age 10 to 12, 75c. Age 14 $1.25, add 14c for postage. Standard Garment Co., 16 Standard Building, London, Canada.

ture of gloom and indifference. Jane was intensely chagrined. He had been so sunny-tempered and happy in the morning; somehow and somewhere he had got the drink which in an hour's time had changed him. She longed to tell Sir Anthony Brede that it was not the real man talking to him. She could see that he was frankly puzzled and chilled by his reception. After all, he need not have come. It was a kindly, neighbourly act, rising out of his desire to get on amicable terms with all his tenants and new neighbours.

Well, it looks like a futile discussion, Courtney. Is there any chance of our coming to terms, I wonder? We might arrive at some understanding about the rent or even about the new barns, but it could not be both, Courtney; you must grasp that."

"I don't mind. I can quit, the sooner the better," said Courtney, and flung himself out of the room.

Sir Anthony stared after him, a trifle put out, then turned enquiringly to Jane.

"A regular fire-eater, eh, ma'am? Perhaps if you have lived long enough to find out, you can tell me what is the matter with him?"

Jane nodded rather sadly, and pointed to a black bottle standing on the end of the sideboard.

"It was not the real Tom Courtney who spoke to you to-day, Sir Anthony. Hasn't anyone told you yet? I rather thought the news had travelled as far as Bradfield."

"No. Ah! That puts a better complexion on it, at least from my point of view. No, Luttrell didn't mention it. If it's true he hasn't made a profit in three years the reason is not far to seek."

"It is not true at all," replied Jane quietly. "He is a first-rate farmer, and the place pays well. But when he gets the drink in, he's a different and very much more difficult person to deal with."

"Ah, then you have no sinecure here. Are there any children?"

"Two little boys. Their mother has not been dead above three months. It is all frightfully sad, but it is in the blood, apparently. Old George Courtney drank himself to death, but that was before my time."

"Ah, I think you don't belong to these parts, Miss—Miss——"

"My name is Secretan."

"Secretan! That's twice I've heard the name in one day. I met the Rector on the road as I rode out. Any relative?"

"My brother; and I have only been here since his marriage a few weeks ago."

"And so you are Miss Secretan!" Sir Anthony looked surprised, and yet more deeply interested. He liked the woman, she was so straightforward, and so true, and though she had no looks to speak of, and was past her first youth, there was something winning about her.

"So you were ousted from Midcar Rectory; it's the fate of sisters. But you need not stop here, you know, with a boor like that. There will be nothing easier than to find you something more congenial. I can speak to my sister about it. She has come to Mardocks to spend the winter with me. I dare say you have heard."

"Yes, Sir Anthony, and I saw her last Sunday in church."

"Ah, yes, so you did. Perhaps you can tell me then why your sister-in-law doesn't attend any of the services, nor do much in the parish. It seems there is a good deal of dissatisfaction about, and yet she is one of the most perfectly charming women I have ever met."

Jane's colour rose. It was a point on which she was abnormally sensitive. She loved Helen dearly, but she could not admit that she was doing her duty or that she realised the position in which she placed her husband by her indifference to all dear and sacred. Sir Anthony's pleasant sun-browned face took on the gravity of hers.

"Ah, I see. I've touched a tender spot. Well, we can't do anything, Miss Secretan. It doesn't pay to interfere with other folks' business. So you are Miss Secretan. It is a pleasure to think that you are here, and I hope for your sake as well as for his own, that you will be able to lick that cub into shape."

He held out a friendly hand. Jane liked his kind, frank face, his alert, soldierly air, and thought what a good thing it was for Mardocks and for the parish that he had come.

"I will talk to Mr. Courtney, and if you can see him another day when he has not been imbibing, I feel sure you will find him a very different man."

"I hope so, I'm sure. I shouldn't like to see the old stock out of the Court Farm. Three hundred years! Dear, dear! He has more right than any of us to the soil. I would sell him the farm if he wished. He ought to own the place his people have tenanted so long. I believe myself that that would be a solution of a lot of the land difficulties. Well, good day."

He went out smiling, good-hearted, simple, honest-minded English gentleman, and Jane was surprised to think how much she had enjoyed her totally unexpected interview. The children were still asleep, and leaving them in strict charge of the house girl, Tabitha Rowan, who really adored them, she got ready for her walk to Midcar. It was not more than two miles by the field paths, and as they were frozen hard she found very good footing and arrived just as Jimmy Bates, now installed in all his glory at the Rectory, was taking in his mistress's tea. Jimmy looked supremely happy. He had transplanted himself whole-heartedly from Colchester, and was charmed with his new home. Hannah, whom he had greatly alarmed at first, now regarded him as an ally and a friend. Peace reigned in the kitchen, and harmony in the parlour. Helen possessed the rare faculty of being able, without effort, to get the best out of those who served her. She had wrought great changes in Midcar Rectory. Each time Jane crossed the threshold she was conscious of it, and sighed a little because of what she had missed. Soft tones, quiet harmonies, books, music, and always flowers or leaves or something pretty to brighten the place, had robbed the Rectory of its barren look.

The six o'clock high tea had been

FREE!! $200.00 IN CASH

AND 1,000 VALUABLE PREMIUMS GIVEN AWAY.

1st Prize, $50.00 in Cash 3rd Prize, $35.00 in Cash
2nd Prize, $40.00 in Cash 4th Prize, $25.00 in Cash
5th to 9th Prizes, each $10.00 in Cash.

Herewith will be found the picture of an old man. Around his head and shoulders are concealed the faces of his seven daughters. Can you find these seven faces? If so, mark the faces with an X. Cut out the picture and send it to us, together with a slip of paper on which you have written the words "I have found the seven faces and marked them."

Write the above words plainly and neatly, as in case of ties, both writing and neatness will be considered in this contest.

Should you not happen to be a neat writer, show this advertisement to some friend of yours who can write plainly and neatly, and have him or her enter this contest in his or her name for you. First, agree with the person who is to do the writing that you are to receive any prize money or prize that may be awarded.

This may take up a little of your time but as there is TWO HUNDRED DOLLARS in cash and One Thousand premiums given away, it is worth your time to take a little trouble over this matter.

Remember, all you have to do is to mark the faces, cut out the picture and write on a separate piece of paper the words, "I have found the seven faces and marked them."

We do not ask You to Spend One Cent of Your Money in order to enter this Contest

Send your answer at once; we will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received over One Thousand Dollars in Cash Prizes from us, and full particulars of a simple condition that must be fulfilled. (This condition does not involve the spending of any of your money.)

Winners of Cash Prizes in our late competitions will not be allowed to enter this Contest.

Below will be found a partial list of the names and addresses of a few persons who have sent in their answers to our contests, together with the amounts they received. All these persons are entirely reliable, as they are well known in their districts. All previous winners of cash prizes are debarred from entering this contest.

Names and Addresses of a few Prize-Winners in Recent Contests

Mrs. W. A. C Orr, 208 Gunnell St., Winnipeg	$50.00	Miss Mary Cochrane, [illegible]	[illegible]
Miss E. Brodeur, 6 Gillespie St., Sherbrooke	50.00	[illegible]	[illegible]
Mr. Louis Quintal [illegible]	[illegible]	[illegible]	[illegible]
Mr. Alphonse D[illegible]	[illegible]	Mr Thos. Blakey, 88 Huntley St., Toronto	[illegible]
Mr J. A. St Pierre, Arthabaska Que	[illegible]	[illegible]	[illegible]
Miss E. McMillan, [illegible]	[illegible]	[illegible]	[illegible]
Miss I. S. Pengelly, [illegible]	[illegible]	[illegible]	[illegible]
Miss H. C. Powell, P.O. Dept., Ottawa, Ont.	40.00	Mr W. C. Masco, 2475 Hutchison St., Montreal	[illegible]
Mrs. Andrew Johnson, [illegible]	[illegible]	[illegible]	[illegible]
Mr. Norman Robinson, [illegible]	[illegible]	[illegible]	[illegible]
Mr Thos Humphries, c/o Ayers & Sons, St [illegible]	[illegible]	[illegible]	[illegible]
Mr. P. A. Ferguson, 223 James Ave., Winnipeg	30.00	[illegible]	[illegible]
Mrs. J. B. Gloutney, [illegible]	[illegible]	[illegible]	[illegible]
Mrs A. Ferguson, [illegible]	[illegible]	[illegible]	[illegible]
Mrs. F. E. Chadwick, [illegible]	[illegible]	[illegible]	[illegible]
Mr R. E. Strange, 300 Rockland Rd St John N B	[illegible]	[illegible]	[illegible]

Address: BOVEL MFG. CO'Y.

DEPT. 92 BOVEL BUILDING MONTREAL, CANADA.

abolished, and at seven a dainty small dinner was served which reminded Secretan of the dinner of the Restaurant Amadee. The study, which had a cold north outlook, had been furnished with drawn underblinds of yellow silk, which created a sunny atmosphere. Helen was sitting there when Jane was shown in.

"Oh, you dear! Did you know how badly I wanted you? Claude is at Bradfield, and will not get back till seven. It is something diocesan, but don't ask me what. I am glad to see you."

She kissed her twice and began opening out her coat.

'Did you walk from the farm? And how is the great hulking creature? I can't think how you can stand him. When are you coming back? Each day when I get up, I say to myself, perhaps Jane will come back to-day."

Jane drew a little quick breath. This love was very precious to her, she had had so little of it in her life.

"Dear, if I had only myself to consider, I should come now, and never go again." She touched Helen's clear pale cheek with her caressing finger, and they both smiled. So perfect was the understanding between them that it was a pure joy for them to be together. The wonder of it was seldom absent from Secretan's mind.

"I forgot about Bradfield, though I knew Claude was going. I think I am rather glad he is away to-day. I feel that I want you to myself; we haven't had a talk for ever so long. How sweet it is in here, how pretty, and how beautiful you look in that pink tea-gown. Who made it?"

"I aid. I had what Hannah called the "framed lady" sent up from Bradfield, and I am going to do all sorts of wonders. I have put it on as a surprise for Claude when he comes home, but I'm very glad to have your verdict. Do you really like it?"

"It's simply sweet. I can't think how your fingers are so clever. Mine plod and sew, but don't achieve anything, only keep the holes from showing. I always feel myself a great awkward person beside you."

Helen laughed aloud.

"Take off your hat so that I may feel you are not going to run off in a minute. So you have left your hair the way I put it! I told Claude I was sure you would take it down the moment you got home. It makes you look years younger."

"It takes me a lot longer time to dress it," said Jane smiling a little. "Sometimes I grudge it."

"You shouldn't grudge anything that makes you look nicer. It's one of the secrets of our power. Of course, you are lost on Tom Courtney, and I shall never, never get used to the idea of you being there. Why, the man isn't even a gentleman! Yes, Jimmy, come in."

Bates laid the table with conspicuous pride. His service was a service of love; his cherubic face wore an expression of absolute contentment. Jane smiled as she watched him finish his task, and then with a small bow retire from the room.

"That boy amuses me. He's so perfect."

"Jimmy?" said Helen with a little smile. "Yes, I think he is a perfect specimen of his kind. The boy has really a sweet disposition, and his adaptability is wonderful. Claude likes him; in fact, I think I am a little jealous of Jimmy's devotion to him. The missus takes only a secondary place."

"Claude has always attracted boys. It is his manliness," said Jane, as she leaned back in her chair, glad to rest and enveloped by the restful influences of the place.

"How do you think Claude is looking, Jane?" inquired Helen, looking at her straightly and at the same moment pausing in her act of filling the cups.

Concrete Sidewalks are Safe, Sightly and Everlasting

LUMBER used in damp places and on wet ground—as, for instance, in walks—has a very short life. It requires almost constant repairing and, in a few years, needs replacing.

Concrete, on the other hand, improves with age, and the very dampness which destroys lumber calls out the best qualities of the cement by making it harder and harder—until neither time nor traffic can affect it.

The best of wooden walks keep getting out of repair, and are a continual menace to life and limb. They are also a frequent source of expensive doctor bills and lost time. Then again, they are likely to eat up the original cost in repairs before they are replaced.

Concrete walks are sightly, everlasting and safe. They cost less to build and need no repairing nor painting.

Write for our *free* book, *"What the Farmer Can Do With Concrete."*

It tells in plain, simple language, how you can save money on farm construction by using cement for Barns, Dairies, Foundations, Fence Posts, Troughs, Feeding Floors, Hitching Posts, Stalls, Silos, Stairs, and so forth. The Book is well illustrated with photographs, plans and diagrams. Fill out the coupon or send a postal *to-day*.

Simply address it to

Canada Cement Co.
Limited
22-32 National Bank Building
Montreal

You may send me a copy of *"What the Farmer Can Do With Concrete."*

Name.....

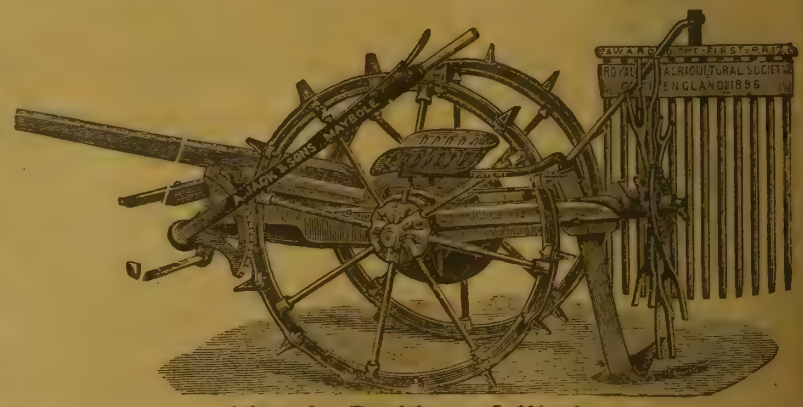
Address.....

The World's Best Potato Digger.

Jack's Royal First Prize New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings.



View in Position of Work.

The New Patent Caledonian Potato Raiser holds the record as the most perfect Potato Raiser in the world. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at LEICESTER, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana (leading Foreign and English Machines competing.)

Write for Catalogue and Price.

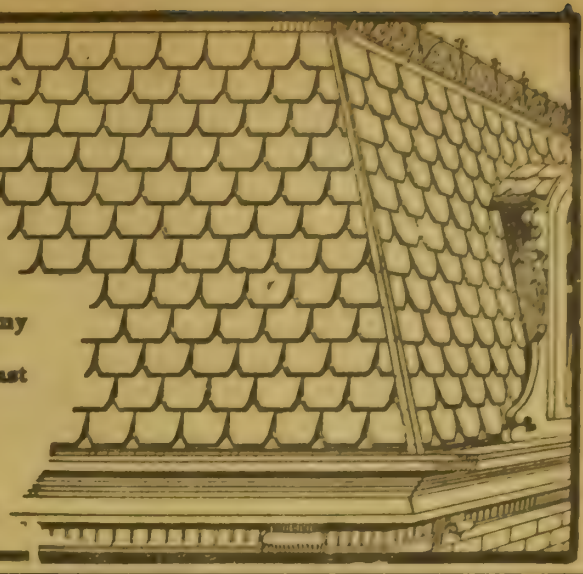
ILLSLEY & HARVEY, *Canadian Agents* **Port Williams, N. S.**

Apple Jelly.

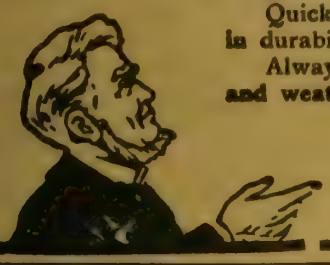
Apple parings, cores, and pieces of imperfect apples make jelly of bright color and fine flavor. Cover with boiling water and cook until tender, drain over night in a jelly bag. Or, if there is more than a bagful, tie a loosely woven cloth over a large jar, so that the cloth will bag enough to hold the fruit but not touch the juice as it drains. Useequal parts of juice and sugar, and cook until a drop will jell when placed on a cold dish. Remove all the skum as it rises. When ready ready to take from the fire, have a hot basin and cloth, the center of the cloth having been dipped into hot water. Drain each batch through this cloth and turn from the basin into hot tumblers. This makes a jelly clear as crystal. Mixed apple and rhubarb juice make good jelly.

A cross husband is about the meanest cross a woman has to bear.

That "EASTLAKE" Steel Shingle of ours



Known as "best for barns" for the past twenty-five years. Now known also as the best roofing for any building, any where.



Quickest to lay—economy in labor; longest to stay—economy in durability.

Always proof in all climates against fire, lightning, rust and weather.

Give us the measurement of any roof you wish to cover. We will send complete estimate of cost.

The METALLIC ROOFING CO., Limited

TORONTO and WINNIPEG

Farm Life the Natural Life.

A desire to "do something better than farming" has led many boys to town to a clerkship and to disillusionment. Things outside of our horizon often seem more desirable than any thing at hand. Our opinions are shaped more than we realize by the feelings—expressed or acted—of those about us. Many boys look upon their farm home as a place to stay till something better turns up. Parents might influence their children by creating an atmosphere of permanence to the boy's home life.

Talk over your plans and hopes with him so he will see where he fits into the scheme of things. Perhaps that will help him to come easily and naturally to your plans. Don't forbid him to go to town to work—that alone would drive some boys away—the opposition merely strengthening their resolves. Perhaps he doesn't understand the real conditions among city workers. With his lack of training he could only hope for a clerkship, factory work or labor of some sort, while it would be a long time before experience and promotions would increase his income to what it could have been on the farm. This, of course, applies to the average country boy without training who tries to make his way unaided among city workers. The average city worker, successful in his line of clerkship or trade, feels that he has done well if he keeps his family housed, clothed and fed and saves a little toward a rainy day.

Almost any farm that is worked with any degree of success does vastly more than that, while the farm worker is no slave to a time clock, or to the nervous strain of "holding his job." With the city worker, every stroke of the hammer is for an employer; on the farm, every stroke of the ax is for himself. If your country worker owns his farm or works on one that will eventually be his, his savings, over and above living expenses and paying for the farm, go towards raising the value of his land by improvement, equipment, careful and conservative cultivation. The average workman in the trades or in clerical positions feels that he has done well if he makes a living for a family and pays for a home worth from $2,000 to $5,000. The farmer works independently and confidently, with no greater labor because it is healthful labor, he accomplishes all the city worker does and pays for property worth four or five times as much; when paid for the property is not only a home but a means of livelihood. Many city workers break down from overwork or nervous strain and the earning capacity which alone feeds and clothes them is gone. Few farmers break down from overwork and if they are sick, the land is still there to provide living expenses. Farm work is often hard for women

VALUE $325.00

MAGNIFICENT PIANO

—AND—

$100.00 in Cash

GIVEN AWAY ABSOLUTELY FREE

FOR CORRECT ANSWERS IN THIS PUZZLE CONTEST.

1st PRIZE.— MAGNIFICENT UPRIGHT PIANO AND STOOL TO MATCH. VALUE $325.00.

Finest action and tone, beautiful hand polished Spanish mahogany case. Fit for the home of a King and the greatest prize ever offered in a contest of this kind. (It is on view any business day from 9 to 5 at our factory.)

2nd Prize	$25.00 cash
3rd Prize	$15.00 cash
4th Prize	$10.00 cash
5th to 9th, 5 Prizes of $5.00 each	$25.00 in cash
and 25 prizes of $1.00 each	$25.00 in cash
TOTAL CASH PRIZES	$100.00

THE PUZZLE.

GEPNINIW ORTONOT
NOTRAELM XFAILAH

The jumbled letters given above represent the names of 4 well-known Canadian Cities. To help you solve them we have underlined the first letter in each name.

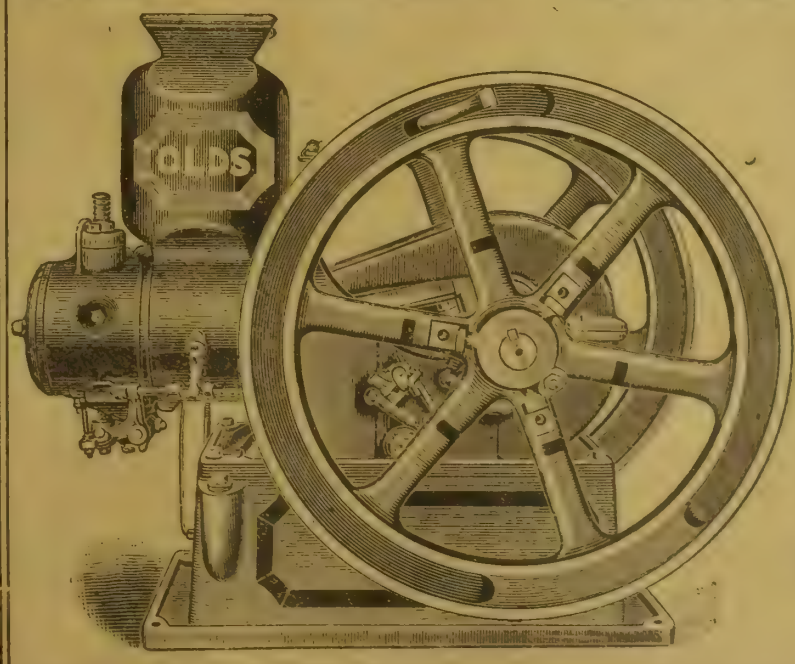
The first is Winnipeg, now guess the rest and send us in your solution of all four names in your very neatest and best handwriting.

CONDITIONS:

1. This contest is absolutely free. No one is asked to spend a cent to enter.
2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in the contest are awarded according to handwriting and general neatness. Be neat and you may win a good prize.
5. Judging will be done by three gentlemen having absolutely no connection with this firm. Their decision is to be accepted as final.
6. There is a simple condition to be fulfilled which we ask of all contestants. As soon as your answer is received we will write advising you if it is correct and telling you of this condition.

Address INTERNATIONAL MANUFACTURING COMPANY, Dept. 90 TORONTO, ONT.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Advertise in the Maritime Farmer for best results.

unless daughters are plenty and willing, but it is only hard as manual work, the nervous force, the motive power of one's life is conserved by the healthful peaceful life. Prison authorities have been experimenting recently with outdoor life as a cure for crime. The healthful work, the good food and the pleasant surroundings have been found an excellent thing. The criminals have given place to honest normal men. If it can cure a criminal surely it can keep a normal man strong and well and happy. It is the reasonable, sensible, comfortable way to live. It is nature's way of providing for the human race. Any normal man can earn his living; a man that knows how can earn ease and comfort and a competence.

Soups and Soup Making.

The richness or quality of soup depends more on a proper choice of ingredients and careful cooking of them than on the quantity of solid matter employed; more on the skill of the cook than on the amount spent.

Soup can be made of anything—fish, flesh, fowl or vegetables. In a household where soup is, as it ought to be, an article of daily food, the ordinary waste is reduced to vanishing point.

Scraps of meat of all kinds, bones, and other odds and ends, can be turned to account in soup-making. Many substances of which we cannot get the benefit by ordinary cooking are in this way made to yield their supply of nourishment, as in the case of gelatin which is contained in bones, and which can only be extracted by slow heat, such as is required to make soup.

Stock, as it is called, is the basis of all soup; but no better foundation can be had than the bones from roast beef or mutton.

Sometimes we put the bones on a gridiron over a clear fire for a few minutes before putting them on to boil, adding any scraps of the cold meat which we may have on hand, and a tablespoonful of rice, or two medium-sized potatoes cut in thin slices.

For the bones from a loin of beef or rib roast allow from 3 pints to 2 quarts of water (cold) and cover closely, boiling three or four hours. Half an hour before dinner remove all the bones and meat, adding boiling water to make the required quantity if it has boiled down. Salt to taste, add a small bunch of celery cut fine, cook 15 to 20 minutes, strain into a warm tureen, and serve as quickly as possible.

The flavor may be varied—a chopped carrot, an onion, or a little browned flour, or a quart of nice ripe tomatoes may be used instead of the celery.

A real vegetable soup may be made by adding two potatoes, an onion, 2 carrots, one quarter of a small cabbage, or a small head of cauliflower, all cut in small pieces, and put in the soup at least three-quarters of an hour before dinner, removing nothing but the bones and scraps of meat.

Three pounds of lean beef or mutton—part of each is better, and the cheapest pieces are good—will answer in place of the roast meat bones.

The bones and pieces from roast meat, especially if there is considerable fat, as in a loin of mutton, may be boiled in sufficient water for the soup, the day before it is to be served, strained and placed where it will cool slowly.

In the morning remove all the fat, and put the broth in a kettle or saucepan with rice or potatoes as in the former recipe; when it boils add salt to taste and any vegetables desired, chopped or cut fine; cook slowly for an hour and a half and serve.

This is a nice foundation for a tomato soup also, using a pint of canned tomatoes, instead of the celery or other vegetables, adding them an hour before the soup is done; strain the same as for celery soup, always using the rice and potatoes to thicken the soup, it being nicer than flour, a little of which, browned, is sometimes added to give flavor.

There are also a few general hints that it is well to keep in mind if you wish to make good soup. Put into the pot a quart of water for every pound of meat. Put the meat into cold water and let it cook very slowly. Skim the soup frequently.

If it is necessary to add water let it be boiling; the addition of cold water will spoil the soup. Keep the lid on as much as possible, for the strength of the soup evaporates with the steam. If there is any soup left, do not throw it away. Pour it into a dish and heat it up next day. Be careful, however, to remove the fat from the top before heating.

VEGETABLE SOUP.

Half a carrot, half a turnip, a small onion, green peas, a cauliflower, and a quart of good mutton broth. Cut the carrot, turnip and onion into dice, and allow them to simmer in mutton broth till tender. Cook a small cauliflower separately, drain it, and divide the flower into pieces; add to the broth, and then stir in a gill of green peas. Sprinkle in a teaspoonful of chopped parsley just before serving, and season well. Small chops of the neck may be cooked and served in the soup if liked.

Stewed Beef Kidney.

With this I sometimes serve rolls of bacon, or grilled tomatoes, or fried potato, as well as the toast. Either goes well with the kidney. Required:

One pound of beef kidney.

Two Spanish onions. One pint of stock.

One ounce of flour.

One ounce of dripping.

One tablespoonful of mushroom ketchup.

Seasoning. Toast.

Cut the kidney into pieces about the size of a small walnut, and be sure to remove any white portions, as these cannot be eaten.

Wash and dry the kidney, roll it in the flour, peel and chop the onion, fry it a light brown in the dripping. Add the kidney, stock, and a little seasoning.

Stir until just on boiling point, then simmer very gently for two hours or till tender.

Add a careful seasoning of salt and pepper, and the ketchup. Serve on a hot dish with sippets of toast round.

Care of the Hands.

A bottle of oxalic acid, kept on a high shelf, out of the way of the little folks, will be found most useful to remove stains gained by preparing vegetables or fruit, and its action may be accelerated by the use of a bit of pumice. After handling onions or fish, wash the hands, then rub them with a mixture of dry mustard and salt before drying them. Burns will leave no scar if they be dusted at once with baking soda—baking powder will do at a pinch—or with powdered charcoal. For scalds, powder with a mixture of bicarbonate of soda and subnitrate of bismuth in equal quantity. Should blisters rise, draw off the water by piercing them at the side, near the outer edge—never on top—with a coarse needle which has first been sterilized by being held in the flame of the gas or the red coals for an instant. The blistered skin will then drop back into place and if protected will act as a shield to the raw surface until a new skin is formed. If moist application be made to a scald or burns, a scar will result.

For slight cuts, apply a mixture of two parts of carbolic acid to one of glycerine, and if the wound be deep

INTERNATIONAL POULTRY FOOD
is a marvellous egg-producer. It often doubles the number of eggs—makes hens lay all winter—and gives you plenty of eggs when they are selling in the cities for 50c. to 60c. a dozen.
HENS LAY RIGHT IF FED RIGHT
The big men in the poultry business—those who are making big money—will tell you that INTERNATIONAL POULTRY FOOD cures Chicken Cholera—saves the little chicks—keeps the fowls strong and vigorous—and is matchless to fatten fowls for the market.
You need it if you want to make money out of your hens. Ask your dealer 25c., 50c. and $1 packages, and the 25c. package gives you a hundred feeds for 12 hens
INTERNATIONAL ROUP CURE is sold on a spot cash guarantee to cure.
International Stock Food Co. Limited
TORONTO, ONT.
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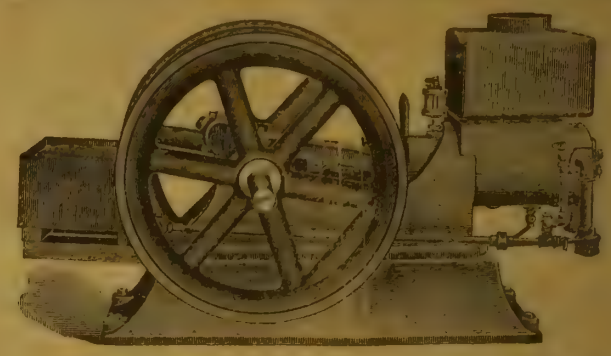


The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Now is the Time to Install Your Evaporator

Don't wait until it is 20 degrees below zero to install a Champion in your sugar camp. You can do a better job now with less trouble. Don't have to pay any sooner.

The Champion is the most profitable Evaporator on the market, and we can prove it. Write for free booklet.

The GRIMM MFG. CO., Limited, 58 Wellington St., MONTREAL, Que.

BOYS—Typewrite your letters, or your home work or make money doing printing for others This wonderful machine will do real typewriting just like a hundred dollar machine Put up in a handsome case with full directions and brass tube of extra ink Given for selling only 25 bottles of the delicious Royal Japanese Perfumes at only 10c. per bottle Six different lovely odors. Everybody buys this perfume and you can surely sell them very quickly We pay all delivery charges on your typewriter.

NATIONAL SALES CO. Dpt. 259 Toronto, Ont.

You Just Pull and Let Go.

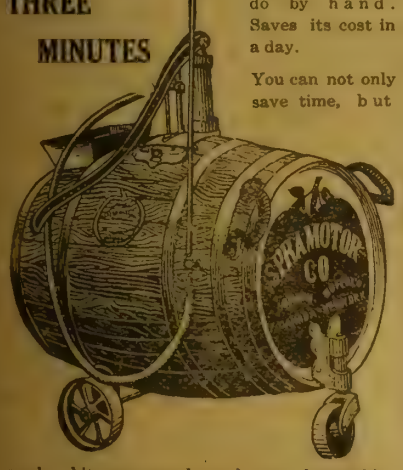
No knots to tie or untie. The SAMSON grip holds the clothes line tight; no props required. A moment's work, and so easy for any woman to put a line up TIGHT or take it down. Every home needs them. Send for sample set 25c. A MONEY MAKER FOR AGENTS.

The Continental Agency, Montreal, Que.

AN HOURS' WORK IN THREE MINUTES

The SPRAMATOR whitewashes in Three Minutes what takes an hour to do by hand. Saves its cost in a day.

You can not only save time, but



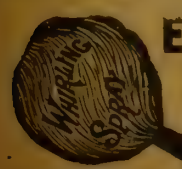
apply whitewase evenly, and more thoroughly than in any other way, driving the paint in every crack and crevice.

It is easily handled and runs about smoothly in any direction. Nothing to get out of order, and no mechanical knowledge required.

10,000 sold in past five years. Forty tons of paint applied by N. Y. C. Ry. to Buffalo stockyards by the SPRAMOTOR method. THEY KNOW! Write for 88 page free booklet today. Paint formula and all directions with machine.

Agents Wanted

W. C. HEARD, 1378 KING ST., LONDON, CANAEA.

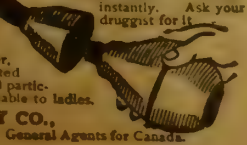


Every Woman

is interested and should know about the wonderful

MARVEL Whirling Spray

The new Vaginal Syringe. Best—Most convenient. It cleanses instantly. Ask your druggist for it



If he cannot supply the MARVEL accept no other, but send stamp for illustrated book—sealed. It gives full particulars and directions invaluable to ladies.

WINDSOR SUPPLY CO., Windsor, Ont. General Agents for Canada.

have a physician draw the edges together with a stitch or two. Do not suffer permanent disfigurement if you can help it, for it is an easy matter to keep a little store of these simple remedies in a medicine cabinet in kitchen or bathroom but it is not so easy to conceal an unsightly scar when one wants pretty white hands to conform with holiday attire.

Cosmetic gloves are excellent for keeping the hands in good condition, or for restoring their appearance if they have been neglected. They may be made from an old pair of well-washed chamois gloves or a well-cleaned pair of kid ones, the tips of the fingers being cut off and holes snipped in the palms and backs. They may be coated on the inside with some good cold cream or clarified mutton tallow, or the hands may be anointed with the grease and the gloves drawn on. A good bleaching medium to be used in connection with the gloves is made of two drams of sweet almond oil, one dram each of glycerine and rice flour, the yolk of one fresh egg, one ounce of rose water and thirty-six drops of simple tincture of benzoin. The egg is well beaten then the other ingredients are beaten into it, the rice flour being added last of all. Almost, if not quite, as efficacious is the clarified mutton tallow, which forms the basis of nearly all first-class cold creams. To prepare it, cover raw tallow with cold water and bring to a boil, then simmer until the fat is melted. Let stand until perfectly cold, when the clean, pure cake may be lifted from the top, melted again in a china bowl set over boiling water, and any preferred essential oil beaten into it, after which it is strained through cheesecloth. The grease not only keeps the nails from cracking and whitens and softens the hands, but does away with hangnails.

Always push back the cuticle from the finger nails, never cut it.

Plenty of Water.

You are desirous of having a clear complexion? It is not enough that you simply treat yourself externally. The complexion is the thermometer that tells by its sallowness that the liver is out of order; by the red spots upon it that the stomach needs attention; and by its dull, heavy look that the kidneys demand treatment. Water externally and internally makes woman good to look upon. Taken internally, it flushes several important organs and acts upon them as a rinser, carrying away all the poisonous matter that has so rapidly accumulated. Where your digestion is out of order a simple medicine recommended by a Southern mammy and found efficacious is a glass of hot water—not tepid, for that may cause sickness—in which pinch of fine table salt. It is possible that, just at first, when taken before breakfast, you may not care for this medicinal drink, and can only take one half of it; but you will get so that a gobletful of it is looked forward to with pleasure, while its effect is shown by the smoothness of the skin and the brightness of the eyes. If you find yourself growing very tired take a tepid bath into which plenty of rock salt has been thrown, and rub yourself dry with a coarse towel.

Reasons for Pruning.

To give proper form to the tree.

To remove all dead branches and limbs that cross each other.

To thin out the top, so that the tree can be readily sprayed, and the fruit easily picked.

Prune when the tree is dormant to increase wood growth and thus renovate the tree by inducing it to bud and new wood growth.

Great Clearance Sale
of used
Pianos, Organs and Gramophones

It's our Semi-Annual Clearance Sale of used Musical Instruments. Every Instrument has been thoroughly gone over in our own work shop, and has been put in first-class condition, cleaned and polished. These sales afford music lovers an unusual chance of securing a good Instrument at an extremely low price.

Here are some of the Bargains :

1 Columbia Gramophone,	Former Price	-	-	$ 35	now	$ 15
1 Edison Phonograph	" "	-	-	35	"	15
1 Drop Head Sewing Machine	" "	-	-	45	"	15
1 Gramophone	" "	-	-	45	"	20
1 Bell Church Organ	" "	-	-	150	"	60
1 Karn 5 Octave Organ	" "	-	-	125	"	75
1 " 6 " "	" "	-	-	160	"	90
1 Uxbridge Piano	" "	-	-	300	"	150
1 Shirmer Piano	" "	-	-	375	"	200
1 Karn Piano	" "	-	-	400	"	250
1 J. A. McDonald Piano	" "	-	-	375	"	250
1 Morris Piano	" "	-	-	400	"	250
1 Mason & Risch Piano	" "	-	-	450	"	350

Full particulars will be given upon application. Arrangements can be made to pay for them on very easy terms. Any of these items will be sent anywhere on approval.

Write today and make sure of getting one of these bargains.

J. A. McDonald Piano and Music Co.
Eastern Canada's GREATEST MUSIC HOUSE
46 Barrington Street, HALIFAX, N. S.

LUMBERSOLE BOOTS

Made of fine Grain Kip uppers lined with thick brown felt, as the name suggests the soles are made of wood, which keeps the feet dry and warm. FROST PROOF AND WATERPROOF.

For Farmers, Drivers, Fishermen, Builders, Dairymen, Sailors and all out door workmen, they are worth four times the price.

No. 2C. Men's 2 Buckle Lumbersole, Brown Felt Lining, sizes 5to 11, at . $1.75

No. 34 1-2C. Laced with one Buckle, unlined, Lumbersole, cut from selected Grain Kip skins $1.98

No. 12C Men's Grain Kip Laced Lumbersole Boot, Whith Felt Lining, sizes 5 to 11, at $2.25

No. 14C. Men's Leg Boots, Lumbersole, Brown Felt Lining. We guarantee all feet warm and dry with our Lumbersole Boots no matter how low the temperature. A great boot for deep snow $2.95

No. 4C Men's Grain Kip 3 Buckle, high cut Lumbersole, Brown felt lining, size 5 to 11, at $2.15

Shoe Packs.

Made from best quality Oil Tanned Beef Hides, Ballows Tongue.

No. 233 Men's, sizes 6 to 12, $1.75
No. 234 Boy's sizes 1 to 5 $1.35
No. 235 Youth's, sizes 12, 13, 1 $1.25
No. 236 Lads', sizes 8, 9, 10 98c

Sent to any address in Canada. Ask for our Catalogue of Bargains in Shoes and Clothing, and Free Premium Lists.

C. B. PIDGEON, MAIN STREET ST. JOHN, N. B.

Curing Meat.

"For probably ten years we have been using a very satisfactory method of curing hams and shoulders, which can be used for sides as well," writes R. E. Rogers. "Until we discovered this method we went through the time-honored method of packing in a barrel of brine good, substantial stuff, which was strong enough for self-support. Now the brine barrel is dethroned at this house.

"We all have our regular ways of butchering, killing hogs, cleaning, handling, etc., which are really not so important, since the results of poor methods here last only till the butchering is done, while improper curing is evident as long as the meat lasts.

"As soon as the hams, shoulders and side pieces are cut up and cool we go at the sugar cure. This usually is two or three days after killing, owing to getting sausage and lard taken care of, and necessary other work and cleaning up after butchering is out of the way.

"The Sugar Cure.—Mix together 1 gallon clean salt, about 1 pint of brown sugar, and not over 1-2 cup of pepper. We use no saltpeter. Thoroughly mix these ingredients together, and apply by rubbing in by hand. Rub one-half of this mixture into every part of the meat possible, and rind side as well as the other parts where there is no rind. Better have the sugar, salt, and pepper in a dish or pan large enough to hold one shoulder or a ham at one time, and so put the meat into the sugar cure rather than the sugar cure on to the meat.

"After you have rubbed it in thoroughly place the meat in a clean, cool place, and leave for a week or more before applying the second or the last amount. It is better not to allow the hams and shoulders to freeze before applying this mixture. Some of our neighbors tried this way of curing except that they added saltpeter, and they did not like it. The reason, I believe, was due to the saltpeter, for since they have used the mixture as given above they like it, and find it a great advantage over the brine method. It takes some of us a long time to learn; for 20 years the brine barrel was as much a part of our housekeeping equipment as was a coal oil barrel.

"After letting the meat lie thus seasoning for several weeks, depending on whether frozen much or not, it is transferred to the smoke house, where its final curing is given."

Hygiene of the Mouth.

A great many of the bacteria that cause disease enter the body through the mouth. Germs are always to be found upon the gums. Those peculiar to the contagious diseases have been repeatedly discovered within the mouths and throats of healthy persons. Some of them persist for months in individuals who are not susceptible to infection; but if, from exposure, physical exhaustion, or other cause susceptibility is developed, the germs promptly produce illness.

There is also a group of diseases which affect only the mouth. The most dangerous of these are known as "ulcerative stomatitis" and "noma." The former generally begins at the junction of the lower gum and the teeth, and may destroy the tissues down to the bone. It is highly contagious. Noma begins on the inner surface of the cheek,and causes extensive destruction. Its progress is so rapid that it sometimes terminates fatally within a few days unless checked by vigorous treatment. It attacks delicate children or those who are recovering from an acute disease, particularly measles or diphtheria.

Fortunately it is comparatively rare, but the possibility of its occurrence indicates the importance of frequent cleansing of the mouth during illness.

The less serious class of mouth diseases includes several which, although not dangerous to life, are painful and may prove injurious, especially to children, by interfering with mastication and impairing nutrition. The simplest of them is characterised only by redness, with perhaps a few small ulcers on the tongue or lips. It often results from neglect of the teeth or the habit of introducing into the mouth such improper substances as pieces of wood or rubber, and in older persons from the use of tobacco. Although it is generally of short duration, it is sometimes followed by other more serious affections. The contagious mouth diseases are often communicated from child to child by the fingers or through the exchange of toys and pencils, or by the eating of fruit and confections in common.

Decay of the teeth is due to the action of bacteria which thrive upon the remnants of food that adhere to the gums and teeth after every meal unless removed with the brush.

The infectious diseases cannot be prevented with any degree of certainty solely by attention to the mouth, but those of a local nature rarely attack a mucous membrane that has received proper care.

The Man of Twenty-one.

To-day you are twenty-one. If life means anything to you, no doubt you feel you must shoulder greater responsibilities than ever before. You go forth now to make your way in the world, to rub elbows with your fellow men and to stand or fall in the business world.

You must choose your own place in life. By nature you are no doubt fitted for some special line of work, and you constantly find your inner nature calling you to enter upon its duties. Select the position in life for which you are best fitted and in the pursuit of which you will take pride and pleasure.

When your life's work is chosen and you have entered it, make it a rule to be perfectly square in all your dealings with mankind. "Honesty is the best policy" may be an old adage but it is nevertheless a true one.

Make up your mind to live a perfectly sober life. Intoxicants have unfitted thousands of men for the business life and finally become their utter ruin. It may sometimes be difficult to refuse when a very dear friend urges you to indulge, but it will pay you in dollars and cents as well as in manhood to resist.

As you no doubt come in touch with many young people, you must choose your associates. Let them be pure and high-minded. From these young people you will no doubt choose the girl who is to share life's joys and sorrows with you. Whatever you do, never trifle with a girl's affections. When you pay marked attention to a young lady, she has a right to think you want to be more than a mere friend. Do not turn from her to another "just for fun," or "to make her jealous." You will regret it when you are settled in life, whether marry her or the other girl, however happy your life may be.

Health by Alphabet.

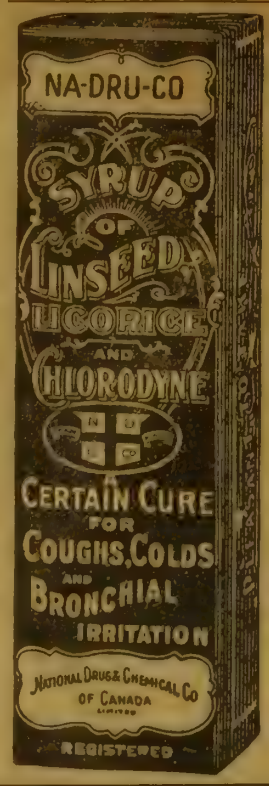
Some calm and collected person reminds us every little while, in the midst of a world of doctors' patients and devotees of health fads, that many of us have, like Liza, "only ourselves to blame" for our troubles. "How do you do it?" we ask hopefully of some ruddy individual known "never to have had a day's sickness" or such amazing record; upon which come dejecting references to ice-cold tubs, or some comfortless kind of meals. Here is something the ordinary woman may have more temptation to adopt, as there seem no such inhuman practices suggested—a "daily health alphabet," compiled bt The New Idea:

Abstain from intoxicating liquors.
Breathe good air.
Consume no more food than the body requires.
Drink pure water.
Exercise daily.
Find a congenial occupation.
Give the body frequent baths.
Have regular habits.
Insure good digestion by proper mastication.
Justify right living by living right.
Keep your head cool and your feet warm.
Learn to control your passions.
Make definite hours of sleep.
Never bolt your food.
Over-exercise is as bad as under-exercise.
Preserve an even temperament.
Question the benefit of too much medicine.
Remember, "an ounce of prevention is worth a pound of cure."
Sacrifice money, not health.
Temperance in all things.
Under no conditions allow the teeth to decay.
Vanish superstition.
Worry not at all.
X-tend the teachings of this alphabet to others.
Yield not to discouragement.
Zealously labor in the cause of health and gain everlasting reward.—Lorgnette.

What is a Lady?

A little while ago, an English paper offered a prize for the best definition of a lady. This is the answer that took the prize:

"To be a lady means, rightly, to be a gentlewoman who shows by her every word and action a sweet and gentle dignity, with a gracious charm of manner; a woman whose heart is pure and true, who is tender toward all suffering, who sympathizes with those in trouble and is ever ready to give that which costs her some effort and self-denial. A lady thinks no work derogatory, and no one is deemed too low to receive courtesy and kindness. She is pure and good in every detail of life, a true friend, and a 'ministering angel' in sorrow and in sickness."


NA-DRU-CO
SYRUP OF LINSEED LICORICE AND CHLORODYNE
CERTAIN CURE FOR COUGHS, COLDS AND BRONCHIAL IRRITATION
NATIONAL DRUG & CHEMICAL CO OF CANADA
REGISTERED

THE SAFE COUGH SYRUP.

Because coughs and colds are common property, and cough medicines are numerous and cheap, many people dose themselves with stuff which the family physician would justly and unsparingly condemn.

NA-DRU-CO Syrup of Linseed, Licorice and Chlorodyne

on the other hand, is a remedy which is compounded by expert chemists and approved by physicians. We will gladly send to your physician or druggist, on request, a list of its ingredients.

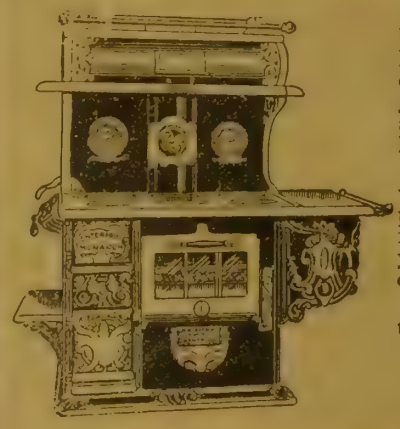
Na-Dru-Co Syrup of Linseed, Licorice and Chlorodyne gives immediate relief in cases of coughs, colds, bronchitis, loss of voice, pains in the chest, or any similar throat or lung troubles. Get a 25c. or 50c. bottle as a safeguard for this winter.

National Drug and Chemical Co. of Canada. Limited. 112

To Make the Farm Kitchen Comfortable

for the winter as far as heat is concerned, and comfortable also in the sense that there will be no friction on account of badly cooked meals, you should purchase an

Enterprise Monarch Steel Range



With it's heavy castings, large fire box for wood burning, improved labor saving devices and small fuel consumption for the work done, it is just the range every farmer as well as city man should install in his home.

Note the extra large reservoir which heats water to the boiling point in double quick time, so that for lots of hot water and a sure oven you can bank on the MONARCH every time.

Write us for circular giving illustrations and full particulars of

"The Range for Those Who Want the Best."

The Enterprise Foundry Co., Manufacturers. Sackville, N. B.

Compare the "BISSELL" with other disks

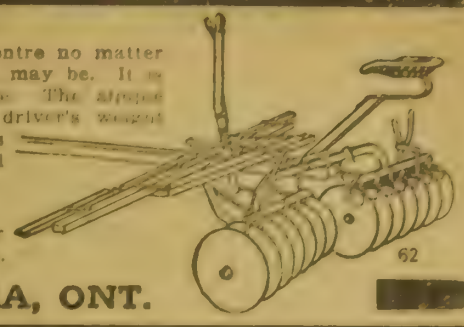
Thousands of Canadian Farmers have tested the "Bissell" Disk Harrow in the same field with other makes and found that the "Bissell" HAS THE GREATEST CAPACITY.

The plates on the "Bissell" Harrow are the correct shape. They cut, turn and pulverize the soil where others only scrape the ground and set it on edge. The "Bissell" does clean work where others make a poor job of it.

The "Bissell" Scrapers meet the plates chisel fashion and keep the plates clean. Movable Clod Irons—an exclusive feature — keep the space between the plates clear.

The "Bissell" stays RIGHT DOWN TO ITS WORK. It won't bind, buckle or hump in the centre no matter how stiff or hard the soil may be. It is built to stand hard usage. The simple method of balancing the driver's weight removes neck weight. It is the Harrow you should know more about.

Write to Dept. M for catalogue with description.



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T. E. BISSELL CO., LTD., ELORA, ONT.

THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be removed with

ABSORBINE

also any Bunch or Swelling. No blister, no hair gone, and horse kept at work. $2 per bottle, delivered. Book 3 E free.

ABSORBINE, Jr., liniment for mankind. Reduces Goitre, Tumors, Wens, Painful, Knotted Varicose Veins, Ulcers. $1.00 and $2.00 a bottle at dealers or delivered. Book with testimonials free. W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca

MUMFORD BROS.

Produce Commission Merchants

MUMFORD'S BUILDING, ARGYLE ST.

Halifax, N. S.

Personal attention given to sales of Butter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.

TELEPHONE 1905.

FURS

Trappers, Hunters and Dealers in any kind of Raw Furs, cannot afford to dispose of their collections without first obtaining our quotations, which we cheerfully furnish upon request, we specialize in the following:—RIGHT PRICES. LIBERAL ASSORTMENT. A remittance forwarded same day goods received, express and mail charges on shipments paid by us, no shipment too large or too small. Canada's Largest Fur Operator "Thre's a Reason" your business and correspondence solicited.

John Hallam - Toronto

HUNTERS & TRAPPERS

We are the largest buyers of raw furs in Canada and we pay the highest cash prices. Write at once for price list and other particulars.

A. & E. PIERCE & CO.

500 St. Paul St., (cor. St. Peter) MONTREAL P.Q.

Minard's Liniment Co., Limited.

Gentlemen,—Last winter I received great benefit from the use of MINARD'S LINIMENT in a severe attack of LaGrippe, and I have frequently proved it to be very effective in cases of Inflammation.

Yours,
W. A. Hutchinson

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

FLORICULTURE.

N. W. A., St. Stephen, N. B., wishes to know: What ferns would be the most suitable for the centre of a dining room table? There is no gas in the house and hot water is used for heating. What size plants should be purchased and how many for a pan eight inches across?

Ans.—Use Pteria Tumula or P. Magnifica for fine ferns, Whitmani or Boston for coarse foliage. The number required depends on size of stock purchased. I like to use two and one-half inch pot plants putting four plants to a pot. This arrangement makes a nice looking pan from the start and leaves room for steady growth. A ball of roots of this size will go into any ordinary jardiniere without tearing the roots apart as one often has to do with a four or five inch pot plant. After planting the ferns they should be thoroughly soaked before placing on the table. Never allow the soil to become dry and spray the foliage, at least, twice a week. Do not allow the steam from hot dishes to come in contact with the foliage.

A Flower Lover, St. John, writes: Would you please tell me how to grow a pot of Spirea for Easter? I have a lot of the common sort growing in the garden. It blooms every Spring. Would their roots answer for pot planting? Is it too late to pot a few roots now being they are frozen?

Ans.—The garden Spirea makes a very pretty plant and should be potted at once. Dig up the amount of roots you want and thaw them out so they will go in seven inch pots. Then place the pots in a cool room that is well lighted but without direct sunshine. When the sprouts are about two inches high, water thoroughly and place the pots in a warm well lighted position. Such plants, if carefully watered, should bloom at Easter. Spray the foliage occasionally to keep off the red spider. See that the drainage is good and never allow the roots to dry out.

Speaking of bulbs for winter flowering, what can be obtained to give so much fragrant bloom during the winter months with so little trouble as the planting of Roman Hyacinths, Paper White Narcissus, Freesias, Dutch Hyacinths and Golden Spur Narcissus in the order named? These plants will give a succession of bloom from December until March, with very little trouble or expense.

Now is the time to cover hardy perennials like Phlox, Paeonies and Iris. These plants should be transplanted early enough, so they can get new roots before the ground closed. Your tubers and bulbs should be put in boxes or barrels and set away in a cool dry cellar where they will not freeze or dry out. Keep them as dry as possible so they will not rot.

I Present to You a "Health Belt Man"

He is 55 Years "Young"

Yes, 55 years young; not 55 old for My Health Belt poured vitality into his blood, nerves and tissues until

HIS VIGOR WAS RESTORED

My marvelous HEALTH BELT is a Wizard Worker, a mechanical self-treatment of the highest therapeutic value. It stands by you and never abandons its task until you are brought back to a state of vigorous Manhood, without an ache, pain or weakness. No drugs, no dieting, no restrictions of any sort, excepting that all dissipation must cease. Worn during the time you are sleeping, it opens its flood gates and drives a great, soft, warm stream of electric-vitality into your blood, nerve and weakened organs throughout the entire night; you sleep better for its use; it cures forever the weakness in your back; it seeks out and expels from your system all rheumatic pains. The electro-suspensory attachment is there for a purpose; it is the strong feature of my Health Belt, and delivers the electro-vitality to the parts most needing it. Courage, ambition

and a new view of life, with full self confidence, surely result. It makes you young and keeps you young, with the fire and vigor of the biggest, fullest blooded man you ever saw. The "HEALTH BELT MAN" cannot grow old, for he knows the secret of perpetual youth. It will place you in the "feeling fine class." "I am a man again, thanks to your wonder-working Health Belt. Use my name as you see fit." So writes C. L. Snell, of Middleport, N. Y. So have said thousands before him.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it does not do the work.

These Wonder Books are FREE

Call or Write for Them To-day

Fill in the coupon and let me get these wonder Health Books into your hands. They are sent free, sealed, by mail, and give certain health and natural facts which every man (young, middle aged or old) should have. They fully describe my Health Belt, and are beautifully illustrated. I have known 100,000 men who sought my aid—I should know you.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs—Please forward me your books, as advertised, free.

NAME . . . . . .

ADDRESS . . . . . .

These Mighty Wheels are Tried and True

Thousands of users testify to the superiority of T-K Wide Tire Steel Wheels. They have four times the strength and durability of ordinary wheels—defy the worst roads, rocky, sandy, hilly or muddy, and lighten the draft on horses from 25 to 50 per cent.

T-K Wide Tire, Steel Wheels and Handy Farm Wagons

Our wagons are designed especially to meet the demands of farmers for a wagon to do all kinds of heavy work on the road and around the farm. They are built low for ease of loading and unloading, and will roll over the grouud with the heaviest load without tiring the horses

Write for descriptive catalogue elling how T-K vehicles and wheels will earn more money for you.

Tudhope-Knox Co., Limited, Orillia, Ontario.

Elegant New Buliding.

SUPERIOR EQUIPMENT,
THE BEST COURSES OF TRAINING.
STRONG STAFF OF SPECIALLY TRAINED TEACHERS.

Result. Public appreciation as shown by the fact that our fall classes are far larger than ever before in our 44 years' history.

Send to-day for catalogue.

S. KERR

Principal.

The Course Given at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

is just what every

PROGRESSIVE YOUNG FARMER

needs

Send for Our Catalogue. Address

W. J. OSBORNE - Principal, Fredericton, N. B.

THE ONTARIO BUSINESS COLLEGE,

BELLEVILLE, ONT.

Students from the Maritime Provinces are constantly in attendance.

For catalogue (44th YEAR) containing full information, write to

PRINCIPAL J. W. Johnson, F. C. A.,

BELLEVILLE. ONT.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont. will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child. the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Storage of Damp Grain.

In sections of the country where grain is in the shock, and has become wet from rains and threshing is done from the field, no doubt much of the grain will go into the bins very damp. The farmer as well as the thresher is anxious to conclude his job as soon as possible, hence the work is often pushed regardless of damp grain.

In many localities where the threshing crew is composed very largely of men from a distance, they become restless and it is a somewhat difficult matter to keep them when they cannot work more than two or three days out of each week because of wet weather. In many instances during the threshing season the machines have been deserted by their crews and the men returned to their homes because of continued rains which kept them idle for days and weeks.

It is a serious mistake to thresh grain when wet or even damp, because the proposition of making it marketable is always expensive and is frequently the cause of serious loss. The farmer who is compelled from any cause to thresh his grain when wet should lose no time in taking immediate care of the same, otherwise it may damage or spoil before he is aware of it.

A few dry bricks thrown into the grain as it is put into the bins will absorb large quantities of moisture. Sticks of very dry stove wood will answer the same purpose. A dry cedar post or sticks of cordwood from poplar or pine trees will absorb their weight in moisture from a bin of damp grain. This has been thoroughly demonstrated on several occasions when damp or wet grain was being stored. Burlap or jute sacks filled with dry chaff when buried in a bin of damp grain will absorb moisture readily and also provide space for air in the same.

The simple and inexpensive methods of protecting wet grains, such as I have mentioned above, are practical and are much more desirable than shoveling it over and over day after day as many farmers have done in order to keep it from heating.

Grain that has been allowed to get warm or hot in the stack or bin is worthless for feed. Musty wheat is no good for flour and should not be sold or used for that purpose.—W. H. Underwood.

Free Interchange of Standard-Breds.

The interchange of breeding stock between Canadian and American breeders of trotters is facilitated by a government order providing for the free importation of Standard-breds from Canada for breeding purposes. The United States Department of Agriculture has adopted a rule recognizing the Canadian National Records for Standard-bred horses, subject to the same provisions as prescribed for books of record across the seas. It is stipulated that no horse registered in the Canadian records for Standard-bred horses shall be certified by our Secretary of Agriculture as pure-bred, except those wnicn trace in all crosses to registered horses in the United States, where the breed originated.—Breeders' Gazette.

Agricultural Society Work in Newfoundland.

Editor Maritime Farmer:—

The St. Johns' Agricultural Society is "up and doing," importing and supplying to farmers Cattle Feeds, Fertilizers, Seeds, and Machinery, of the best guaranteed quality obtainable in Canada, at greatly reduced prices; and new lambs, calves, swine, and other animals of pedigree stock for registration in the countryf

Its efforts are also being directed towards the advancement of the

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PURITY FLOUR is unlike any other brand of flour. No two milling companies follow exactly the same process of milling. In fact, no two different brands of flour in the world are exactly alike in quality.

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Use PURITY FLOUR for your next batch of bread. Count the loaves. You'll find you have made "MORE BREAD AND BETTER BREAD" from PURITY than when you've used an equal weight of weaker and cheaper flour.

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IMAGINE, if you can, how much whiter, and more toothsome, and more nutritious, the bread made from such a HIGH-GRADE flour must be.

And can you imagine yourself enjoying the flaky pie-crust and the light, delicate cake? —your reward for using PURITY flour

When making pastry, please remember to add more shortening than required with ordinary flour—for on account of its extra strength, PURITY FLOUR requires more shortening for best pastry-results

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Lumber used by Agricultural Implement and Vehicle Manufacturers in Canada, 1910.

Statistics of the lumber used have been received from 162 companies, consisting of the Agricultural Implement and Vehicle Manufacturers of Canada in six provinces, by the Forestry Branch of the Department of the Interior. 76,474,000 feet of lumber were used worth $2,513,265, or an average cost of $32.86 per thousand. Ontario used nearly 90 per cent. of the total for the Dominion; Quebec purchased 6 per cent.; Manitoba 4 per cent. and Nova Scotia, New Brunswick and Prince Edward Island used very small amounts. Woods used in these industries require strength and durability which is shown by the large amount of Maple, Elm, Oak, Birch and Hickory that were used. Of the native woods, cherry was the most expensive at $104.00 per thousand, and Ironwood the cheapest at $15.00 per thousand. Mahogany at $120.00 per thousand, was the most expensive of imported woods.

The species of woods having the technical qualities required by these industries at present grow only in small quantities in the agricultural and farming districts of Canada. For this reason the supply is rapidly becoming diminished so that unless steps are taken to reforest or conserve the production, we must depend more and more for our supply, on the United States. The fact that the woods necessary for the proper building of agricultural implements cannot be secured in any quantity in Canada tends to increase the cost of manufacturing in Canada.

One Line Pulling.

(Continued from page 154).

your whip upon the other side," "Take off the blinds," Even up the bridle—one cheek piece is too high," "Your over check hurts the top of his head," "Examine his eye—there is some defect in vision," "Get after the windows in the barn and don't let him suffer from light in his eye when standing," "Don't hitch one side to the house when you tie up—change him round occasionally." These are a few of the many good hints that I got from the doctors, and I am free to say that I learned much from the advice so kindly given.

Old "fox hunter" had two very sharp molars. The edges kept his cheek very sore. I was ashamed of myself when I looked through the speculum at that poor bruised cheek. To be sure, I had let a so-called "floater" float them some time before, but I had neglected the duty of being present and looking after them myself.—Dr. R. H. Wood.

Canada's Lumber Production—Softwoods.

Interesting statistical comparisons may be made from the 1910 lumber report prepared by the Dominion Forestry Department. Of the twenty-six native species of wood which together were cut in 1910 to the extent of four billion, nine hundred million board feet worth over seventy-seven million dollars, the first nine were coniferous or softwoods. Spruce was the most important, alone forming over one-quarter of the total cut. Spruce and white pine together formed barely one half of the 1910 cut, while in the year previous, these two species made up nearly three fifths of the total. This decrease in proportion is due not to a smaller cut of the two species, but to a very great increase in the amount of Douglas fir, hemlock, cedar and yellow pine produced in British Columbia. One-quarter of the 1909 cut was formed of these four species, while in 1910 the total cut of the four was increased by seventy percent.

White pine lumber is undergoing a gradual evolution in its importance to the lumber industry. Up to three years ago, white pine stood at the top of the list when it was supplanted by spruce, although the actual cut of the former had not decreased. The prediction of last year that white pine had nearly reached its maximum cut has proven true this year, the 1909 cut being decreased by four percent., or forty-two million feet. Yellow pine, increased in its cut nearly six hundred percent. in British Columbia during one year. This increase of over one hundred and fifty million feet was sufficient to raise it from fourteenth place in the species table to sixth place in importance, thus surpassing in one year, red pine, larch, balsam, and the four most important hardwoods.

Building Big Fertilizer Plant at St. Stephen.

To meet the increasing demand from the farmers and fruit growers of New Brunswick, Nova Scotia, and Quebec for high-grade commercial fertilizers, a 10,000-ton plant is being completed by U. S. interests at St. Stephen, N. B.

In planning the factory provision has been made for increasing its capacity to 20,000 tons annually. The plant is 90 by 252 feet, equipped with up-to-date machinery for the manufacture of fertilizers according to the most advanced ideas. A cooperage will also be operated by the company

Located at tide-water, the St Stephen plant will have the advantage of receiving raw materials by direct shipment—potash from Germany nitrates from Chili, and acid phosphate from southern States ports. Little or none of the ingredients of fertilizers except fish-scrap are produced in Canada.

As a distributing center St. Stephen has the advantage of location on the lines of the Canadian Pacific, and of water transportation to many points. Fertilizers from the States pay a duty on the average of $3.30 per ton, and must be ordered far in advance with great uncertainty as to deliveries and the condition in which the goods will be received. A thoroughly modern plant of large capacity, favorably located, will give the fertilizer consumers of this district far better service than was possible heretofore.

Preserving Fruit for Exhibition.

It is often desirable to preserve fruit in the natural state so that it may be kept for several months, retaining color and shape. The use of formaldehyde is one of the best methods of preserving fruits for exhibition at state and country fairs which usually come several weeks after fruit is ripe. In the first place the fruit should be ripe and well colored when gathered, but should not be soft or have defective spots. For apples, peaches and pears, take 95 parts pure cistern water and add to this five parts of formaldehyde; stir this a little and do not leave it exposed since formaldehyde evaporates quickly when exposed to the air. Place the fruit in a jar and pour the preparation over it and seal tight. For grapes use 98 parts water and two parts formaldehyde. These formulas will usually give satisfaction, but when the fruit is exceedingly acid a teaspoonful of soda to a quart jar will aid in holding the color.

Formaldehyde is known commercially as 40 per cent. solution of formalin and may be so ordered from any druggist or supply house through the local dealer. Exhibition jars are not so readily obtainable, but the common Mason fruit jar will answer the purpose very well.—H. F. Grinstead.

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Do You Shave Yourself?

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I want to send you a complete 10 days treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost, my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really cures all women's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H 3097 • WINDSOR, ONT.

How to Handle Damp Sheaves.

Taking up the subject of "Seed Germination," and treating more particularly, the handling of grain in in the stook, Mr. J. Ball, of Rexboro Alberta, in the issue of The Homestead for March 1st, last, gives some very timely suggestions that are well worthy of reproduction and will apply to the handling of damp sheaves. Mr. Ball says in part:

No matter if the stooks do not contain more than ten or twelve sheaves if they are simply reared up and left unhooded, they are placed in a position in which they will take considerable harm from a fall of rain. Of course, it is better not to throw a large number of sheaves together into one stook; and then again, stooks should never be built in a circular form, as the sheaves in the centre, when once thoroughly damped, are in such a position that they dry out very slowly indeed.

Let us for a few moments consider what will take place where grain is simply left reared up, with the heads unprotected, should a heavy fall of rain take place. The heads being tightly packed together in the sheaf, the glumes or chaffs act as a cup, holding the water to the grain, which is thus literally soaked, and largely owing to the length of time it remains damp, it becomes very much discolored. In looking through samples of grain, harvested here, these discolored kernels can readily be distinguished from the rest.

Having for a good many years been accustomed to harvesting grain in a wet climate, I have found that the only way to secure a bright sample, free from discoloration, is to proceed as follows. Rear up eight sheaves in a double row—four at a side—giving the sheaves sufficient spar or slope that they will prop or support each other. This double row of sheaves should be so placed that the ends point to the north-west and south-east, as we generally get our strongest winds from the north-west. The stooks being thus placed end to the wind, not only offer the least resistance to the on-rush of the blast, but the wind rushes through the aperature formed by the straddling of the sheaves, and thus dries out the grain both on the inside and outside of the stook.

Having got the eight standing sheaves placed in position, the workman should then place a sheaf across his right thigh in such a position that the heads are before him and the butt or stubble end under his right arm. He then opens out the sheaf, right up to the band, in such a way as to cause the heads to describe a half-circle; and lifting this on to the southeast end of the standing sheaves, he fixes it firmly on, butt-end up, and with the heads hanging down all around so as to thatch four of the eight standing sheaves. He then opens out another sheaf in like manner, placing it so as to thatch the other four standing sheaves, and the operation is finished by giving the two butt-ends of the hooding sheaves, which are sticking up, a smart whack with both arms, so as to drive them close together. The hooding-sheaf at the southeast end should always be placed in position first, as, should a strong north-west wind blow, the north-westerly hooding sheaf, being placed in position last, will help it to maintain its position.

Stooks built in this manner will defy the heaviest fall of rain, as the hooding sheaves, acting like thatch will shoot off the water. Indeed the only grain that comes in contact with the rain, at all, is the grain in the two hooding sheaves; and, as these are inverted, the glumes or chaffs protect the grain, shooting off the water instead of holding it like a cup, as they would have done with the heads unprotected.

AFTER DRUGS FAIL---
I'LL CURE YOU!

Go try them all; drugs, dope, patent nostrums and doctor's concoctions, and after you have found by experience that none of them will help you, then come to me and I'll cure you. Nature's way.

I've quit asking people to come to me first; to do so would save them many a dollar and lots of useless suffering, but experience is the best teacher, and the only thing that will really convince a skeptical mind.

I used to prescribe drugs for my patients, just as much as any other doctor. I knew I was deceiving them when I told them I could cure them with drugs. That's why I quit. The time is near when doctors who use drugs will have to abandon that system of treatment for the natural treatment, electricity.

Why, there's Prof. Osler, a world-famed scientist, who said recently that most drugs are worthless.

Dr. Albert Leffingwell, of the American Humane Association, says that the average length of human life would not be diminished by an hour if all the drugs of Christendom were dumped into the sea—barring, perhaps, half a dozen.

How does electricity cure, you ask. By helping Nature. Nature will cure you if she has the power. Electricity is that power. Understand that your machinery is run by electricity. The stomach, heart, liver, kidneys and digestive apparatus are run by electric energy, which is created by the digestion of food in the stomach. Most sickness and chronic disorders can be traced to the failure or breaking down of one of these organs. The reason any part fails to do its work is because its supply of electricity is insufficient. Restore that force and pain and sickness will disappear.

Electricity is nerve-food—nerve-life. It makes vigorous men out of weaklings.

I have the only successful method of applying electricity. It has taken me twenty years to perfect my appliance, and I know what I can do.

My Electric Belt is worn while you sleep. Just put it on and turn on the current. There is no shock or burn; the only sensation is a soothing glow.

I have testimonials from people all over the Dominion, who have found health in my treatment. You won't believe these letters, but they are bona fide.

M. F. McLaughlin:—

Dear Sir,—I have worn your Electric Belt for about three months now, and must say that it has done wonders for me. I have had doctor after doctor, and they have failed to do me any good whatever. Therefore, I must say, that I cannot recommend your Belt too highly, and I intend, that wherever I may go, or whoever I may come in contact with, to recommend it as a sure cure.—Herman O. Cook, Yarmouth, N.S.

Mr. Thos. C. Morton, 75 Cameron St., Windsor, Ont., says:—"Before I used your Belt, three or four years ago, I was unable to walk, but it improved me so much that I had no difficulty to walk after using it for some time, and my advice to all sufferers is to use one of your Electric Belts. No Doctors; no drugs, just one solid comfort. I hope your good work will be kept up."

The confidence I have in the wonderful curative powers of my Belt allows me to offer any man or woman who can give me reasonable security the use of the Belt at my risk ,and they can

PAY WHEN CURED

Electricity is a lot cheaper than a course of drugging, besides it cures where drugs don't.

Call or send for my free book, read it over, and then use your own judgment.

I GIVE IT FREE

Get my 84-page book, describing my treatment, and with illustrations of fully developed men and women, showing how it is applied.

This book tells in plain language many things you want to know, and gives a lot of good, wholesome advice for men.

If you can't call, I'll send this book, prepaid, free, if you will inclose this coupon.

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As far as stacking is concerned, I would begin by rearing a double row of sheaves in a straight line, the length I wanted to build my stack, and then keep on building sheaves round these, heads up and butts to the ground, until I had got the stack as long and as wide as I wanted; and, right from the ground upwards would keep it so that the centre or crown of the stack was considerably the highest, so that there would be no danger of water finding its way to the grain.

If, however, the grain has been stacked in soft condition, it matters not however, scientifically the stack may have been built, the result will be disappointing; as the moisture in the sheaves will induce fermentation, which will quickly destroy the germ of the grain.

Special care should be taken to see that barley is well hooded in the stook, as the awns, where unprotected, hold a large amount of moisture and even the smallest amount of discoloration, whether the result of weathering in the stook or of fermentation in the stack will unfit a sample for malting purposes.

In opening out sheaves for hooding, it will be found that sheaves tied by the self-binder are tied too near the heads to make good hooding sheaves. To obviate this difficulty, my practice was to go eight rounds with the binder, tying the sheaves, as usual, pretty close to the heads; and then slide the binding platform so as to cause the machine to tie nearer to the butt-end , going two rounds with the binding table in this position. This arrangement gave eight sheaves tied as usual, for standing sheaves, and two tied nearer the butt for hooding-sheaves.—J. Ball.

Durability of Posts.

The Ohio Agricultural Experiment station has published a bulletin on the relative durability of post timbers. The need for investigation in this direction is clear. There is a great variety of opinion as to the best kinds of timbers for posts, whether they should be set green or well seasoned, and whether the top or the big end of a post should be placed in the ground. Men of practical experience are not agreed in any one particular. The bulletin referred to gives the results of examination of 292 fences, containing 30,160 posts. The fences were located in five States, and covered a great variety of local conditions.

The facts brought out by the investigation may be summarized as follows:

1. That a large post usually lasts longer than a small one of the same wood.

2. That there is no difference which end is put in the ground, except that the sounder or larger end should have the preference.

3. In a stiff clay soil, the posts rot principally just beneath the top of the ground, and in a porous, sandy or gravelly soil they usually rot from the top of the soil all the way down; the effect is the same in both cases.

4. In soil that is full of water all the time, posts will last longer. It is the alternating between wet and dry that causes decay.

5. From data collected so far, seasoning does not seem to have any marked effect on durability. The best catalpa fence examined was set green. In the best oak fence examined, the posts were cut and put in the ground the same day. Likewise some of the best fences are those in which the posts were well seasoned.

It has been very difficult to get accurate data on the matter of seasoning, especially in fences where the posts have been only partially season posts have been only partially seasoned when set. But there has been a sufficient number found in which the posts when set were well seasoned or entirely green to justify the above conclusion.

6. Timber that grows rapidly and in the open is not as good as the same variety that grows in the woods. This has been observed, especially in the red cedar, the catalpa, and the locust.

7. There is some evidence that it is not a good time to cut posts just as the tree begins to grow in early spring. This was noticed especially in catalpa fences, and to some extent in a number of others.

8. The wood at the centre of the tree is not as good as that just inside the sap wood. This characteristic is very common with nearly all the varieties of timber examined, especially so with the locust, the white cedar, the hardy catalpa and the oaks.

condition of the wood fiber of a post is a very important item in its ability to endure in the soil. In an average lot of so-called first class posts on the market, usually a number can be selected that are defective, though they may appear sound and firm. The quality of posts is usually somewhat darker than the usual color, esoecially near the centre of the tree.

Editor's Note:—

We would like to get the experience of some of our readers on this question.

Home Made Vinegar.

In response to numerous inquiries regarding the various processes involved in the home manufacture of vinegar and the precautions which should be taken in order to secure good results, Prof. C. I. Lewis, of the horticulture department of the Oregon Agricultural college at Coravallis has issued the following statement for the assistance of all those desiring to make vinegar on their own farms:

There are three distinct steps involved: (1) apple juice sugar, (2) alcohol, and (3) acetic acid: The amount of apple juice and quality depend on the grade of apples, their ripeness, variety and freedom from dirt. To make good cider vinegar ripe apples which are free from filth should be used, and the juice should be put into good, clean barrels.

In grinding and pressing the apples, care should be taken to observe the ordinary precautions for cleanliness. In some cases water should be added to the apple pumace after pressing, and then, after it has been allowed to stand a while, pressed again. In this way an additional amount of juice is obtained. This, however, does not contain enough sugar to make good vinegar. If high-grade vinegar is desired, the pumace should not be washed.

Where it is possible to do so, the juice should be put into one large vat or covered receptacle and allowed to stand a few days before putting it into barrels. In this way the solid matter will settle gradually before it is placed in the casks. The casks ld be thoroughly cleaned, treated with live steam or boiling water, to be certain that there is no foreign matter in them. Barrels should not be filled over two-thirds full of juice, and the bungs should be left out. A loose plug or cotton may be placed over the hole, however, to decrease the evaporation and prevent dirt getting in. The bungs should never be gut in until after the vinegar is made.

After the juice is placed in the cellar, the temperature should not be allowed to fall below 44 or 50 degrees Fahrenheit. The alcoholic fermentation will be complete in three to six months time. By raising the temperature the fermentation may be made more rapid, but it should not be pushed over 75 degrees. By adding yeast, fermentation can be completed in three months' time or even in less. It takes one yeast cake to about every five gallons of apple juice. The yeast cake should be dissolved in warm water before putting it into the juice. Vinegar or "mother" should never be added to fresh apple juice, or until after the cider has become hard.

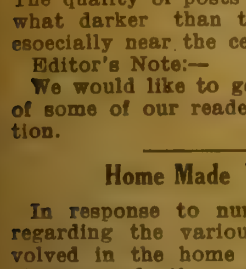
After thorough alcoholic fermentation has taken place, and the cider has become hard, the clear liquid can then be drawn off and after the cask has been thoroughly rinsed, the liquid can be returned to it. After filling the barrel about half full of the clear liquid, one-fourth of the old vinegar may be added, and on the surface of it some "mother" may be added if desired.

It requires from three to eighteen months or more to make good vinegar, according to the conditions under which the fermentation is carried on. When the apple juice is stored in a cellar and allowed to become vinegar to legal standard, it takes from twenty-one to twenty-four months. If the alcoholic fermentation is hastened by the use of yeast, and the acetic fermentation favored by a warmer temperatuee, and a vinegar "starter" added, it is possible to make good vinegar in six to twelve months.

When the acetic fermentation will produce about 4.5 or 5 per cent. of acetic acid, then the barrels can be filled to th?ir capacity and tightly corked.

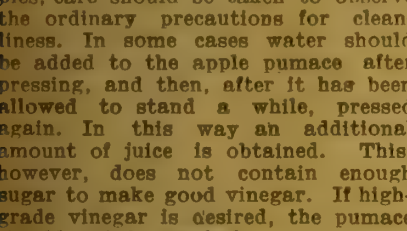
In manufacturing plants they use the "mother," or thick, tough, yellowish skin which forms in the vinegar barrel, and after adding it to the apple juice, let it drip over beech shavings, coming in contact with warm air in the process, which profilled to their capacity and tightly

Even when a man grows all the feed for his stock and its cost to him is nil it is not good business to feed it to cows that are not working at a profit.



ALL teas may look alike to you—but the difference in Red Rose Tea is in the taste and the smell. Another marked difference is the agreeable strength that puts real quality in the cup with less tea in the pot. Will you try it.

99



Business of Herdsman.

The work of a herdsman in charge of the costly herds in such aggregations of stock as that of the International Live Stock Exposition in Chicago has been put on such high plane that it has become one of the best paid jobs in out of the city work.

Only the men who own such herds know how important it is to have an accomplished herdsman in charge of his stock. This care not only covers the farm, but the road to and from the shows, and in the arena where judging is under way.

A large per cent. of the herdsmen in charge of American herds are foreigners. They hail largely from Ireland, Scotland, England and the Netherlands. Some of these men in their native country were early taught to make the best possible use of every ounce of feed assigned to the upkeep of the animals. Most of them had no such liberal approriations of feed stuff as that provided by the American dairy and beef stock farmers, so that most of them engaged in the work in this country with some exceedingly economical ideas in taking care of a herd of high bred cattle.

9. The quality of the wood or the

How Much Does it Cost By the Year?

The first price of a cream separator is no basis for figuring its cost. Suppose you paid $2 for a pair of shoes which, with $1.00 worth of repairs, lasted 12 months, making an average monthly cost of 25 cents. At another time, you paid $3 at the start, only 50 cents for repairs, and the shoes lasted 24 months—an average cost of less than 15 cents per month. Which was the better buy?

The same principle holds good in cream separator buying. You may pay a low price at the start—but such a separator will need frequent repairing—and won't last. The cost per year will be double that of a good separator.

I H C Cream Harvesters
Dairymaid and Bluebell

are famous for their durability. They skim close and run easy for years. They are built for long, hard, steady service. Here are some of their advantages:

Milk and dust-proof gears which are easily accessible—a feature found on no other separators; a patented dirt-arrester which removes the finest particles of dirt before the milk is separated; frame entirely protected from wear by phosphor bronze bushings; large shafts, bushings, and bearings.

I H C Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes. Let the I H C local agent tell you all the facts, or, if you prefer, write nearest branch house for catalogues and any special information you desire.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

International Harvester Company of America
(Incorporated)
Chicago U S A

I H C Service Bureau

The Bureau is a clearing house for agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.

TENDER CARE OF FINE ANIMALS

Then the herdsman must keep track not only of the herd, but of the individual cow, especially when the latter is engaged in making a record. On such occasion the herdsman is as particular about the feed of a cow as a doctor is in directing the diet of a patient. Of course the owner of the herd directs his man what to feed, but there is a deal in faithfully carrying out the orders.

When an animal or part of the herd is in the ring the herdsman constantly is on the watch to see that an animal stands in the most effective position. Almost constantly he is touching a hoof with his own toe in an effort to secure a better showing of an animal on all fours.

When a herd is on exhibition the head herdsman leaves the animals scarcely long enough to get his meals. He sleeps on a cot close by, and if an animal shows some sign of indisposition, the attention of the herdsman is as close as that of the trained nurse to a human patient. The most scrupulous care is taken in the matter of blanketing and in guarding against the herd sleeping in drafts.

The wages of a herdsman ranges all the way from $45 to $75 a month and even more, according to the size and character of the herd. The board and lodging of a herdsman is furnished in addition to his wages.

In late years a great deal of progress is made in rendering show animals tractable. They are handled with consummate skill in many places and under conditions capable of producing a stampede. There have been instances in which a good herdsman has accomplished the entire subjugation of an animal predisposed toward viciousness.

As to Fall Grazing.

The least growth of grass in the pasture will tempt many farmers to turn their cows onto it, and in many regions the regreened meadows will be fall-grazed. This policy is a wrong one, because, first, the new growth of one or two weeks can not make nutritious grazing, and, second, the cows will injure the sod and put the rootage into shape to do only poorly next year, even with an average of very good rainfall. Furthermore, the pasturage, at best, can be available for but a short time, and to turn the milk cows from dry rations to the green, small, thin and watery grass will result in disturbing their digestion and their milk flow for several weeks.

The experiment stations are warning the dairymen against overdoing the fall-grazing of the weakened pastures. Only where grass is well developed is it advisable to turn the stock onto it. Last fall many farmers disregarded the advice to fall-graze lightly or not at all, and they damaged their pastures badly. Those who fall-grazed their meadows ever so lightly now understand that they put their grass rootage into shape to make it suffer more seriously from this year's drouth. The dollar seemingly gained by grazing the revived grass down to the roots this fall will be lost probably with two or three other dollars next spring and summer.

A Des Moines man had an attack of muscular rheumatism in his shoulder. A friend advised him to go to Hot Springs. That meant an expense of $150.00 or more. He sought for a quicker and cheaper way to cure it and found it in Chamberlain's Liniment. Three days after the first application of this Liniment he was well. For sale by all dealers.

Field Crops of Canada.

A bulletin on the field crops ofCanada issued from Ottawa on September 14th, gives their average condition by provinces at the end of August, together with estimates of the production of spring wheat, oats and barley at that time. The per cent. condition of wheat is given as 86.80, of oats 84.44 and of barley 84.73, which is about five to seven per cent. higher than last year and nearly the same as two years ago. The other crops range in condition from 80 to 86 per cent. and are generally somewhat lower than in 1909 and 1910. The rains of August hindered the ripening of grain and some injury was caused by hail storms, low temperature and rust. Towards the end of the month frosts prevailed in many sections of the Northwest provinces, the full extent of which could not be determined at the date of the reports, but in the case of wheat, oats and barley production was lowered by probably 12 per cent., which has been followed in the table. In the older provinces the grains ripened earlier and little damage was sustained excepting from drouth in some localities, and the reported condition was 75 or over.

The average yield of spring wheat is estimated at 19.14 bushels per acre for the Dominion, which is seven bushels more than last year, and the total yield at 186,928,000 bushels. The fall wheat was reported last month at 17,706,000 bushels, being grown almost wholly in Ontario and Alberta. The total wheat yield of the country is therefore estimated to be 204,634,000 bushels or 81,849,000 bushels more than last year at the same date. The average per acre is 19.50 bushels, or 6.30 bushels per acre more than last year.

For the Dominion the yield of oats is given as 368,153,000 bushels, which is 83,906,000 bushels more than last year's estimate at the same date, and the average at 35.81 bushels per acre, being more than last year by 7.10 bushels. The average for barley is also higher than last year by 7.31 bushels, and the total yield is estimated at 51,559,000 bushels as against 39,388,000 bushels for last year.

The estimated yield of spring wheat for Manitoba, Saskatchewan and Alberta this year is 181,535,000 bushels, of fall wheat 3,193,000 bushels, of oats 204,758,000 bushels and of barley 30,205,000 bushels, as compared with 98,808,000 bushels spring wheat, 1,082,000 bushels fall wheat, 92,201,000 bushels oats and 14,723,000 bushels barley in the previous year.

In Prince Edward Island, Nova Scotia and New Brunswick the estimated yield of spring wheat is 1,453,000 bushels, of oats 16,699,000 bushels and of barley 437,000 bushels; in Quebec 1,777,000 bushels spring wheat, 44,619,000 bushels oats and 2,389,000 bushels barley; and in Ontario 2,163,000 bushels spring wheat, 14,513,000 bushels fall wheat, 102,077,000 bushels oats and 18,528,000 bushels barley.

The final estimates of last year printed in the December Monthly gave the production for the whole country as 16,610,000 bushels fall wheat, 133,379,600 bushels spring wheat, 323,449,000 bushels oats and 45,147,600 bushels barley.

The October number of the Census Monthly will give the statistics of the areas of field crops of the Dominion this year as taken by the Census of the first of June.

THE SARNIA FENCE CO.
SARNIA, ONT.

ROYAL FARM FENCING

MODERN METHODS IN MANUFACTURING, MODERN METHODS IN MARKETING, mean dollars saved for us and for our customers. The difference between the price of **ROYAL BRAND FENCE** is not through any inferior quality, as some agents wou'd have you believe. Every pound of wire that goes into **ROYAL BRAND FENCE,** is of the best that can be purchased, and the quality of galvanizing is maintained to the highest standard. Our manufacturing is done in the largest and most modern plant in Canada. High speed looms and up-to-date methods of handling enable us to manufacture fence at half the cost of any other plant. We sell direct to the farmer for cash. We require no travelling salesmen, we pay no commissions to anyone, and have no bad debts to ask the farmer help wipe out. All these advantages enable us to sell the best fence made in Canada, for the least money. The following is our unconditional guarantee: If you should receive a shipment of **ROYAL BRAND FENCE,** and you do not find it to be the best wire, the best galvanizing, and the most perfectly woven fence you ever purchased at any price, you are at liberty to return it, and we will pay charges both ways, and refund every cent of your money. Don't be mislead by unscrupulous agents who attack the quality of **ROYAL BRAND FENCE** in order to induce you to purchase from them a fence on which they can make a commission. Send your order to the factory, and save from one-third to one-half on your fence purchases. Our fence is all kept under cover, in enormous warehouses, situated on the railroad. You get nice bright bales, delivered, freight paid, at the prices below, any quantity from one bale to a carload, in 20, 30, and 40 rod bales only, and we make shipment the same day order is received

5-40-0 Has 5 line wires, 40 in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 10, 10, 10, 10. Price per rod . **18½c**

6-40-0 Has 6 line wires, 40 in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 7, 7, 8, 9, 9. Price per rod . **20½c**

7-40-0 Has 7 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing 5, 6, 6, 7, 7 1-2, 8 1-2. Price per rod **23c**

8-40 Has 8 line wires, 40 in high, 2 stays to the rod, all No. 9 hard steel wire. Spacing 3, 4, 5, 6, 7, 7, 8. Price per rod . . **27½c**

7-48-0 Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spaceing 5, 6, 7, 9, 10, 11. Price per rod . **24c**

8-48 Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing 4, 5, 6, 7, 8, 9, 9. Price per rod . . . **28½c**

9-48-0 Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing 3, 4, 5, 5, 6, 8, 8, 9. Price per rod **28½c**

9-48 Same as 9-48-0, with 12 stays to the rod. Price per rod **30½c**

10-50 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 3¼, 3½, 4 3-4, 5½, 6, 8, 8, 8. Price per rod **33c**

8-34 Has 8 line wires, 34 in. high, 24 stays to the rod. Top and bottom No. 9, filling No 12 hard steel wire. Spacing 3, 3¼, 3½, 4¾, 5½, 6, 8. Price per rod **21c**

15-50P. Stock and Poultry Fence. Has 15 line wires, 50 in. high, 24 stays to the rod; top and bottom No. 9, filling No. 12. Spacing very close for poultry. Price per rod **35c**

Stretcher. An all iron Stretcher, top and bottom draw, very heavy chain. Extra, single wire stretcher and splicer, freight paid with fence orders only . . . **$7.50**

The above prices include freight prepaid to any railroad station in Old Ontario, south of North Bay (steam boat and electric lines not included). To points in New Ontario, Quebec, Maritime Provinces and the north west, deduct two cents per rod from our printed prices, customer to pay his own freight from Sarnia. These prices will be in effect, up to July 1st, 1912. We urge upon you to order your fence at the earliest date possible, and assist us to keep to our standard, of shipment the same day we receive your order.

Remit cash with your order by registered letter, post office or express order.

THE SARNIA FENCE COMPANY, SARNIA, ONTARIO.

Tight Cooperage Manufactured 1910.

Tight cooperage barrels are used in the shipping of wines, whisky, beer, ale, oils and other liquids, and the stock used is required to be clear and of a species which will not impart its resinous or other taint to the contents. For these reasons oak, preferably white, is the principal wood used by the trade, and as this species cannot be obtained in Canada, the large shippers import it either as staves or in the log, from the United States. In the latter country, however, gum and basswood are rapidly taking the place of oak in sawed tight cooperage, so that in a short time a change may be looked for in the woods used in Canada. Statistics compiled by the Dominion Forestry Branch at Ottawa show that the tight cooperage industry in Canada during 1910 amounted in value to three hundred and forty-five thousand dollars. Nearly four-fifths of the total value was composed of staves, while heading to the value of$72,000 made up the balance. The staves production was as follows:—7,173,000 sawed staves worth $195,788; 923,000 ale and beer worth $44,814; and 319,000 bucked and split worth $72,240. Oak formed nearly three-quarters of the sawed staves, all the ale and beer staves, and all the bucked and split. Gum, a species of wood not hitherto reported, which should prove itself very satisfactory on account of its durability and freedom from flavor, stands third in the sawed stave table. In one year, with a production of 437,000 staves it surpassed all the native species except spruce. To fill the demand for tight cooperage in Canada, imports as reported by the Department of Trade and Commerce were as follows for 1910:—7,220,000 oak staves valued at $200,672; stave bolts to the value of $81,888 and 93,811 empty barrels worth $112,126.

Maritime Winter Fair Prize List.

Beef Cattle.

CLASS I, SHORTHORNS.

Sec. 1—Steer 2 years old and under 3—1st, J. R. Coates & Son, Nappan Sta.; 2nd, Hazen Etter, Westmorland Pt.; 3rd, Harold Etter, Westmorland Pt.

Sec. 2—Steer 18 mos. and under 2 yrs.—1st, Harold Etter, Westmorland Pt.; 2nd, J. R. Coates & Sons, Nappan Sta.; 3rd, Harold Etter, Westmorland Pt.; 4th, Edwin Forrest, Amherst Pt.; 5th, Chas. Forrest, Amherst Pt.

Sec. 3—Steer 1 yr. and under 18 mos.—1st, J. R. Coates & Sons, Nappan Sta.; 2nd, Chas. Forrest, Amherst Pt.; 3rd, J. E. Baker & Son, Barronsfield; 4th, Geo. M. Holmes, Amherst.

Sec. 4—Steer 6 mos. and under 1 year—1st, J. R. Coates & Son, Nappan Sta.; 2nd, Harold Etter, Westmorland Pt.

Sec. 5—Steer under 6 mos.—Edwin Forrest, Amherst, N. S.

Sec. 6—Cow or Heifer 3 yrs. or over—1st, Harold Etter, Westmorland Pt.; 2nd, C. A. Archibald, Truro, N. S.; 3rd, C. A. Archibald, Truro, N. S.; 4th, C. A. Archibald, Truro, N. S.; 5th, C. A. Archibald, Truro, N. S.

Sec. 7—Heifer 2 yrs. and under 3 years—1st, C. A. Archibald, Truro; 2nd, R. A. Snowball, Chatham; 3rd, R. A. Snowball, Chatham; 4th, Harold Etter, Westmorland Pt.; 5th, C. A. Archibald, Truro.

Sec. 8—Heifer 18 mos. and under 2 yrs.—1st, R. A. Snowball, Chatham; 2nd, R. A. Snowball, Chatham; 3rd, J. McCully Pipes, Amherst; 4th, J. McCully Pipes, Amherst.

Sec. 9—Heifer 1 yr. and under 18 mos.—1st, R. A. Snowball, Chatham; 2nd, R. A. Snowball, Chatham; 3rd, Chas. Forrest, Amherst Pt.; 4th, Hazen Etter, Westmorland Pt.; 5th, Geo. M. Holmes, Amherst.

Sec. 10—Heifer 6 mos. and under 1 year—1st, R. A. Snowball, Chatham; 2nd, Harold Etter, Westmorland Pt.; 3rd, Edwin Forrest, Amherst Pt.; 4th, Chas. S. Angus, Carrington; 5th, Chas. S. Angus, Carrington.

Sec. 11—Heifer under 6 mos.—1st, Harold Etter, Westmorland, N. B.; 2nd, J. McCully Pipes, Nappan Sta.; 3rd, J. R. Coates & Son, Nappan; 4th, J. McCully Pipes & Sons, Amherst.

Sec. 12—Best Female any age—1st, Harold Etter, Westmorland Pt.

Sec. 13—Best Steer any age—1st, J. R. Coates & Son, Nappan, N. S.

Sec. 14—Sweepstakes, best animal, any age—1st, Harold Etter, Westmorland Pt.

CLASS 2.

Silver Cup donated by M. J. O'Brien, Railway Contractor, Montreal for best Shorthorn animal, any age, won by Harold Etter, Westmorland Pt.

CLASS 3.

HEREFORDS.

All Prizes awarded in this class went to W. W. Black, Amherst, N. S. without competion.

CLASS 4.

GRADES OF ANY BREED.

Sec. 1—Steef 3 yrs. old or upwards—1st, W. W. Black, Amherst, N. S.; 2nd, Laurie Anderson, Sackville; 3rd, Edwin Forrest, Amherst, N. S.; 4th, Chas. H. Angus, Carrington; 5th, J. R. Coates & Son, Nappan, N. S.; 6th, Thos. J. Etter, Westmorland Pt.

Sec, 2—Steer 2 yrs. and under 3 yrs.—1st, Edwin Forrest, Amherst Pt.; 7nd, W. W. Black, Amherst, N. S.; 3rd, C. W. Pugsley, Barronsfield, N. S.; 4th, Harold Etter, Westmorland Pt;; 5th, Hazen Etter, Westmorland; 6th, Chas. Forrest, Westmorland.

Sec. 3—Steer 18 mos. and under 2 yrs.—1st, W. W. Black, Amherst, N. S.; 2nd, J. R. Coates & Son, Nappan, N. S.; 3rd, Thos. J. Etter, Westmorland Pt.; 4th, Chas. Forrest, Amherst, Pt.; 5th, Hazen Etter, Westmorland Pt.; 6th, Laurie Anderson, Sackville, N. B.

Sec. 4—Steer 1 yr. and under 18 mos.—1st, W. W. Black, Amherst, N. S.; 3nd, J. R. Coates & Son, Nappan; 3rd, Edwin Forrest, Amherst, N. S.; 4th, Fowler Bros., Amherst Pt.

Sec. 5—Steer 6 mos. and under 1 yr.—1st, Ed. P. Anderson, Sackville, N. B.; 2nd, W. W. Black, Amherst, N. S.; 3rd, Ed. P. Anderson, Sackville; 4th, Hazen Etter, Westmorland Pt.

Sec. 6—Steer under 6 mos.—1st, W. W. Black, Amherst; 2nd, Ed. P. Anderson, Sackville, N. B. 3rd, Harold Etter, Westmorland Pt.

Sec. 7—Cow 3 yrs. old and upwards—1st, W. W. Black, Amherst, N. S.; 2nd, Chas. Forrest, Amherst Pt.; 3rd, Hazen Etter, Westmorland Pt.; 4th, W. W. Black, Amherst, N. S.; 5th, Harold Etter, Westmorland Pt.; 6th, Edward Anderson, Sackville, N. B.

Sec. 8—Heifer 2 yrs. and under 3 yrs.—1st, W. W. Black, Amherst, N. S.; 2nd, Chas. Forrest, Amherst Pt.; 3rd, Edwin Forrest, Amherst; 4th, Hazen Etter, Westmorland Pt.

Sec. 9—Heifer 18 mos. and under 2 yrs.—1st, W. W. Black, Amherst, N. S.; 2nd, Edwin Forrest, Amherst, N. S.; 3rd, Laurie Anderson, Sackville, N. B.; 4th, Laurie Anderson, Sackville, N. B.

Sec. 10—Heifer 18 mos. and under 1 yr.—1st, W. W. Black, Amherst, N. S.; 2nd, Chas. Forrest, Amherst, N. S.; 3rd, Laurie Anderson, Sackville, N. B.; 4th, Edwin Forrest, Amherst.

Sec. 11—Heifer 6 mos. and under 1 year—1st, Ed. P. Anderson, Sackville N. B.; 2nd, Edwin Forrest, Amherst Pt.; 3rd, W. W. Black, Amherst, N. S.

Sec. 12—Heifer under 6 mos.—1st, Ed. P. Anderson, Sackville, N. B.; 2nd, J. R. Coates & Son, Nappan, N. S.; 3rd, W. W. Black, Amherst, N. S.

CLASS 6.

Silver Cup donated by the Hon. Wm. Pugsley, Ex-Minister of Public Works, for best animal of any age in Class 4, won by Ed. P Anderson, Sackville, N. B.

CLASS 5.

BEEF CARCASSES.

Best Beef Carcasses from animals shown in the foregoing classes—1st, Edwin Forrest, Amherst; 2nd, W. W. Black, Amherst; 3rd, Chas. Forrest, Amherst; 4th, Chas. Forrest, Amherst; 5th, Harold Etter, Westmorland Pt.; 6th, J. R. Coates, Nappan, N. S.

CLASS 7.

The Amherst Foundry and Heating Co. offer goods valued at $12.00 for best animal any age in class 4 owned by the winner of the Champion Cup in this class, won by W. W. Black, Amherst, N. S.

CLASS 9.

GRAND CHAMPIONSHIP.

Donated by Massey-Harris & Co., Ltd., Toronto, Ont. for the best beef animal any breed or grade, won by W. W. Black, Amherst, N. S.

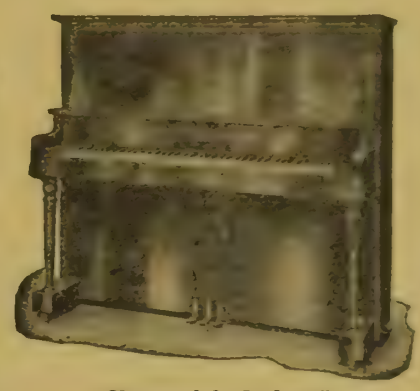
Lonis XV. Style 80

The

Sherlock-Manning Piano

Represents

Rare Quality



Chippendale Style 75

The purchase of a piano is a very important matter, so don't be hasty in your choice. Before deciding on any piano see the **Sherlock-Manning**. It gives the utmost satisfaction, at the lowest possible price for a piano worthy the name.

All **Sherlock-Manning** Pianos are thoroughly tested and inspected before leaving the factory. Therefore, we guarantee them absolutely for ten years. And we use **Nothing but the best,** both in labor and material.

The **Sherlock-Manning** Piano is noted for its beauty and permanency of tone — a tone that will last for years.

If you do not know the **Sherlock-Manning** dealer near you, write us and we will gladly introduce you to him or we will give you full information by mail direct. You will save money by writing **Now** for our catalogue.

You can't get better value for your money than we offer here

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20th Century Style 110

Sherlock-Manning

Piano and Organ Company

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No Street Address Necessary

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One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issie. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

FOR SALE—Devon bull, American Register. Apply to GEORGE WHITMAN, Arcadia, N. S.

FOR SALE.—Guernsey bull, registered, nineteen months old. D. G. MACKAY & SON, Scotsburn, Pictou Co., N. S.

WANTED pork, dressed poultry, pigeons, eggs, rabbits, etc., fresh stock. Prompt returns. JOHN HOPKINS, established 1867, St. John, N B.

FOR SALE—Guernsey Bull, registered, nineteen months old. D. G. MACKAY & SON, Scotsburn, Pictou Co., N.S.

FOR SALE—Clydesdale Stallion, Kings College, 8 years old, imported from Scotland in 1907. Apply to R. M. MENZIE, Midland, N. B.

Registered Yorkshire pigs for sale. 10 sows 1 year old, bred for last of March. Also 1 boar in fine breeding condition. BOYD A. WETMORE, Harvey, Albert Co. N.

ANY person wishing the service of a practical stockman to take charge of farm and stock should write at once to the MARITIME FARMER, St. John, N. B.

FOR SALE, going out of business. 25 registered Cotswold ewes, all served with a first class ram. Aso a few rams. Prices right. DONALD INNES, Tobique River, Victorir Co., N. B.

FOR SALE—1 pure bred reg. Ayrshire Bull, 4 years old. 1 pure bred reg. Yorkshire Boar, 19 months old, both choice animals. A. FITZ RANDOLPH, ox 75, Brighton, N. S

FOR SALE—1 Ayrshire bull, four past. 3 Ayrshire bulls sixteen months. 2 Ayrshire bulls, six months. 2 Holstein bull calves, six months. 2 Holstein cows. Please write for particulars. JOHN A. HUGHES, Petitcodiac, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers aud a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

White Orpington Cockerels For Sale

Kellerstrass Strain

Good large vigorous birds, four and half and four months old. Price $2.00 and $3.00 each. If you want a nice bird write at once and get first choice.

B. C. CLARK,
Bear River, Digby Co., N. S.

FOR SALE AT ONCE

75 Barred Plymouth Rock, Cockerels and Pullets; two yearling pens, cockerel and pullet matings, also a few Light Brahmas.

Cockerels, $2.00 to $3.00 each; Pullets, $3.00 per pair.

E. T. JORDAN
Kentville, N. S.

Bloomfield Stock Farm.

We have in stock and for sale at present:—
25 Prime Shropshire Ewes
10 Ewe Lambs
10 Ram Lambs—a superior lot registered—also one Ayrshire Bull—2 years, a prize winner, one Ayrshire Bull, 14 months, and several Bull Calves—all registered and as good as the best.
Prices right.
Write or Call

JOHN McDONALD & SON,
Shubenacadie, Hants Co., N. S.

CLASS 10

Sec. 1—Donated by the Blatchford Meal Co., Waukegan, Ill., represented by A. A. Archibald & Co., Truro, N. S. for the best calf under 1 year, any breed or grade, won by R. A. Snowball, Chatham, N. B.

Sec. 2—Donated by the Blatchford Calf Meal Factory, Waukegan, Ill., for the best animal any breed or grade, won by W. W. Black, Amherst, N. S.

Class Dairy Cattle.

CLASS 11—SHORTHORNS.

Sec. 1—Cow 4 yrs. and upwards—1st, Geo. M. Holmes, Amherst; 2nd, Fred T. Holmes, Amherst.

Sec. 2—Cow 3 yrs. and upwards—1st, Geo. M. Holmes, Amherst.

Sec. 3—Heifer 2 yrs. old—2nd, Fred T. Holmes, Amherst.

Sec. 4—Heifer 1 yr. old—2nd, Geo. M. Holmes, Amherst.

CLASS 12.

AYRSHIRES.

Sec. 1—Cow 4 yrs. old and upwards—1st, McIntyre Bros., Sussex; 2nd, Retson Bros., Truro; 3rd, Retson Bros, Truro; 4th, McIntyre Bros., Sussex; 5th, A. McRae & Sons, East Royalty, P. E. I.

Sec. 2—Cow 3 yrs. old and upwards—1st, A. McRae & Sons, East Royalty; 2nd, McIntyre Bros., Sussex; 3rd, Fred S. Black, Amherst; 4th, A. McRae & Sons, East Royalty; 5th, McIntyre Bros., Sussex.

Sec. 3—Heifer 2 yrs. old—1st, A. McRae & Sons, East Royalty; 2nd, McIntyre Bros., Sussex; 3rd, McIntyre Bros., Sussex; 4th, Retson Bros.; 5th, McIntyre Bros.

Sec. 4—Heifer 1 year old—1st, McIntyre Bros., Sussex; 2nd, Chas. Symes, Minudie.

CLASS 13—HOLSTEINS.

Sec. 1—Cow 4 yrs. old and upwards—1st, R. L. Hicks, Dalhousie Jct.; 2nd, Logan Bros., Amherst; 3rd, Logan Bros., Amherst; 4th, Samuel Dickie & Sons, Central Onslow; 5th, Samuel Dickie & Sons, Central Onslow.

Sec. 2—Cow 3 yrs old—1st, Samuel Dickie, C. Onslow; 2nd, Samuel Dickie, C. Onslow; 3rd, R. L. Hicks, Dalhousie Jct.; 4th, Samuel Dickie, C. Onslow; 5th, Logan Bros., Amherst.

Sec. 3—Heifer 2 yrs. old—1st, Samuel Dickie, C. Onslow; 2nd, Logan Bros., Amherst; 3rd, R. L. Hicks, Dalhousie Jct.; 4th, Logan Bros., Amherst Pt.

Sec. 4—Heifer 1 year old—1st, Logan Bros, Amherst Pt.; 2nd, Logan Bros., Amherst Pt.

CLASS 14—GUERNSEYS.

Sec. 1—Cow 4 yrs. old and upwards—1st, Roper Bros., Charlottetown; 2nd, Roper Bros.; 3rd, Roper Bros.

Sec. 2—Cow 3 yrs. old—1st, Hugh A. Dickson, C. Onslow; 2nd, Roper Bros., Charlottetown.

Sec. 3—Heifer 2 yrs. old—1st, Roper Bros, Charlottetown; 2nd, Hugh A. Dickson, C. Onslow.

Sec. 4—Heifer 1 yr. old—1st, Roper Bros., Charlottetown.

CLASS 15—JERSEYS.

Sec. 1—Cow 4 yrs. old and upwards—1st, J. E. Baker & Son, Barronsfield; 2nd, H. S. Pipes & Son, Amherst; 3rd, H. S. Pipes & Son; 4th, H. S. Pipes & Son.

Sec. 2—Cow 3 yrs old—1st, H. S. Pipes & Son, Amherst; 2nd, H. S. Pipes & Son.

Sec. 3—Heifer 2 yrs. old—1st, J. E. Baker & Son, Barronsfield; 2nd, H. S. Pipes & Son, Amherst; 3rd, W. E. Harding, Amherst.

CLASS 16—GRADES.

Sec. 1—Cow 4 yrs. old and upwards—1st. Fowler Bros., Amherst; 2nd, R. L. Hicks, Dalhousie Jct.; 3rd. T. W. Keillor, Amherst Pt.; 4th, T. W. Keillor; 5th, T. W. Keillor; 6th, Fred S. Black, Amherst.

Sec. 2—Cow 3 yrs. old—1st, W. N. Boomer, West Amherst; 2nd, A McRae & Son, East Royalty; 3rd, Fowler Bros., Amherst Pt.; 4th, Roper Bros., Charlottetown; 5th, W. N. Boomer, West Amherst; 6th, McIntyre Bros., Sussex.

Sec. 3—Heifer 2 yrs. old—1st, Samuel Dickie & Sons, C. Onslow; 2nd, W. W. Black, Amherst; 3rd, T. W. Keillor, West Amherst; 4th, W. N. Boomer, W. Amherst; 5th, Geo. M. Holmes, Amherst' 6th, Fowler Bros., Amherst Pt.

Sec. 4—Heifer 1 yr. old—1st, Fowler Bros, Amherst Pt.; 2nd, Fowler Bros., Amherst Pt.

SPECIALS.

CLASS 17.

Donated by T. Eaton & Co., Ltd., Toronto, won by A. McRae & Sons, East Royalty for best herd of milk cows, consisting of one aged cow, one three-year-old cow and one two-year-old heifer.

CLASS 18.

The Holstein-Friesian Association of Canada donates $25.00 for the highest scoring 3 year old in dairy test, won by Samuel Dickie & Son, Central Onslow.

CLASS 19.

The Holstein- Friesian Association of Canada donates Silver Cup for Champion Cow in Grade Class, won by Fowler Bros., Amherst Pt.

CLASS 22.

GRAND CHAMPIONSHIP

Silver Cup donated by Henry Birks & Sons, Ltd., of Montreal, for highest scoring cow in dairy class, won by Samuel Dickie, Onslow.

Sheep

CLASS 26.

LEICESTERS.

Sec. 1—Ewe 2 years old or over—1st, 2nd and 4th, Albert Boswall, Pownal; 3rd, Retson Bros, Truro.

Sec. 2—Ewe 1 yr. and under —1st, Retson Bros.; 2nd and 3rd, Albert Boswall; 4th, Samuel C. Lane, Pownal.

Sec. 3—Ewe Lamb—1st and 2nd, Albert Boswall; 3rd, Retson Bros.; 4th, Jas. A. Telfer, Markhamville.

Sec. 4—Yearling Wether—1st, 2nd and 3rd, Samuel C. Lane; 4th, Albert Boswall.

Sec. 5—Wether Lamb—1st, 2nd, 3rd and 4th, Samuel C. Lane.

CLASS 27.

LINCOLNS.

Sec. 1—Ewe 2 yrs. old or over—1st, C. W Pugsley, Barronsfield; 2nd, Jas. Telfer; 3rd, Chas. Symes, Minudie, N. S.; 4th, Albert Boswall, Jr., French Fort.

Sec 2—Ewe 1 yr. and under 2—1st, Jas Telfer; 2nd, C. W. Pugsley; 3rd, Chas. Symes; 4th, Albert Boswall,

Sec. 3—Ewe Lamb—1st, Albert Boswall, Jr. 2nd, 3rd, Chas. Symes; 4th, C. W. Pugsley.

Sec. 4—Yearling Wether—1st. Albert

Sec. 5—Wether Lamb—1st, J. E. Baker & Son, Barronsfield.

CLASS 28—COTSWOLDS.

Sec. 2—Ewe 1 yr. and under 2—1st, Jas, Telfer.

Sec. 3—Ewe Lamb—1st, Retson Bros.

Sec. 4—Yearling Wether—1st, Albert Boswall, Jr.

Sec. 5—Wether Lamb—1st, Albert Boswall, Jr.

CLASS 29—CHEVIOTS.

Sec. 1—Ewe 2 years or over—1st, 2nd, 3rd and 4th, Chas. Symes.

Sec. 2—Ewe 1 yr. and under 2—1st, 2nd, 3rd and 4th, Chas. Symes.

Sec. 3—Ewe Lamb—1st, 2nd, 3rd and 4th, Chas. Symes.

Sec. 4—Yearling Wether—1st, 2nd, 3rd and 4th, Chas. Symes.

Sec. 5—Wether Lamb—1st, 2nd, 3rd and 4th, Chas. Symes.

CLASS 30—HORNED DORSETS.

Sec. 1—Ewe 2 yrs. old or over—1st and 4th, Geo. L Boswall, French Fort 2nd, Jas. Telfer; 3rd, Hartland Poultry Yards.

Sec. 2—Ewe 1 yr. and under 2—1st and 3rd, Geo. L. Boswall; 2nd, Jas. Telfer; 4th, Hartland Poultry Yards.

Sec. 3—Ewe Lamb—1st and 2nd, Geo. L. Boswall; 3rd and 4th, Hartland Poultry Yards.

Sec. 4—Wether Lamb—1st and 2nd Geo. L. Boswa,l; 3rd, Hartland Poultry Yards.

CLASS 31—SOUTH DOWNS.

Sec. 1—Ewe 2 yrs. or over—1st, Cephas Nunn, Winsloe Road; 2nd and 3rd, J. E. Baker & Sons; 4th, Oliver C. Saunders, Trilby.

Sec. 2—Ewe 1 yr. and under 2—1st and 3rd, J. E. Baker & Sons; 2nd, Oliver C. Saunders; 4th, Cephas Nunn

Sec. 3—Ewe Lamb—1st, Oliver C. Saunders; 2nd, Cephas Nunn; 3rd and 4th, J. E. Baker & Sons.

Sec. 4—Yearling Wether—1st and 3rd, J. E. Baker & Sons; 2nd, Jas. Telfer; 4th, Cephas Nunn.

Sec. 5—Wether Lamb—1st and 2nd, J. E. Baker & Sons; 3rd, Oliver C. Saunders.

CLASS 32—SHROPSHIRES

Sec. 1—Ewe 2 yrs. or over—1st, Geo. L. Boswall; 2nd and 3rd, Jas. J. Stewart, Amherst Pt.; 4th, Jas. A. Telfer.

Sec. 2—Ewe 1 yr. and under 2—1st, Geo. L. Boswall; 2nd, Jas. J. Stewart; 3rd, Jas. A. Telfer.

Sec. 3—Ewe Lamb—1st and 2nd, Jas. J. Stewart; 3rd and 4th, Geo. L. Boswall.

Sec. 4—Yearling Wether—1st and 3rd Jas. J. Stewart; 2nd, Cephas Nunn.

Sec. 5—Wether Lamb—1st, 2nd and 3rd, J. Stewart.

CLASS 33—OXFORDS.

Sec. 1—Ewe 2 yrs. old or over—1st 2nd and 4th, Jas. E. Baker & Sons; 3rd, Hartland Poultry Yards.

Sec. 2—Ewe 1 yr. and under 2—1st, 2nd and 3rd, Jas. E. Baker & Son.

Sec. 3—Ewe Lamb—1st and 4th,

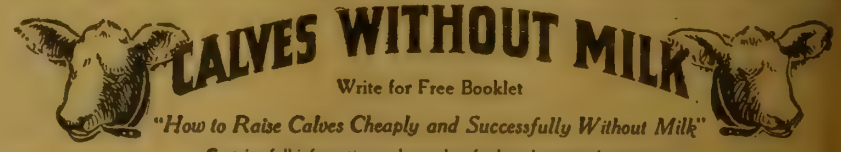
(Continued on page 172).

FOR SALE!

We are offering at a very low figure the Holstein Bull (Victor of Fairmead) rising four years old, weight over 1800, Sire Jacob Van Voran, (twice Grand Champion, Charlottetown, over all Dairy Breeds), Dam Beauty of Fairmead, a Show Cow. "Official" record made five days after calving, 455 lbs. 14 oz. milk and 171.2 lbs. of butter in seven days—gave 12000 lbs. of milk this year on ordinary feed.

This bull won 2nd in class of five at Charlottetown this fall, and is an exceptionally fine animal in every way. Write for particulars to

LEA & CLARK,
Victoria, - - - P. E. I.



Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N
Boyd A. Wetmore, Harvey, Albert Co., N. .
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake NB. .
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West: N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

FOR SALE.

20 Brown Leghorns, S.C.Cockerels, Both matings from $1.00 up. 15 Brown Leghorn S. C. Pullets from $1.00 up both matings. Single and Rose Comb R. I. Red Cockerels and pullets. 2 Brown Leghorns S. C. Cocks, both show birds. Price $2.00 and $3.00 each.

W. H. HENRY,
Shubenacadie, N. S.

Trees That Will Grow.

Reliable men wanted to work during the winter; part time or steadily. Should average $25. weekly. Special salesmen wanted for the fruit belt. Our trees will grow; there's a reason.

THOS. W. BOWMAN & SON Co., Ltd.,
Ridgeville, Ont.

FOR SALE.

Columbian Wyandotte, cock and hen, both prize winners, the pair $5.00. S. C. White Leghorn, cock and hen, both winners, $8.00

200 egg, Peerless Incubator used two hatches, too large for us, will sell cheap.

120 egg, Chatham Incubator, good hatcher, $10.00.

ORCHARD HILL FARM,
Brown's Flats, N. B.

BIG POULTRY SHOW

Moncton, N. B. January 10th to 13th, 1911.

Large list of cash and special prizes. Send for a free copy of our prize list. Box 485, Moncton, N. B.

C. H. WISENER

Orpingtons and Brown Leghorns

PICTOU, - N. S.

Broad View Farm

Now offers for sale a lot of choice pure bred Barred and White Rocks, Rose Comb Reds, and Buff Orpington Cockerels and pullets at $1.00 each to make room. Order now.

EGBERT DEYOUNG,
Box 120, Dartmouth, N. S.

For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111,
"Sunnyside Stock farm," Sussex N. B.

Get Ready For The Hatching Season

Send for Special Incubator Catalogue.

Maritime Poultry Supply Co., Moncton, N.B.

Hillside Stock Farm

FOR SALE—Four Ayrshire yearling bulls, fit for service. Also two imported three-year-old Clydesdale fillies, sired by "Moncrieff Marquis" and "Pride of Blacon," both of which horses have been winners in Scotch show rings. These fillies weigh about 14 cwt., and are good value.

PRESCOTT BLANCHARD,
Truro, N. S.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

CRAIG BROS., Amherst, N. S.

Rosebank Farm Jerseys

Young Bulls for sale by the imported bulls, Pogis 40th of Hood Farm and Foxhall's St. John O'Dreamwold Champion bull at Halifax and Chatham also headed 1st prize herd on the circuit. JOSSELYN & YOUNG
St. John, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

CEPHAS NUNN

Lot 33 Winsloe Road, P. E. I.

Breeder and Importer of Shropshire Southdown and Hampshire Sheep.

Some good animals of either sex of the above breeds for sale at reasonable prices. Inspection invited.

Dates to be Remembered

St. John Exhibition, St. John, N. B.—September 7 to 9, 1912.

Short Courses at the Nova Scotia Agricultural College begin on January 2nd, 1912.

You Can Earn More Than 3% on Your Savings

By Investing in a Good Reliable Bond

We can offer municipal bonds to yield from 4 1-4 per cent. to 4 3-4 per cent. with absolute safety
If you are interested in earning more than 3 per cent. on your money, drop us a post card for list of our offerings.

Atlantic Bond Company, Limited,

HOWARD P. ROBINSON, President.

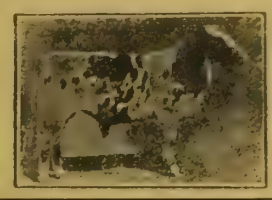
Herald Building, HALIFAX, N. S.
Bank of Montreal Building, ST. JOHN, N. B.

MAPLE FOREST STOCK FARM.

YORKSHIRE SWINE.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

Glen View **Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns.**

Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

GLEN VIEW POULTRY YARDS, - SUSSEX, N.B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

SHEEP MEN ATTENTION!

Those who desire to purchase some of the best blood obtainable in all the leading breeds of sheep will do well to write me for prices. I have a car of beauties coming from Ontario which I intend to exhibit at the Maritime Fairs. Make a point to see my exhibit and be convinced I have the goods and that they may be bought right. Special attention paid to Farmers' Societies.

JAS. A. TELFER, Sunny Brae Sheep Ranch, Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

Milking Shorthorns

I have to offer, 5 Shorthorn Bulls, fit for service. Dams excellent milkers. Sire ¾ Cruikshank blood.

BLISS M. FAWCETT.
Sackville, New Brunswick.

Shorthorns For Sale

We have sold eight pure-breds and have a choice lot of roan and reds left, ages from 13 to 26 months. Also a large red bull, 3 years old.

C. C. H. EATON,
Canard, N. S.

Maritime Winter Fair Prize List.

(Continued from page 170).

Hartland Poultry Yards; 2nd and 3rd, Jas. E. Baker & Son.

Sec. 4—Yearling Wether—1st and 2nd, Jas. E. Baker.

Sec. 5—Wether Lamb—1st, J. E. Baker.

CLASS 34—HAMPSHIRES

Sec. 1—Ewe 2 yrs. old or over—1st and 4th, Jas. Telfer; 2nd and 3rd, Cephas Nunn.

Sec. 2—Ewe 1 yr. and under 2—1st, Jas. Telfer; 2nd and 3rd, Cephas Nunn.

Sec. 3—Ewe Lamb—1st and 2nd, Cephas Nunn.

Sec. 4—Yearling Wether—1st, Cephas Nunn.

Sec. 5—Wether Lamb—1st and 2nd, Cephas Nunn.

CLASS 35—SUFFOLKS.

All prizes awarded in this class went to Albert Boswall, Jr. without competition.

CLASS 36—GRADES AND CROSSES.

Sec. 1—Ewe 2 yrs. old or over—1st and 2nd, Jas. J. Stewart; 3rd, J. E. Baker & Son; 4th, Cephas Nunn; 5th, Samuel C. Lane.

Sec. 2—Ewe 1 yr. and under—1st, Jas. J. Stewart; 2nd, J. E. Baker & Son; 3rd and 6th, Samuel C. Lane; 4th, Oliver C. Saunders; 5th, C. W. Pugsley.

Sec. 3—Ewe Lamb—1st, Cephas Nunn; 2nd, 4th and 5th, Jas. J. Stewart; 3rd, Albert Boswall. ...

Sec. 4—Yearling Wether—1st. Jas. Stewart; 2nd, Oliver Saunders; 3rd and 5th, Samuel C. Lane; 4th, Cephas Nunn.

Sec. 5—Wether Lamb—1st, Oliver C. Saunders; 2nd, Jas. Stewart.

CLASS 38—SPECIALS.

Donated by the Blatchford Calf Meal Co., for the best wether lamb, 50 lbs. Blatchford Early Lamb Food, won by Jas. E. Baker & Sons, Barronsfield.

CLASS 39.

Donated by the Robb Engineering Co., of Amherst for the best four lambs, all of one breed in classes 26, 27, 28, 31 and 32, won by—1st, Jas. J. Stewart; 2nd, Oliver C. Saunders.

CLASS 40.

Donated by the Bank of Montreal, Amherst, N. S., for the best ewe in sec. 1, 2, and 3, of classes 34, 35 and 36 won by—1st, J. E. Baker & Sons, Barronsfield; 2nd, Jas. A. Telfer, Markhamville.

CLASS 41.

Donated by the Hewson Woollen Mills, Amherst, N. S.: Sec. 1—Best flock of short wool sheep, one gentleman's suit length value $7.00, won by J. E. Baker & Son, Barronsfield, N. S.; Sec. 2—Best flock of short wool sheep, two suits heavy ribbed underwear made from good quality domestic wool, value $5.00, won by Geo. L. Boswall, Pownal, P. E. I.

CLASS 42.

Donated by the Canadian Bank of Commerce, Amherst, N. S. for best 3 shearling Wethers—1st, Jas. J. Stewart, Amherst Pt.; 2nd, Jas. E. Baker & Sons, Barronsfield.

CLASS 43.

For the best pen of four wether lambs—1st, Jas. J. Stewart; 2nd, Geo. Boswall; 3rd, Jas. E. Baker; 4th, Samuel C. Lane.

CLASS 44.

Donated by the Royal Bank of Canada, Amherst, N. S., for pen including 1 ewe lamb, 1 yearling ewe, 1 ewe 2 yrs. and over—1st, Geo. L. Boswall, French Fort; 2nd, Jas. E. Baker & Sons, Barronsfield.

FLEECE COMPETITION.

Lincolns—1st and 3rd, Albert Boswall, Jr.; 2nd, Jas. A. Telfer.

Leicesters—1st, Retson Bros.; 2nd, J. A. Telfer; 3rd, Albert Boswall.

Cotswolds—1st, Albert Boswall; 2nd J. A. Telfer; 3rd, Retson Bros.

Oxfords—1st and 3rd, J. E. Baker & Son; 2nd, Hartland Poultry Yards.

Shropshires—1st, J. A. Stewart; 2nd, Geo. Boswall; 3rd, J. A. Telfer.

Southdowns—1st, J. E. Baker & Sons; 2nd, J. A. Telfer; 3rd, Oliver Saunders.

Hampshires—1st, J. A. Telfer; 2nd, Cephas Nunn; 3rd, Albert Boswall, Jr

Dorsets—1st, Geo. Boswall; 2nd, J. A. Telfer; 3rd, Hartland Poultry Yards.

Cheviots—1st, Chas. Symes.

Best two Long Wool Fleeces—1st, Retson Bros.; 2nd and 3rd, Albert Boswall.

CLASS 37—SHEEP CARCASSES.

Sec. 1—Dressed carcasses to be shown from any sheep over 1 year old, exhibited in foregoing classes—1st and 2nd, Cephas Nunn; 3rd, Jas. E. Baker; 4th, Jas. Stewart; 5th, Chas. Symes; 6th, Oliver C. Saunders.

Sec. 2—Dressed carcasses shown from any sheep under one year old shown in foregoing classes—1st, 2nd and 3rd, Jas. J. Stewart; 4th and 6th, Oliver C. Saunders; 5th, Jas. E. Baker.

Swine

CLASS 45—YORKSHIRES.

Sec. 1—Barrow 6 mos. and under 9—1st, J. W. Callbeck, Summerside; 2nd, Roper Bros., Charlottetown; 3rd, Geo. M. Holmes, Amherst, N. S.; 4th, W. C. Black, Salem, N. S.

Sec. 2—Barrow under 6 mos.—1st and 2nd, J. W. Callbeck; 3rd, A. A. McBeath, Marshfield; 4th, W. C. Black.

Sec. 3—Sow 9 mos. and under 15 mos.—1st, A. A. McBeath; 2nd, Roper Bros.; 3rd and 4th, J. W. Callbeck.

Sec. 4—Sow 6 mos. and under 9 mos.—1st A. A. McBeath; 2nd and 4th, J. W. Callbeck; 3rd, Roper Bros.

Sec. 5—Sow under 6 mos.—1st, A. A. McBeath; 2nd and 4th, J. W. Callbeck; 3rd, Roper Bros.

CLASS 46—TAMWORTHS.

Sec. 1— Barrow 6 mos. and under 9 mos.—1st, 2nd and 3rd, W. J. Gibson, Marshfield.

Sec. 2—Barrow under 6 mos.—1st and 2nd, Roper Bros.

Sec. 3—Sow 9 mos. and under 15 mos.—1st, W. J. Gibson, Charlottetown; 2nd, Roper Bros.

Sec. 4—Sow 6 mosf and under 9 mos.—1st, 2nd and 3rd,W. J. Gibson, Marshfield.

Sec. 5—Sow under 6 mos.—1st and 2nd, Roper Bros.

CLASS 47—BERKSHIRES.

Sec. 1—Barrow 6 mos. and under 9 mos.—1st and 3rd, Peter Brodie, Little York; 2nd, Jas. J. Stewart.

Sec. 2—Barrow under 6 mos.—1st, Jas. J. Stewart; 2nd and 3rd, Peter Brodie; 4th, Logan Bros., Amherst Pt

Sec. 3—Sow 9 mos. and under 15 mos.—1st, W. J. Gibson; 2nd, Fowler Bros., Amherst Pt.; 3rd, Logan Bros.

Sec. 4—Sow 6 mos. and under 9 mos.—1st and 3rd, Jas. I. Stewart, Amherst Pt.; 2nd, W. J. Gibson; 4th, Peter Brodie.

Sec. 5—Sow under 6 mos.—1st, W. J. Gibson; 2nd, Peter Brodie; 3rd, Logan Bros.; 4th, Fowler Bros.

CLASS 48—ANY OTHER PURE BREED.

Sec. 1—Barrow 6 mos. and under 9 mos.—1st and 2nd, Leonard Court, Donaldston, P. E. I.

Sec. 2—Barrow under 6 mosf—1st and 2nd, Leonard Court.

Sec. 3—Sow 9 mos. and under 15 mos.—1st, 2nd and 3rd, Leonard Court; 4th, Thos. J. Etter, Westmorland Pt.

Sec. 4—Sow 6 mos. and under 9 mos.—1st and 2nd, Leonard Court.

Sec. 5—Sow under 6 mos.—1st and 2nd, Leonard Court; 3rd, Thos. J. Etter.

CLASS 49—GRADES OF ANY BREED.

Sec. 1—Barrow 6 mos. and under 9 mos.—1st, J. W. Callbeck; 2nd and 4th, Fred T. Holmes, Amherst; 3rd, W, N. Boomer, West Amherst.

Sec. 2—Barrow under 6 mos.—1st, A. A. McBeath; 2nd, Peter Brodie; 3rd, Jas. J. Stewart; 4th, Edwin Forrest, Amherst Pt.

Sec. 3—Sow 9 mos. and under 15 mos.—1st, A. A. McBeath; 2nd, Geo. M. Holmes, Amherst.

Sec. 4—Sow 6 mos. and under 9 mos.—1st, J. W. Callbeck; 2nd, Fowler Bros.; 3rd, W. N. Boomer; 4th, Edwin Forrest.

Sec. 5—Sow under 6 mos.—1st, Fowler Bros.; 2nd and 3rd, Chas. Forrest, Amherst Pt.; 4th, Peter Brodie.

CLASS 52.

Donated by the Dominion Swine Breeders' Association, A. P. Westervelt, Secretary, Parliament Buildings, Toronto, Ontario.—Best Sow 9 mos. and under 15 mos.—1st, Thos. J. Etter, Westmorland Pt.

Best sow under 6 mos.—2nd, Thos J. Etter.

Open to New Brunswick only.

CLASS 51.

Donated by the Dominion Swine Breeders' Association. A. P. Westervelt, Secretary, Parliament Buildings, Toronto, Ontario.—Best Sow 9 mos. and under 15 mos.—1st, Fowler Bros., Amherst.

Best Sow 6 mos. and under 9 mos.—1st, Jas. J. Stewart, Amherst Pt.

Best Sow under 6 mos.—1st, W. C. Black, Salem, N. S.

Open to Nova Scotia only.

CLASS 53.

Donated by the Dominion Swine Breeders' Association, A. P. Westervelt, Secretary, Parliament Buildings, Toronto, Ontario.—Best Sow 9 mos. and under 15 mos.—1st, A. A. McBeath.

Best Sow 6 mos. and under 9 mos.—1st, A. A. McBeath.

Sow under 6 mos.—W. J. Gibson.

Open to Prince Edward Island only.

CLASS 54.

GRAND CHAMPIONSHIP INDIVIDUAL.

Silber Cup donated by the Atlas Stock Food Co., Amherst, for best animal any breed or grade, won by W. J. Gibson.

CLASS 55.

GRAND CHAMPIONSHIP PEN.

Silver Cup donated by Percy B. Evans, Grocer, St. John, won by A. A. McBeath.

CLASS 50.

DRESSED CARCASSES.

Pair of carcasses must have been shown in foregoing classes.

1st, 3rd and 6th, J. W. Callbeck, Summerside, P. E. I.; 2nd and 4th, Peter Brodie, Little York; 5th and 12th, A. A. McBeath, Marshfield, P. E. I.; 7th, Roper Bros., Charlottetown, P. E. I.; 8th and 9th, W. J. Gibson, Marshfield, P. E. I.; 10th, Geo. M. Holmes, Amherst, N. S.; 11th Leonard Court, Donaldston, P. E. I.

Poultry

CLASS 56—BRAHMAS, LIGHT.

Sec.1—Cock—1st, Warren Watt, Pictou; 2nd, Thos. Latham, Sylvester.

Sec. 2—Hen—1st. Hartland Poultry Yards; 2nd, J. McCully Pipes, Nappan.

Sec. 3—Cockerel—1st, J. McCully Pipes; 2nd, D. A. Smith, Shediac, N. B.

Sec. 4—Pullet—1st, E. A. Smith, Shediac, N. B.; 2nd, J. McCully Pipes

CLASS 57—BRAHMA, DARK.

Sec. 1—Cock—1st, Hartland Poultry Yards; 2nd, Thos. Latham.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Hartland Poultry Yards.

Sec. 4—Pullet—1st and 2nd, Hartland Poultry Yards.

CLASS 58—COCHIN, BUFF.

Sec. 1—Cock—1st, Wm. A. Balsor, Moncton; 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st and 3rd, Wm. A. Balsor; 2nd, Dennis D. Leger, Amselme.

Sec. 4—Pullet—1st and 2nd, Wm. A. Balsor; 3rd, Dennis D. Leger.

CLASS 59—COCHIN A. O. V..

Sec. 1—Cock—1st and 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Thos. Latham; 2nd, Hartland Poultry Yards.

CLASS 60—DORKINGS.

Sec. 1—Cock—1st, Earl Roach, Amherst, N. S.; 2nd, Donald G. Robertson, Amherst.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, Earl Roach.

Sec. 3—Cockerel—1st, Earl Roach; 2nd, Donald G. Robertson.

Sec. 4—Pullet—1st, Earl Roach; 2nd, Donald G. Robertson.

CLASS 61—PLY. ROCK BARRED.

Sec. 1—Cock—1st and 2nd, Craig Bros., Amherst; 3rd, L. H. D. Foster, Marshfield.

Sec. 2—Hen—1st and 6th, Craig Bros.; 2nd, 3rd and 4th, Glenview Poultry Yards, Sussex; 5th, L. H. D. Foster.

Sec. 3—Cockerel—1st, L. H. D. Foster; 2nd, 3rd, 4th and 5th, Craig Bros.; 6th, Watson Lutz, Moncton.

Sec. 4—Pullet—1st, L. H. D. Foster 2nd and 6th, Craig Bros.; 3rd, Wm. Fanning, Amherst; 4th, Glenview Poultry Yards; 5th, Watson Lutz.

CLASS 62—PLY. ROCK, WHITE.

Sec. 1—Cock—1st, Geo. Callbeck, Summerside; 2nd, R. Carter, Halifax; 3rd, Albert Boswall, Jr.

Sec. 2—Hen—1st, Geo. Callbeck; 2nd and 5th, R. Carter: 3rd, John F. Ives, Pictou; 4th, Wm. Weiss & Co., Halifax; 6th, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Cooke McCallum, Lyons Brook; 2nd, John F. Ives; 3rd, Albert Boswall, Jr.

Sec. 4—Pullet—1st, Albert Boswall; 2nd, Geo. Callbeck; 3rd, John F. Ives.

CLASS 63—PLYMOUTH ROCK BUFF

Sec. 1—Cock—1st, H. D. Thompson, Stellarton; 2nd, Wm. Weiss & Co.; 3rd, L. H. D. Foster.

Sec. 2—Hen—1st, H. D. Thompson; 2nd, L. H. D. Foster; 3rd, Wm. Weiss & Co.

Sec. 3—Cockerel—1st and 2nd, Haszard & Duchemin, Charlottetown; 3rd, H. D. Thompson.

Sec. 4— Pullet—1st, H. D. Thompson; 2nd and 3rd, Haszard & Duchemin.

CLASS 64—WYANDOTTES, GOLDEN.

Sec. 1— Cock—1st, Hartland Poultry Yards; 2nd, Wm. Weiss & Co.

Sec. 2—Hen—1st, Wm. Weiss & Co.; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Hartland Poultry Yards.

Sec. 4— Pullet—1st, Hartland Poultry Yards.

CLASS 65—WYANDOTTES, SILVER.

Sec. 1—Cock—1st, S. E. McKie, Moncton, N. B.; 2nd, Thos. Latham; 3rd, David Landalls, Sackville.

Sec. 2—Hen—1st and 4th, S. E. Mc Kie; 2nd and 6th, Robt. A. Knight, Moncton; 3rd, Jas. Retson, Truro; 5th, E. S. Brown, Pictou, N. S.

Sec. 3—Cockerel—1st and 2nd, S. E. McKie; 3rd, John D. Fraser, Pictou.

Sec. 4—Pullet—1st, E. S. Brown; 2nd and 3rd, E. S. McKie; 4th, John D. Fraser; 5th, S. E. McKie; 6th, Robt. Knight.

CLASS 66—WYANDOTTE, BUFF.

Sec. 1—Cock—1st and 2nd, Kingsdale Poultry & Supply Co.

Sec. 2—Hen—1st, Kingsdale Poultry & Supply Co.; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Kingsdale Poultry & Supply Co.; 2nd, Hartland Poultry Yards.

Sec. 4— Pullet—1st, Hartland Poultry Yards; 2nd, Kingsdale Poultry & Supply Co.

CLASS 67—WYANDOTTE, WHITE

Sec. 1—Cock—1st and 2nd, A. C. Reid, Tignish, P. E. I.; 3rd, Kingsdale Poultry & Supply Co.

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Sec. 2—Hen—1st, A. C. Reid; 2nd, J. A. Simpson, Amherst; 3rd, J. S. Thompson, East Amherst.

Sec. 3—Cockerel—1st, A. C. Reid; 2nd, Kingsdale Poultry & Supply Co.; 3rd, J. A. Simpson.

Sec. 4—Pullet—1st, 2nd and 6th, A. C. Reid; 3rd, J. A. Simpson; 4th and 5th, Watson Lutz.

CLASS 68.

WYANDOTTE COLUMBIAN.

Sec. 1—Cock—1st, W. H. Henry, Shubenacadie; 2nd, Orchard Hill Farm, Brown's Flats.

Sec. 2—Hen—1st, W. H. Henry; 2nd, C. R. McKay, Pictou, N. S.; 3rd, Orchard Hill Farm.

Sec. 3—Cockerel—1st, Orchard Hill Farm; 2nd, C. R. McKay; 3rd, Haszard & Duchemin.

Sec. 4—Pullet—1st, Orchard Hill Farm; 2nd, Haszard & Duchemin; 3rd, Hartland Poultry Yards.

CLASS 69—ANDALUSIAN.

Sec. 1—Cock—1st and 2nd, Hartland Poultry Poultry Yards; 3rd, Fred E. Steeves, Moncton.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd and 3rd, Fred E. Steeves.

Sec. 3—Cockerel—1st, Hartland Poultry Yards; 2nd and 3rd, Fred E. Steeves.

Sec. 4—Pullet—1st and 3rd, Fred E. Steeves; 2nd, Hartland Poultry Yards.

CLASS 70—MINORCAS BLACK S. C.

Sec. 1—Cock—1st, R. B. Stewart, Moncton; 2nd and 3rd, Kingsdale Poultry & Supply Co.; 4th, Dennis D. Leger; 5th, R. Carter; 6th, Wm. Weiss & Co.

Sec. 2—Hen—1st and 3rd, Kingsdale Poultry & Supply Co.; 2nd and 4th, R. B. Stewart; 5th, Arthur E. Stone, Moncton; 6th, Sadie E. Shipley, Amherst.

Sec. 3—Cockerel—1st, Kingsdale Poultry & Supply Co.; 2nd, R. B. Stewart; 3rd, Arthur E. Stone.

Sec. 4—Pullet—1st and 3rd, R. B. Stewart; 2nd, Kingsdale Poultry & Supply Co.; 4th, Dennis Leger; 5th, Fred E. Steeves; 6th, Arthur Stone.

CLASS 71—MINORCAS BLACK, R.C.

Sec. 1—Cock—1st, Kingsdale Poultry & Supply Co.

Sec. 2—Hen—1st, John D. Fraser; 2nd, Kingsdale Poultry & Supply Co.

Sec. 3—Cockerel—1st, John D. Fraser.

Sec. 4—Pullet—1st, John D. Fraser.

CLASS 72—BLACK SPANISH, W. F.

Sec. 1—Cock—1st and 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, John F. Burke, Charlottetown.

Sec. 3—Cockerel—1st, Hartland Poultry Yards; 2nd, John F. Burke.

Sec. 4—Pullet—1st, Hartland Poultry Yards; 2nd, John F. Burke.

CLASS 73—LEGHORNS, WHITE S C

Sec. 1—Cock—1st and 2nd, J. A. Simpson; 3rd, Hartland Poultry Yards.

Sec. 2—Hen—1st, J. A. Simpson; 2nd, Hartland Poultry Yards; 3rd, H. D. Thompson.

Sec. 3—Cockerel—1st, Orchard Hill Farm; 2nd and 5th, H. D. Thompson; 3rd and 4th, Wm. Weiss & Co.; 6th, Hartland Poultry Yards.

Sec. 4—Pullet—1st, R. Carter; 2nd and 6th, J. S. Thompson; 3rd, Orchard Hill Farm; 4th, H. D. Thompson; 5th, Wm. Weiss & Co.

CLASS 74—LEGHO&NS, BROWN S C

Sec. 1—Cock—1st, Glenview Poultry Yards; 2nd, W. H. Henry; 3rd, Dennis D. Leger.

Sec. 2—Hen—1st and 2nd, Glenview Poultry Yards; 3rd, R. Carter.

Sec. 3—Cockerel—1st, R. Carter; 2nd and 5th, W. H. Henry; 3rd, 4th and 6th, Glenview Poultry Yards.

Sec. 4—Pullet—1st, 3rd and 5th, Glenview Poultry Yards; 2nd and 6th, W. H. Henry; 4th, Dennis Leger.

CLASS 75—LEGHORNS BROWN,R C.

Sec. 1—Cock—1st, E. H. Hall, Shubenacadie, N. S.; 2nd, John Suckling, Truro.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, David Landall, Sackville; 3rd, E. H. Hall.

Sec. 3—Cockerel—1st, Edwin J. Mc Grath, Tgtamagouche; 2nd, E. H. Hall; 3rd, John Suckling.

Sec. 4—Pullet—1st, Edwin J. Mc Grath 2nd, David Landalls; 3rd Hartland Poultry Yards.

CLASS 76—LEGHORNS, BUFF S. C.

Sec. 1—Cock—1st, Hibbert Lawrence, Nappan, N. S.; 2nd, Wm Weiss & Co.

Sec. 2—Hen—1st and 2nd, Maritime Poultry Supply Co.; 3rd, Wm Weiss & Co.

Sec. 3—Cockerel—1st, Maritime Poultry Supply Co.; 2nd and 3rd, Hartland Poultry Yards.

Sec. 4—Pullet—1st and 2nd, Maritime Poultry Supply Co.; 3rd, Hibbert Lawrence.

CLASS 77—LEGHORNS, A. O. V.

Sec. 1—Cock—1st and 2nd, E. H. Hall.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, Maritime Poultry & Supply Co.

Sec. 3—Cockerel—1st, Hartland Poultry Yards; 2nd, E. A. Smith, Shediac; 3rd, Maritime Poultry & Supply Co.

Sec. 4—Pullet—1st, Maritime Poultry Supply Co.; 2nd, E. H. Hall; 3rd, E A Smith.

CLASS 78—GAME, BLACK RED

Sec. 2—Hen—1st and 2nd, C. Snowden, Amherst, N. S.

Sec. 3—Cockerel—1st, C. E. Snowden.

Sec. 4—Pullet—1st, C. E. Snowden.

CLASS 80—GAME INDIAN COR. &W

Sec. 1—Cock—1st and 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Hartland Poultry Yards.

Sec. 4—Pullet—1st, Hartland Poultry Yards.

CLASS 81—GAME, PYLE.

Sec. 1—Cock—1st, Thos. Latham.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

CLASS 82—GAME, A. O. V.

Sec. 1—Cock—1st and 2nd, Arthur Dobson, Amherst, N. S.

Sec. 2—Hen—1st, Arthur Dobson; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st and 2nd, Arthur Dobson.

Sec. 4—Pullet—1st and 2nd, Arthur Dobson.

CLASS 84—HAMBURGS, BLACK.

Sec. 1—Cock—1st and 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, John F. Burke; 2nd, Hartland Poultry Yards.

Sec. 4—Pullet—1st, J. F.Burke; 2nd, Haszard & Duchemin.

CLASS 84—HAMBURGS G. P. & S.P.

Sec. 1—Cock—1st and 2nd, John F. Burke.

Sec.2—Hen—1st and 2nd, John F. Burke.

Sec. 3—Cockerel—1st and 2nd, Haszard & Duchemin.

Sec. 4—Pullet—1st and 2nd, Haszard & Duchemin.

CLASS 85—HAMBURGS G. S. or S.S.

Sec. 1—Cock—1st, Thos. Latham; 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Haszard & Duchemin; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Haszard & Duchemin; 2nd, John F. Ives.

Sec. 4—Pullet—1st, Hartland Poultry Yards; 2nd, Haszard & Duchemin.

CLASS 86—POLANDS.

Sec.1—Cock—1st and 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, J. T. Waugh, Tatamagouche, N. S.

Sec. 4—Pullet—1st and 2nd, Hartland Poultry Yards.

CLASS 87—HOUDANS.

Sec. 1—Cock—1st and 2nd, Earl T. Duchemin.

Sec. 2—Hen—1st and 2nd, Earl T Roach.

Sec. 3—Cockerel—1st and 2nd, Karl T. Roach.

Sec. 4—Pullet—1st, Hartland Poultry Yards; 2nd and 3rd, Earl Roach.

CLASS 88.

ORPINGTON BUFF S. C.

Sec. 1—Cock—1st, Mrs. Wm. Robertson, Amherst; 2nd, C. H. Wisener, Pictou; 3rd, Haszard & Duchemin.

Sec. 2—Hen—1st, Mrs. Wm. Robertson; 2nd, E. S. Brown; 3rd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Mrs. Wm. Robertson; 2nd, 3rd, 4th and 5th, Haszard & Duchemin; 6th, E. S. Brown.

Sec. 4—Pullet—1st, 2nd and 6th, Haszarh & Duchemin; 3rd, E. S. Brown; 4th, Cooke McCallum, Lyons Brook; 5th, Mrs. Wm. Robertson.

CLASS 89—ORPINGTONS, A. O. V.

Sec. 1—Cock—1st, C. H. Wisener; 2nd, Ripley Bros., Maccan, N. S.

Sec. 2—Hen—1st and 2nd, Kingsdale Poultry & Supply Co.; 3rd, C. H. Wisener.

Sec. 3—Cockerel—1st, M. B. Jones, Moncton, N. B.; 2nd, E. H. Parsons, Springhill; 3rd, Kingsdale Poultry & Supply Co.

Sec. 4—Pullet—1st, Kingsdale Poultry & Supply Co.; 2nd and 3rd, M. B. Jones.

CLASS 90—ORPINGTONS, BLACK

Sec. 1—Cock—1st, C. H. Wisener; 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, C. H. Wisener; 2nd, R. Carter.

Sec. 3—Cockerel—1st, C. H. Wisener.

Sec. 4—Pullet—1st, C. H. Wisener; 2nd, Hartland Poultry Yards.

CLASS 91—BANTAMS, GAME.

Sec. 1—Cock—1st, Hartland Poultry Yards.

Sec. 2—Hen—1st, Hartland Paultry Yards.

Sec. 3—Cockerel—1st, Hartland Poultry Yards.

Sec. 4—Pullet—1st, Hartland Poultry Yards; 2nd, E. A. Smith.

CLASS 92—BANTAMS SEABRIGHT.

Sec. 1—Cock—1st, Haszard & Duchemin; 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Haszard & Duchemin; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, E. A. Smith.

Sec. 4—Pullet—1st, Hartland Poultry Yards; 2nd, E. A. Smith.

CLASS 93—BANTAMS, COCHIN.

Sec. 1—Cock—1st, Haszard & Duchmin; 2nd, Hartland Poultry Yards; 3rd, Maritime Poultry & Supply Co.

Sec. 2—Hen—1st, Haszard & Duchemin; 2nd, Hartland Poultry Yards 3rd, Maritime Poultry & Supply Co.

Sec. 3—Cockerel—1st, Maritime Poultry & Supply Co.; 2nd, Hartland Poultry Yards; 3rd, Geo. H. Seaman, Moncton.

Sec. 4—Pullet—1st, Maritime Poultry & Supply Co.; 2nd, Hartland Poultry Yards.

CLASS 94—BANTAMS, A. O. V.

Sec. 1—Cock—1st, Maritime Poultry & Supply Co.; 2nd, E. S. Brown; 3rd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Haszard & Duchemin; 2nd, E. S. Brown 3rd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Maritime Poultry & Supply Co.; 2nd and 3rd, Hartland Poultry Yards.

Secf 4—Pullet—1st, Hartland Poultry Yards; 2nd, E. S. Brown; 3rd, Haszard & Duchemin.

CLASS 95—RHODE ISLAND RED.

Sec. 1—Cock—1st and 2nd, Glenview Poultry Yards; 3rd, John Higson, Stellarton.

Sec. 2—Hen—1st, Hartland Poultry Yards; 2nd, John Higson; 3rd, Haszard & Duchemin.

Sec. 3—Cockerel—1st and 6th, John Higson; 2nd and 5th, W. H. Henry; 3rd, Glenview Poultry Yards; 4th, E. A Smith.

Sec. 4—Pullet—1st W. H. Henry; 2nd, Ed. J. McGrath; 3rd, John Higson; 4th, Glenview Poultry Yards; 5th, E. A. Smith; 6th, Haszard & Roach, Amherst.

CLASS 96—RHODE ISLAND R. R. C.

Sec. 1—Cock—1st, Alex. Urquhart, Stellarton, N. S.; 2nd, Geo. H. Seaman.

Sec. 2—Hen—1st, W. H. Henry; 2nd, G. H. Seaman; 3rd, Alex. W. Urquhart.

Sec. 3—Cockerel—1st, Alex. Urquhart; 2nd, Dr. J. W. Clarke, Tatamagouche; 3rd, Hartland Poultry Yards.

Sec. 4—Pullet—1st, Alex. Urquhart; 2nd, W. H. Henry; 3rd and 5th, Dr. J. W. Clarke; 4th, Hartland Poultry Yards; 6th, C. R. McKay.

CLASS 97—LANGSHANS, A. V.

Sec. 1—Cock—1st, Harold H. Weeks Amherst; 2nd, Hartland Poultry Yards.

Sec. 2—Hen—1st, Wm. Mitchell, Halifax; 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st and 2nd, Harold Weeks.

Sec. 4—Pullet—1st and 2nd, Harold Weeks; 3rd, Hartland Poultry Yards.

CLASS 98—ANCONAS.

Sec. 1—Cock—1st, Hartland Poultry Yards.

Sec. 2—Hen—1st and 2nd, Hartland Poultry Yards.

Sec. 3—Cockerel—1st, Hartland Poultry Yards.

Sec. 4—Pullet—1st, Hartland Poultry Yards.

CLASS 99—ANY OTHER VARIETY.

Sec. 1—Cock—1st, C. R. McKay.

Sec. 2—Hen—1st,Aaron Moreash, Oakfield.

Sec. 3—Cockerel—1st, C. R. McKay; 2nd and 3rd, Wm. Weiss & Co.

Sec. 4—Pullet—1st and 2nd, Wm. Weiss & Co.; 3rd, Aaron Moreash.

TURKEYS, GEESE AND DUCKS.

CLASS 100—TURKEYS, BRONZE

Sec. 1—over 1 yr. Male—1st, Albert Boswall, French Fort; 2nd, M. H. Parlee, Lr. Millstream; 3rd, Edgar Harrison, Maccan; 4th, J. W. Smith, Moncton, N. B.

Sec. 2—Female—1st and 4th, M. H. Parlee; 2nd, Hartland Poultry Yards; 3rd, Hibbert Lawrence, Nappan Sta.

CLASS 101—TURKEYS, BRONZE

Sec. 1—1911 Male—1st, M. H. Parlee; 2nd, Edgar Harrison; 3rd, J. Titus Barnes, Sussex; 4th, Albert Boswall.

Sec. 2—1911 Female—1st, M. H. Parlee; 2nd, Albert Boswall; 3rd, Edgar Harrison; 4th, J. Titus Barnes.

CLASS 102—TURKEYS, WHITE

Sec. 1—over 1 yr. Male—1st, Hartland Poultry Yards.

Sec. 2—over 1 yr. Female—1st, Albert Boswall; 2nd, Hartland Poultry Yards.

CLASS 103—TURKEYS, WHITE

Sec. 2—1911 Female—1st, Hartland Poultry Yards.

CLASS 104—TURKEYS, A. O. V.

Sec. 1—over 1 yr. Male—1st, Thos. J. Etter, Westmorland Pt.; 2nd, Hartland Poultry Yards.

Sec. 2—iver 1 year Female—1st, Thos. J. Etter; 2nd, Hartland Poultry Yards.

CLASS 105—TURKEYS, A. O. V.

Sec. 1—1911 Male—1st, Robt. Black, Amherst, N. S.; 2nd and 4th, Thos. J. Etter; 3rd, Hartland Poultry Yards.

AT THE SHEEP MEN'S MEETING.

Mr. Rich outlined the objects of the Association and Messrs. S. A. Logan J. B. Daggett, J. A. Telfer, Geo. Retson, W. W. Hubbard and S. L. Peters spoke of some of the questions that could be effectively handled by the Association all of which would tend towards the upliftinb of the sheep industry in the Maritime Provinces.

Persons wishing to help the Sheep Industry along should join the Association. Mr. Telfer will be pleased to enlist every sheep man in Nova Scotia, New Brunswick and Prince Edward Island. He has such faith in the sheep business that we believe he would sit up nights filling in membership certificates. Keep him busy for a while.

How to Completely Cure

nearly 100 diseases of farm stock is told in FLEMING'S VEST POCKET VETERINARY ADVISER. Write for this indexed, illustrated 96 page book—it's free.

Tells how to cure the dreaded

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If it or any other of Fleming's Remedies fails to cure, we will refund your money.

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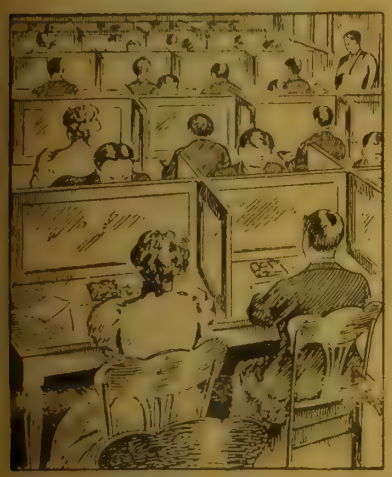
G. T. P. School of Telegraphy and Railroading



and prepare for positions as Operators and Agents on the Grand Trunk Pacific in N. B. Big demand. $50 to $75 monthly.

Brother Farmer Got a Good Position.

Mr. George Campbell of Gordensville, Carleton Co., N. B. has been selected and recommended by the "Great Trans-Pacific School of Telegraphy & Railroading," EMPLOYMENT DEPARTMENT, to fill the position as Asst. Agent and Operator at Sherman Sta., on the Bangor & Aroostook Railroad. Word has just been received that he has been transferred to Patten Station, (with an increase of salary).

Station Agents, are provided with Free House, Coal, Oil, etc., in addition to their salary, $55 to $120 monthly. "THINK IT OVER," Can YOU find any better position? Mr. Campbell don't think so.

Another Position.

Mr. Harold G. Meisner, of Springhill, Annapolis Co., N. S., has been selected and recommended by THIS school's "Employment Department," to fill the position as Assistant Agent and Operator at Milo Jct. on the Bangor & Aroostook R. R. What we have done for him we can do for you. Winter term begins TUESDAY, JANUARY 2nd, 1912, residental school. Free catalogue, rates and full particulars, address

W.T. Little, Principal, Fredericton, N. B.

You will find that druggists everywhere speak well of Chamberlain's Cough Remedy. They know from long experience in the sale of it that in cases of coughs and colds it can always be depended upon, and that it is pleasant and safe to take. For sale by all dealers.

Sec. 2—1911 Female—1st, Hartland Poultry Yards; 2nd, Thos. J. Etter.

CLASS 106—GEESE, TOULOUSE

Sec. 1—over 1 year Male—1st, Albert Boswall; 2nd, Thos. C. Latham, Sylvester; 3rd, Edgar Harrison; 4th, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st, Albert Boswall; 2nd, Hartland Poultry Yards; 3rd, Thos. C. Latham.

CLASS 107—GEESE, TOULOUSE

Sec. 1—1911 Male—1st, Albert Boswall; 2nd and 4th, Edgar Harrison; 3rd, Hartland Poultry Yards.

Sec. 2—1911 Female—1st, Albert Boswall; 2nd and 4th, Edgar Harrison; 3rd, Hartland Poultry Yards.

CLASS 108—GEESE, B. or E.

Sec. 1—over 1 year Male—1st, Albert Boswall; 2nd, J. Titus Barnes; 3rd, Hartland Poultry Yards; 4th, Hibbert Lawrence.

Sec. 2—over 1 year Female—1st, Albert Boswall; 2nd, J. Titus Barnes; 3rd, Hibbert Lawrence; 4th, Hartland Poultry Yards.

CLASS 109—GEESE B. or E.

Sec. 1—1911 Male—1st and 2nd, Albert Boswall; 3rd, J. Titus Barnes; 4th, Hibbert Lawrence; 5th, Hartland Poultry Yards.

Sec. 2—1911 Female—1st and 2nd, Albert Boswall; 3rd, J. Titus Barnes; 4th, Hibbert Lawrence.

CLASS 110—GEESE, A. O. V.

Sec. 1—over 1 year Male—1st, Hartland Poultry Yards; 2nd, Albert Boswall; 3rd, Hibbert Lawrence; 4th, Chas. Forrest, Amherst Pt.

Sec. 2—over 1 year Female—1st, Albert Boswall; 2nd, Hartland Poultry Yards; 3rd and 4th, Hibbert Lawrence.

CLASS 111—GEESE, A. O. V.

Sec. 1—0911 Male—1st, Hartland Poultry Yards; 2nd and 3rd, Hibbert Lawrence; 4th, Albert Boswall.

Sec. 2—1911 Female—1st, Hartland Poultry Yards; 2nd, Hibbert Lawrence; 3rd and 4th, Albert Boswall.

DUCKS.

CLASS 112—DUCKS, PEKIN

Sec. 1—over 1 year—1st, Albert Boswa,l; 2nd, Maritime Poultry Supply Co.; 3rd, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st and 2nd, Maritime Poultry Supply Co.; 3rd, Albert Boswall.

CLASS 113—DUCKS, PEKIN

Sec. 1—1911 Male—1st, Albert Boswall; 2nd and 3rd, Maritime Poultry Supply Co., Moncton.

CLASS 114—DUCKS, ROUEN

Sec. 1—over 1 year Male—1st, Hibbert Lawrence; 2nd, Albert Boswall; 3rd, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st, Albert Boswall; 2nd, Hibbert Lawrence.

CLASS 115—DUCKS, ROUEN

Sec. 1—1911 Male—1st, Hartland Poultry Yards; 2nd and 3rd, Hibbert Lawrence.

Sec. 2—1911 Female—1st, Hartland Poultry Yards; 2nd and 3rd, Hibbert Lawrence.

CLASS 116—DUCKS, MUSCOVEY

Sec. 1—over 1 year Male—1st, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st, Hartland Poultry Yards; 2nd, Hibbert Lawrence.

CLASS 117—DUCKS, MUSCOVEY

Sec. 1—1911 Male—1st, Hartland Poultry Yards.

Sec. 2—1911 Female—1st, Hartland Poultry Yards.

CLASS 118.

DUCKS, INDIAN RUNNER.

Sec. 1—over 1 year Male—1st, Chas. Symes, Minudie; 2nd, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st, Chas. Symes; 2nd, Hartland Poultry Yards.

CLASS 119.

DUCKS, INDIAN RUNNER.

Sec. 1—1911 Male—1st, Chas. Symes 2nd, John F. Ives, Pictou; 3rd, Hartland Poultry Yards.

Sec. 2—1911 Female—1st, Chas. Symes; 2nd and 3rd, John F. Ives.

CLASS 120—DUCKS, CAYUGA.

Sec. 1—over 1 year Male—1st, Hartland Poultry Yards.

Sec. 2—over 1 year Female—1st, Hartland Poultry Yards.

CLASS 121—DUCKS, CAYUGA.

Sec. 1—1911 Male—1st, Hartland Poultry Yards.

Sec. 2—1911 Female—1st, Hartland Poultry Yards.

(Concluded next issue).

Gold Medal for Intercolonial Railway.

The Intercolonial Railway has received notice of the award of a gold medal by the Directors of the Canadian National Exhibition, Toronto, Ont., for the fine display made by the Railway last September, when the "Ocean Limited" Express was ingeniously featured in a large illuminated motion picture which attracted a great deal of attention from the throngs of visitors. The whole display made by the I. C. R. of pictures mounted specimens of fish and game, etc., was very attractive, and the highest award of the Exhibition Management was not amiss. The total attendance at Toronto Exhibition this year was nearly up to the million mark.

Special Fares for the Holiday Season.

On the Intercolonial Railway special fares will prevail for Christmas and New Years. Between all stations on the line a one way first class fare will prevail from December 21st to January 1st, good for return until January 3rd. To Detroit, Port Huron, Sault Ste. Marie, Buffalo, Niagara Falls and points east in Canada beyond Montreal the fare will be first class one way to Montreal added to first class one way fare and one third class beyond; good going from December 21st to January 1st and good for return until January 3rd. This is a pretty generous limit for these reduced fare tickets and it gives ample opportunity for those who wish to spend the Christmas season at home or with relations or friends elsewhere.

TRAPPERS

send us your

FURS

and we will pay you the Highest Prices

REVILLON FRÈRES
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We will send free to every trapper who sends us furs, our book **"The Trapper's Loyal Companion".**

When you have a bilious attack give Chamberlain's Tablets a trial. They are excellent. For sale by all dealers.

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THE BOOK DESCRIBES EVERY STEP IN DETAIL

IN the organization and construction of rural telephone lines, this book, "How to Build Rural Telephone Lines," is a practical guide. It is a carefully classified volume, covering everything you need to know, from the inception of the idea to the moment the telephone is hanging on your own wall, ready for you to use. No question on the building of rural telephone lines can possibly arise without your being able to find the answer to it in this volume. It offers explanation on every point—the solution for every problem. If you are even the least bit interested in the subject, all you have to do is to clip, sign and mail the coupon and

We Will Send You FREE This Book on "How to Build Rural Telephone Lines"

Bear in mind that **you have to ask** for this volume to get it. This book represents 100 profusely illustrated pages of vital facts, bound in stiff, cloth-covered binding. Apart entirely from the cost of printing and binding, this book represents the brain work of experienced telephone men—has cost us so much money that we really ought to make a charge for it. So long as the edition lasts, however, we are willing to send it FREE to every farmer who, by using the coupon, signifies that he is interested in the subject. This book is very frank, it tells you exactly what you can do, what you must do and what you cannot do; you will be interested in the straightforward way in which it comes out with vital information. Systems of rural telephone lines are spreading a network throughout the Dominion in the form of community-owned companies. Sooner or later someone will organize such a system in your locality. Why shouldn't **you** be the man to do it? In any event you owe it to yourself to know all there is to know about this subject. Better send the coupon NOW, while you are thinking about it.

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AND CO-OPERATIVE DAIRYMAN

Library Univ. of Illinois
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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

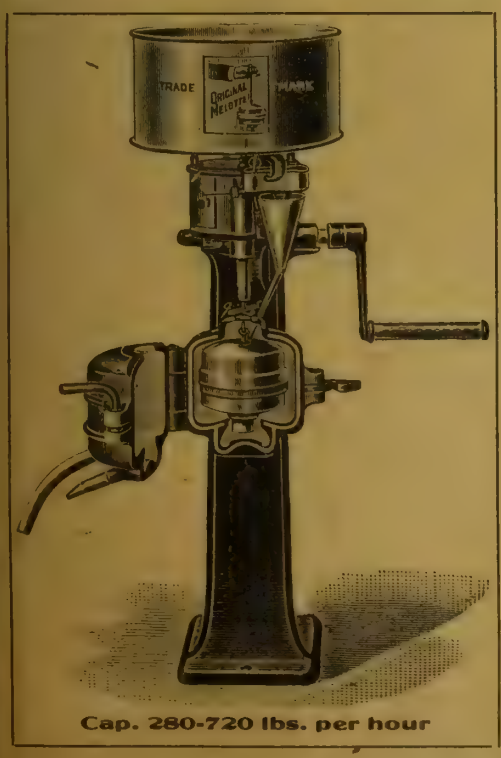
Vol. 17. ST. JOHN, N. B., DECEMBER 26, 1911 No. 6

25 YEARS' USE

In the Dairies of Half a Million Customers Demonstrates that

THE MELOTTE

is the MOST EFFICIENT, SERVICEABLE and PROFITABLE CREAM SEPARATOR ever constructed



Cap. 280-720 lbs. per hour

The "Melotte" pays its original cost within 12 months from date of purchase in EXTRA CREAM alone and there is NO COST for repairs.

The "Melotte" skims more milk with LESS POWER in LESS TIME, and, under all conditions MORE EFFECTIVELY than other Cream Separators.

"MELOTTES" are ALWAYS READY to separate. Ask your neighbor to prove this statement.

If you want a Cream Separator, TRY A MELOTTE, then you'll buy it and be a SATISFIED USER.

It's a Time-Saver, Money-Earner, Satisfaction-Giver, all the year round

MELOTTES are all GUARANTEED to give entire satisfaction, and every machine can be operated before being purchased when in doubt.

Write for New Recommendation Booklet which is All Truth

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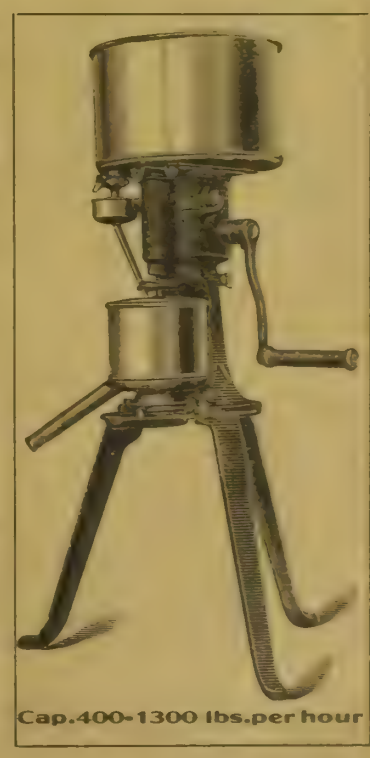

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R. A. LISTER & COMPANY, LIMITED,

82 Water St., ST. JOHN, N. B., or 62 Stewart St., TORONTO

One of the Many Letters We are Receiving Daily

Monastry of Our Lady of Charity,
Ottawa, Ont., Aug. 11th, 1911

Asepto Soaps, Ltd., St. John, N. B.

Dear Sirs:---Please accept our Sincere thanks for having so promptly sent us the premiums asked for. We are delighted with them, they are so beautiful. We remain,

The Sisters of Our Lady of Charity.

Do you realize how quickly you can procure a beautiful premium from us? and that all of the following articles carry coupons that count together on the same premium?

List of Articles That Carry Coupons With Them

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Asepto Soap.
Asepto Soap Powder.
Asepto Woollen Soap.
Asepto Carbolic Soap.
Asepto Hand Cleaner.
Asepto Potash or Lye.
Asepto Ironing Wax.
Asepto Bluing.
Asepto Gloss Starch.
Asepto Scouring Soap.
Asepto Black Harness Soap.
Naptho Soap.
Venus Floating Soap (toilet)
Scott's Scouring Powder.

Specialties

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Bees Honey
Turpentine
Salts
Talcum Powder
Banner Cocoa
Senna
Household Ammonia
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Ebony Shoe Polishes

Ebony Lustre - - - $0.25
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Oils

Banner Axle Oil
Camphorated Oil
Cod Liver Oil
Heavy Machine Oil
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Fish Oil
Carbolated Oil
Castor Oil
Harness Oil
Sweet Oil
Neatsfoot Oil
Olive Oil
Sewing Machine Oil

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Pendleton's Colic Cure
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Allspice
Nutmeg
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Ginger
Pepper
Cinnamon
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Cassia

Banner Fruit Syrups

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Lemon
Orange
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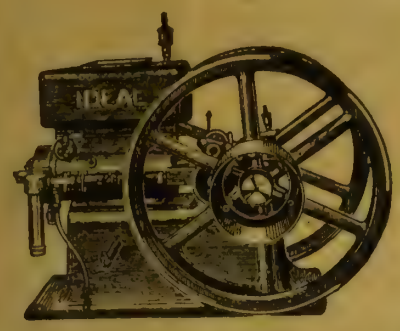

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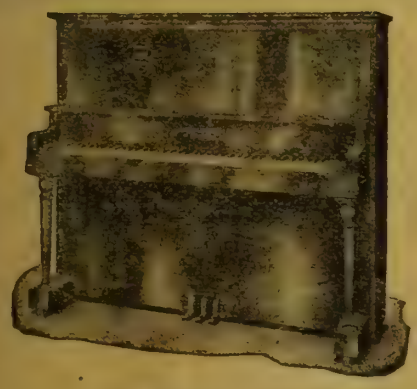

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With a **Sherlock-Manning 20th Century** Piano in your home, you are assured of years of satisfaction and enjoyment. For the **Sherlock-Manning 20th Century** Piano is perfect in tone, finish and workmanship. No piano made surpasses the **Sherlock-Manning 20th Century** in real excellence.

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But it is impossible to tell you all the excellent features of this exquisite Piano. Write for catalogue showing six different styles.

If you do not know the **Sherlock-Manning** dealer near you, write us and we will gladly introduce you to him or we will give you full information by mail direct. You will save money by writing NOW for our catalogue.

Sherlock-Manning Piano and Organ Co.

(No Street Address Necessary) LONDON, CANADA

If Your Advertisement was in This Space Just for One Issue it Would be Read by 50,000 Farmers.

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There's no use Telling you over and over again that the

De Laval Cream Separator

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TRY IT FREE

Then You'll Believe It

And Looking Back, Won't You Be Sorry.

Send for Catalog.

Short Courses at the Agricultural College

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January 2nd to 12th, 1912

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The Short Course for Ladies, held on the same dates, promises to be the most largely attended yet. The subjects taught will be Dairying, Horticulture, Poultry, Domestic Science, and students may attend selective classes from the above Courses.

Tution to students from all the Maritime Provinces FREE.

Board will cost from $3.50 to $4.00 per week.

All Railways grant SINGLE FARE privilege.

For full particulars write

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THE MARITIME FARMER

AND

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, DECEMBER 26, 1911. Number 6.

Agricultural Progress in Newfoundland

St. John's Agricultural Society is Up and Doing.

By P. G. Bulter.

THE St. John's Agricultural Society is "up and doing" importing and supplying to farmers Seeds and Machinery of the best guaranteed quality obtainable in Canada, at greatly reduced prices; also lambs, calves, cows, swine and other animals of pedigree stock, free of duty, for registration in the country.

Many copies of the Maritime Farmer, the official organ of the Society, are distributed free at each Executive and Special Commitee Meeting, fortnightly and on Saturdays in the British Hall, when people also subscribe to this helpful Journal and value it highly. Bulletins on Sheep Raising, etc. received from various Agricultural Boards are also distributed and exchanged frequently and regularly among Agricultural live stock keepers at these meetings, and do much good—a practical library worth having.

Its efforts are also being directed towards the advancement of the great Sheep Raising industry in the districts of St. John's East and West; no less than three shipments of sheep have been already imported from Canada and shared out by the Board, fourteen of the last shipment in St. John's districts alone.

At a well attended meeting of the Society held recently in the British Hall, the following resolution was proposed, seconded and passed unanimously: "That a vote be taken in the Electoral Districts of St. John's East and West as soon as possible, for the destroying of dogs in these districts, to enable its people to go into the valuable industry of Sheep Raising as desired by this Society and deserving of protection and encouragement."

Therefore, this matter has been taken up and will be carried into effect first in St. John's West with as little delay as possible, as the farmers say the few sheep they have are being destroyed by dogs, and those sent out by the Society for breeding purposes are in danger of destruction. Even calves have been killed by dogs recently, so that the farmers run very great risks and this matter needs immediate attention.

The Society considers that the present law for the muzzling, chaining or clogging of dogs and the allowing of setters, etc. to run at large is of no practical value; and although frequent requests have been made as to its being carried out it is openly violated with impunity as everyone knows, therefore, the extermation of dogs that kill sheep in these districts is the only effective remedy.

A few persons may argue that sheep breaking into fields would do still more harm by destroying crops, but the answer is that this is not the case where the sheep industry is being carried on. Sheep Raising is bound to come and the best plan is to get ready for it by putting up wire fences now.

The Society is ready to send out the petition next week prohibiting the keeping of dogs in St. John's West after this winter. Everything possible is being done to advance the interests of the people in this Sheep Raising industry.

President Cowan and Vice-President Snow have been appointed to visit the different settlements during this month, to find out the number of people who koep sheep, the number they keep, the prospects for Sheep Raising in each place and to select the best keepers in preference to anybody who might come along or apply, for during the last few weeks I have received no less than fifty applications for Agricultural Sheep, and this will show you the necessity for using good discretion and the interest that has been awakened in the movement. What is needed is immediate Action, more stock, more instructions, more supervision, and the only means of protection, the killing of dogs, to advancet his work.

The killing of dogs without giving the owners a few ponies between them as well as sheep is to be regretted, but of course, the branch railways and the peat industry here will compensate to a certain extent in facilitating transport operations, especially in getting out fire wood or fuel in car loads, in many cases where dogs were employed previously. In the case of Petty Harbour, where 400 dogs are used for hauling wood in winter, the railway now comes within two miles of the settlement.

I have replied to several advertisements I have seen in Canadian and English papers, in which ponies are offered at only a few dollars each, and it is possible that the people referred to might be persuaded to invest in these in preference to dogs in the future, because it is absolutely necessary that the dogs which are killing the sheep be destroyed and prohibited before very much can be done in Sheep Raising in St. John's West, at least. Therefore, it is hoped that a majority of the people in St. John's West will sign the petition, a copy of which is appended hereto and that the law will be carried out after the 1st day of May next; then and not till then, will there be nothing to prevent people from getting into this great and profitable industry on a large scale as the shortage and high prices of mutton and wool here, and the starting of the new wool factory in St. John's recently, unmistakably prove that there is a great market for mutton and wool at our very doors.

COPY OF PETITION.

To His Excellency the Governor in Council:

The petition of the undersigned humbly showeth:—

That your petitioners are duly qualified electors residing in an area or section of the electoral district of St. John's West comprised and bounded as follows: All outside the municipality of St. John's.

That the said area or section contains the following settlements: Kilbride, Goulds, Petty Harbour, Mount Pearl Road, Topaal Road, Freshwater, Mundy Pond Road, Black Marsh Road, Black Head, Broad Cove, Maddock's Cove, etc.

That your petitioners are desirous and humbly pray your Excellency in Council that a proclamation or notice be issued under the provisions of Chapter 141 of the Consolidated Statutes, prohibiting the keeping of dogs within the above described area or section of the said district after the first day of May, 1912, and your petitioners will ever pay, etc.

LIVE STOCK KEEPER'S BOND.

The following copy of the agreement or bond that our live stock keepers are required to sign, will show that the animals so far sent out cannot be "killed for Christmas" and that the Agricultural Society is not "incapable" as intimated in one of the local papers; also the keepers are choosen on merit, without any respect to party inclinations as is proved by the fact that people on both sides of politics have received Agricultural Society live stock, seeds, machinery, etc., without any discrimination whatever in this respect. Therefore, the assertion that the Society favours either of the two political parties is groundless.

FORM OF AGREEMENT FOR EACH KEEPER

It is hereby mutually agreed between the President of the Agricultural Society of St. John's, Newfoundland, of the first part, and the keeper of the Societie's live stock in the District of St. John's East and West of the second part, that the party of the first part agrees to provide and the said party of the second part agrees to take and keep at his own risk and expense for service at his farm, a bull, sheep. calf, cow or other animal for a period of three years from the date of this agreement. The said party of the second part also agrees to keep the said animal in good order and condition and to permit the said party of the first part or any person or persons authorized by him to inspect the said animal at any time or times to ascertain its condition and should the said party of the first part or such person or persons appointed by him, as aforesaid, be not satisfied with the condition, management or treatment of the said animal to deliver him up to the said party of the first part on receipt of his written order to do so. And further he agrees not to kill the said animal unless in the event of its becoming vicious and then only after notifying the said party of the first part and receiving written authority to that effect. The said party of the second part also further agrees at any time, on receiving an order in writing from the said party of the first part to return the said animal and take in exchange any other animal which may be forwarded by the party of first part.

Registration of Stock—and the said party of the second part also agrees to keep a record of progeny of each animal and to furnish the said party of the first part or such person or persons as he may authorize to receive the same, on or before the first day of July in each year during the continuance of this agreement with a copy of the said record for the year last past, namely, from the first day of July to the last day of June. And the said party of the first part, in consideration of this agreement, agrees that the said animal shall become the property of the said party of the second part at the expiration of the term of three years hereinbefore mentioned.

DATED at this day of A.D. 19 .

Signed in the presence of

Information Wanted.

Editor Maritime Farmer:

To advance the interest of Sheep Raising in this country the St. John's Agricultural Society is encouraging people to keep ponies instead of dogs. In fact all dogs in St. John's districts, no difference how beautiful, will have "to pass in their cheques" after the first day of May next—even the favorite "Newfoundland Dog" must go. Therefore, I wish to know if you or any of your readers would kindly tell me where reliable ponies can be secured cheap in Canada, and the price given per dozen, F.O.B. or C.I.F. St. John's; also where dog skins can be sold, and the price given for each.

The Society will also be importing more sheep, calves, swine and cows in the spring, and will be glad of particulars and prices from any of your advertisers who deal in live stock.

Thanking you for a reply, and for your kindness in inserting this in the Maritime Farmer.—P. G. Butler.

Editor's note:—Can any of our readers give the desired information? Our stock breeders would do well by corresponding with Mr. Butler, telling him what stock they have for sale and at what prices F.O.B.

Care of Potato Seed.

The Minnesota experiment station advises farmers that potatoes for seed should be carefully stored where the temperature will be as low as possible without freezing the potatoes. Narrow bins, slightly raised from the floor, and with slatted sides, are much better for storing seed potatoes than are tight bins. Cellars can often be kept reasonably cool, early in the fall and in the spring, by leaving the windows open at night and closing them in the day time.

THE MEN WHO ADVERTISE in the Maritime Farmer are experts in their business. It will pay you to consult them about your needs in their line. Tell them you are writing them because you saw their advertisement in the Maritime Farmer where all ads are guaranteed.

Maritime Agricultural Societies

Promoting Agriculture at Little She-mogue, N. B.

Editor Maritime Farmer:

Under separate cover, I am sending you a copy of the prize list of our exhibition. If you will refer to its pages you will find mention of some of the lines of work which are proving interesting and valuable in promoting interest in our Agricultural Society and its work.

"Standing cropcompetitions," "exhibits of grain in sheaf," "essays on agricultural subjects," "school competions both in map drawing and writing," held on exhibition day. "collections of weeds and weed seeds," "a cup for the best kept farm" and "a plowing match" are some of the things that are helping to promote agriculture in this district. If any of this work will be of benefit to any reader or other society, we will appreciate it all the more.—J. R. Taylor.

Editor's note: The prize essays referred to in the above article appeared in a recent issue of the Maritime Farmer.

Notes From Grand Falls, N. B.

Editor Maritime Farmer:—

Our Agricultural Society ceased to exist four years ago. Our farmers have adopted a rotation of crops and seed down considerable quantities of clover.

The favorite breeds of live stock in this locality are: Clydesdale and Percheron horses, Holstein and Jersey cattle and a few Ayrshire crosses, Chester White and Yorkshire Swine, and in sheep, mostly all Cotswold and Leicester crosses.

We had a very dry April and May so that there was no broken time during the seeding season. The new grass did not get a good start so newly seeded fields and old meadows were rather light in hay yield. There will, however, be an ample supply of hay for the local demand.

Grains gave a good yield. We do not sow much wheat here as the early frosts have been causing a lot of damage for several years.

Potatoes, which are being exte sively grown in this section, gave good yield.

Garden crops were all good a came in early for this section. Nea every family plant a small kitch garden and grow their own vege bles.

The apple crop, where trees w well cared for, did well. When army worm did not gain a footho gooseberries and currents were good crop.

We do not grow many cultiva strawberries, as we have an abu ance of the wild variety, which d not require cultivating.—Jam Watson.

Andover a Progressive Society.

Editor Maritime Farmer;—

We are advancing in our farm operations rather slowly but, I thi surely. We are gradually doing a with hand labour and using m horse power and machinery. G help is so scarce and wages are high that we are forced to machinery. A few years ago, could be had for from $16 to $20 month, now we pay from $25 to This scarcity of help has affected dairy business more than any ot branch. There are less cows in country to day than ten years but they better fed better c for. The crease in potato bu ess has affected dairy, as as the g There is little b raised in section n and we a home ma for about of it. T are quit number hogs ra but they about all on the ma during two months of October and Nov ber and this sends the price d Good draft horses can hardly found for sale at any price.

The dry weather in the spring an excellent chance for seeding, it was too dry for the grass, and hay crop was short of an aver especially on high land. Grain l ed well and gave promise of a crop, but the very hot and later weather, ripened it too fast befo had time to fill well.

Potatoes were good, although bugs have been plentiful. T was very little blight but dry weather affected the y Turnips also suffered for lack of Potatoes and hay are about the farm products that are shipped this section now. A large am of last years hay was held, awa

New Brunswick School Children are Interested in Fruit Growing. Display of Jams, Jellies and Preserved Fruits Made by the Pupils of the Consolidated School, Kingston, N. B., at the Recent New Brunswick Fruit Show.

a better price.

Our society is trying to help the farmers in procuring good seeds. Last spring we bought nearly $1,700 of grass seeds also 100 tons fertilizer, this was all sold at cost. For two years we have conducted a standing grain competition, this tends to more care with seed and better cultivation. We usually bring in a few pure bred cattle, sheep and pigs every year. Our membership is increasing. We give the Maritime Farmer to each member. The first Women's Institute of the province was organized at Andover this summer. We expect it to do considerable for the welfare and prosperity of the community.—S. B. Wright.

Tidings from Bear River.

Editor Maritime Farmer:—

This vicinity has witnessed much argciultural progress during the past few years. More land is being tilled, the orchards are being better cared for and interest in agriculture is on the increase.

The condition of crops last season, we are sorry to say, was below the average on account of the exceedingly dry season. Hay gave only about two-thirds of an average crop on account of the exceedingly dry season. The potato crop was also below the average. Grain did well in some of our districts but on the highlands the straw was short and poorly headed so that taken as a whole we only had a medium yield. Turnips, mangels and beets did well with some of our farmers while with others they were almost a complete failure. Fruit did well and was particularly free from spot.

The influence of the Agricultural Society for more modern methods leading to "know how" farming has been and is good.

The society had under its control, this year, one Guernsey bull and two Shorthorn bulls, one of which is from a good milking strain. More interest is being taken in the raising of pure bred stock by the members.

The Digby County exhibition was held last October under the auspices of our society.—Geo. I. Brooks.

Slow But Steady Progress.

Editor Maritime Farmer:—

This part of Cape Breton, is making slow but steady progress in the various branches of agriculture. Crops during the past season were very good, although hay was somewhat light on the uplands. We have areas of lowlands and intervals which give an abundant yield so that the crop as a whole will be about average. Our grain crop turned out well.

We believe agricultural societies are doing much good in interesting young men in farm work, and thus induce them to remain at home and go along in the march of improvement. Our society was only organized last year, and of course, we have not as yet been able to do a great deal of work.

Our aim is largely to improve the dairy cattle in this district, and to this end we have purchased a fine 3-year old Holstein bull.

After we see how his stock turns out, and as our society gains strength we will try to improve the other classes of farm live stock.

We are satisfied that the man who farms intelligently in a willing way will make a better living and have a dollar to spare for adverse days than can a labourer in any other class of work.—Gordon J. McLeod, Cleveland, N. S.

A Good Farmer's Cow.

Champion Grade dairy cow at the recent Maritime Winter Fair, Amherst, N. S. This cow was sired by a pure bred Holstein bull and consequently she won the Holstein Friesian Association's Silver Cup. 138.4 pounds milk yielding 4.76 pounds butter fat in 48 hours. Owned and exhibited by Fowler Bros., Amherst Point, N. S.

Fanny K.

The Champion Grade dairy cow also sired by a Holstein bull, at the 1910 Amherst Winter Fair. She had the largest flow of milk, 162.7 pounds at the 1911 Fair but her butter fat production was only 4.14 pounds in 48 hours. Owned by T. W. Keillor, Amherst Point, N. S.

Hemford Agricultural Society.

Editor Maritime Farmer:—

As I am the past secretary of our agricultural society I feel it my duty to respond to a letter handed to me for reply by our present secretary.

I have been a regular subscriber to the Marieime Farmer for the past few years, although I am not a farmer, nevertheless I take a deep interest in farming, for I was raised on a small farm. I take a particular interest in Agricultural Society work. I am pleased to state that I was one of those who helped to organize and keep running our Society. You and probably many of the officers of Agricultural Societies who may read this will know that the organization of an agricultural society is only a small part of the energy necessary to keep matters running smoothly. It requires a lot of active work by the various officers.

We meet with quite a lot of opposition to our society in the form of scrub bulls being allowed to run at large and a lot of cheap talk. Some people say the Agricultural Society is no good and that the pure bred stock we have do not suit them as well as the scrubs. In the face of matters of this kind our society has had its ups and downs, as I suppose all other societies have experienced in the past. I am pleased to state that the financial standing of our society is at present, on a solidbas is. We own a good Durham bull, 16 months old, that is well patronized.

Our society is growing in strength, as cattle for the past year have been very high in price and our people are realizing that it pays to keep good stock. We had a fair crop of hay on our uplands, but not so much as last year, while our meadows were fully as good if not better than last year. Grain and roots did not turn out as well as we would wish, owing to the dryness of the season.

Brooks that we not dry for years were dry for a while last season.

Should this letter be printed, I suppose a lot of people will wonder where Hemford is, so I will tell them. Hempford is a little village in Lunenburg Co., N. S., on the Caledonia Branch of the Halifax and Southwestern Railway, 6 miles from New Germany. We have a railway station here around which clusters a very nice business centre. Farming in summer and lumbering in winter are the principal occupations that tend to keep this thriving little centre agoing.

Farming interests are on the increase, due to high prices for live stock, and to the work of improvement that is being done by the agricultural society. Mr. Fuller, superintendent of Agricultural Societies, has visited us, and was quite well pleased with our progress. He has promised us a share of the Institute speakers in the future, which will benefit our society a great deal.

My Maritime Farmer is always claimed by some one as soon as I am through reading it, so it is needless to say that our people find matters of interest in its columns.—E. W. Mailman.

Rogers Hill in the Line of Improvement.

Editor Maritime Farmer:—

Our Agricultural Society consists of 25 members, all farmers, and all are doing their best to make their business a success. Some years ago, when our society was organized, we made the mistake that lots of other societies are making, viz: — wanting too many breeds of cattle. But as we are all patrons of the creamery at Scotsburn, we are now all of one mind, and are breeding for dairy purposes. We have been breeding Guernesys for a number of years. We own two first-class pure bred bulls, and by keeping heifers from our best cows we are steadily improving our breeds.

Methods of farming are also changing in this section. Before the creamery was started we depended on mixed farming, as we were near Westville and Stellarton, both good local markets, and prices for potatoes, hay, vegetables of all kinds, and fruit were good. Most of our members manufactured their own butter, and by raising the above mentioned produce managed to make a fairly good business, but with a good deal of hard work.

Since the advent of the creamery we are beginning to devote most of our time to dairying, members are keeping more cattle and are feeding them better, and instead of raising vegetables for market, are raising more feed for their dairy cows.

Owing to the very dry summer

(Continued on page 199).

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front page is, in every case, the time to which your subscription is paid.

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NOTICE TO ADVERTISERS—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

DECEMBER 26, 1911.

DATES OF ISSUE.

January ..... .16—30

February ..... .13—27

THE TWILIGHT OF 1911.

Christmas is already here and the twilight of 1911 is rapidly stealing upon us. Soon Father Time will have pulled up the anchor of the year and 1911 will be allowed to drift off into history. Like an influence it can never die. It will have a silent place in the foundation of future history. Like a word let slip, it will never be recalled. The use we have made of it can never be changed. 1911 has given us fairly good seasons and there are evidences of prosperity on every hand. Many difficulties have been encountered and met. Filled with hopes for favorable seasons next year you do not feel sorry as you watch the twilight gather. You look forward to awakening activities, after a brief rest from field work. If you have spent your time and energies well during 1911, you will feel at peace with the world and welcome the dawn of the young, untiring 1912.

RESOLUTIONS FOR THE NEW YEAR.

It is quite customary for persons in all walks of life to make new resolutions, or "turn over a new leaf" at the commencement of a new year. Not a few go forward with their new resolutions ever in view and looking forward to higher ideals. To these success comes sooner or later. Others forget their resolutions almost as soon as they are made and instead of going forward they are found repeating the disastrous mistakes of other years. Instead of attaining success the latter class are found, year after year, plodding along in the same old groove. Let us no longer belong to the latter class, but rather choose the plans exemplified by the former class, and with stubborn persistency aim to make the year I912 a profitable one for ourself and the world at large.

Following are a few resolutions that are worthy of consideration :

Resolved to attend the short courses at the Truro Agricultural College.

Resolved to be more up-to-date in my farming operations.

Resolsed to help supply the demands of the home market.

Resolved to attend as many Institute and farmers meetings as possible.

Resolved to feed and care for my live stock better than ever.

Resolved to test my cows and to get rid, by the shortest possible route, of each and every animal that does not pay.

Resolved to feed, weed and breed my herd of cows so that I may bring them up to an average of at least 8000 pounds of milk a year, and by systematic selection, aim for even higher individual production.

Resolved not to sell anything from the farm except as a finished product.

Resolved to be more careful in the handling of dairy products.

Resolved to be more careful in the housing of my farm machinery.

Resolved to keep a strict account of all my transactions so that I may know my financial standing at any time.

Resolved to store enough ice to last for all household and dairy purposes for one year.

Resolved that when I appear in public I shall strive to do so in such a way, as to bring the mast credit to avocation.

Resolved to read all I can about my chosen calling and take a deep interest in matters that require the attentian of all good citizens.

Resolved to so treat my boys and girls that they will like to remain on the farm instead of moving city events.

Resolved to secure, at least, one new subscriber to the Maritime Farmer, knowing the more rgricultural literature that is read by my neighbors, the more rapid will be the progress of advanced agriculture.

A Merry Christmas and a Happy and Prosperous New Year to all our readers is the hearty wish of the Management and Editors of the Maritime Farmer.

LAST CALL TO THE COLLEGE SHORT COURSES.

Before the first January issue of the Maritime Farmer reaches our readers the 1912 short courses at the Nova Scotia Agricultural College will be in full swing.

Preparations are now being made for the accommodation of what promises to be the largest short course class in the history of the college. These short courses are held during the first two weeks of January each year, for the benefit of farmers and farmers' sons, who cannot spare the time from home to take a long course.

Over 300 farmers and farmers' sons, hailing from all parts of the Maritime Provinces, attended this course last year. They varied in age from 16 to 70, the large proportion being over 30 years. In this course, the very gist of the college work is given. Many have profited by and been pleased so much with the course that they have taken it two or three times. The expenses are light. No tuition is charged. Board has to be paid for ten days at from $3.50 to $4.00 per week, and the railways grant a single fare return from all parts of the Maritime Provinces.

At the same time, as the Short Course for men, a similar Course for ladies is conducted. The principal subjects taught are Dairying, Horticulture, Poultry and Domestic Science. Besides, the ladies are at liberty to take any of the classes in connection with the men's Short Course. The conditions of entrance, expenses, etc., are the same as for the men's Short Course. There were 26 in this class last year, but a much larger number is anticipated for the ensuing year.

Even if never turned to practical account, ladies will find this short course of great benefit. It makes life in the country and even the city more interesting if you know the reason of things and can intelligently discuss problems related to the farm. Besides, the knowledge acquired of butter making, the making of soft cheeses in the home, poultry raising, flower and vegetable growing, cooking and house management, etc., should prove of the greatest value.

Untold benefit has already been derived from these short courses. Can you afford, in this progressive century, to miss the opportunity offered by this most important event of the year 1912? Remember the dates January 2nd to 12th, 1912.

ECONOMICAL FEEDING.

The question of feeding economically is as great as farming economically. The man who contended his cow could live on fresh air didn't quite succeed, because she died about the time he cut her down to one straw a day. No doubt he was feeding economically; yet it didn't pay. There are various tables showing analyses of feed stuffs and it is a good plan to work out a ration that you think best, using your best judgment in studying the capacity of the cow, and weighing and testing her product and then feeding accordingly. You may make mistakes, many of them you never know, no doubt, yet in the main you will be constantly increasing your herd, your land will be getting richer, you will be building better buildings and getting more and better equipment. You may not have a bank account beyond your everyday needs, you may not have money loaned out, you may not possess bank stock nor railroad bonds yet it may give as much satisfaction to see your nice heifers, colts,

pigs, sheep and poultry and to know that you are trying to carry on a progressive and up-to-date line of work, even if you cannot count your profits in dollars. To farm economically is much like any other business. One must spend money to make money. A good building, a fine bull, a valuable mare, will often pay more than six per cent on the investment.

What an Ex-Student Says of the N. S. A. C. Short Courses.

Editor Maritime Farmer:—

I wish to call the attention of the readers of your valuable paper, to the opening of the short courses in agriculture at the Nova Scotia Agricultural College, at Truro, N. S. As doubtless most of your readers are aware, the attendance at these short courses have grown in a most remarkable manner from year to year, as the following figures will show: First year, 60. Last year 300.

The regular college staff are assisted by the best experts, in the various subjects, obtainable in Canada.

The lectures given to the students are of the most practical nature, and perfectly easy for any person to understand. I find in travelling about the country, that some are under the impression that you would need to be a college professor to get at the meaning of the lectures. This is not so. To the average stockman, the demonstrations given in up-to-date judging of all kinds of live stock is easily worth all the expense and time taken by the course, The actual showing to the students of the good and bad types of live stock, and showing the difference between various animals of the same breed, impress them in such a manner as no amount of reading could possibly do. It is a well known fact among all feeders that the buying of the right or wrong type of either beef or dairy cattle, decides whether they will make a profit or loss on the transaction. And as live stock must continue to be the main stay of maritime agriculture, I cannot emphasize this point too strongly on your readers. What is true of this branch of the course is true of all the other branches.

If a man is interested in Horticulture for instance, there are always expert apple growers there from the Valley and elsewhere, who will make him feel as though he should go home and plant an apple tree before going to bed. In these days of fungus and insect pests, so damaging to our various crops, any knowledge as to their suppression or control is of vital importance to us all. And the proper methods to follow to arrive at these results are handled in a most efficient manner by the college staff. Time and space will not permit me to mention in detail each subject taught, nor is it necessary so do. If one is important, the others are perhaps more so, and therefore, as one who has attended the "short courses," and went back and did it the second time, I would say "by all means plan on taking a little holiday and go to Truro the first of January next and you will never regret it, even if you did nothing else than pass experience with your brother farmers."

As to the benefits of the special course for ladies, well! ask the girls what they think of it themselves when you go to Truro.—W. L. MacFarlane, Cumberland Co., N. S.

Editors Note:—We want many more young men like Mr. McFarlane. As stated above he took a short course at the college and finding the results so beneficial he went back and did the same thing over again. Nor was he content with this, he went back again and took the full two years course and graduated last spring. Since then he has been busy on his farm at Fox Harbor, Cumberland Co. He was in St. John this week to superintend the shipping of a carload of 16 head of pure bred Clydesdale fillies that arrived on thd 19th inst. from Scotland, on the Donaldson Liner S.S. Salacia, for B. H. Bull & Sons, Brampton, Ontario.

Display Made by the St. John River Valley Farm and Fruit Lands Co., Burton, Sunbury Co., N. B. at the Recent N. B. Fruit Show.

The Value of Agricultural Education.

Editor Maritime Farmer:—

It is important that the farmers of to day should be educated along their lines of business?

Is there anything to be learned from science as relating to farm work?

To the ones who would say No! to the questions above, I hope they are few, I think we are justified in calling them back numbers. To the ones that will say Yes! is the one to whom this article appeals.

"The twillght of 1911 will soon be stealing in upon us. Soon Father Time will have pulled up the anchor of the year 1911, and it will drift off into the ocean of history. The use we make of it can never be changed, like a misspoken word it can never be recalled."

It is now up to us to use the year 1912, for a larger field of usefulness, than we have used the year that now is swiftly passing into history; remembering the fact thst our years are fast reeling off, and that if we wish to make good, we must, as the poet says: "Be up and doing."

The knowing of how to do the "doing," is I believe, of vast importance.

On the 2nd of next month there will open in the Agriculture College at Truro, N. S., the two week's Short Courses, which has been held there for the past number of years.

They occupy the same length of time as the short courses at the Ontario Agricultural College. I might say that in every Agricultural College in the United States and Canada, and there are many of them, short courses are held during the winter for the advantage of those who cannot take in the long courses.

Considerable has already been said and written about the short courses at Truro. "Truth, however, will always stand repeating." Repeatenly bring to the notice of farmers and their sons what a mine of agricultural knowledge lies at their very doors, cannot be amiss. The way that the short courses are yearly drawing larger numbers to the class rooms at the Agricultural College at Truro, is certainly proof positive that there is something to be gained by attending them.

It cannot be denied that the farmers of these times should have an education to fit them for their work. Some one has said: "The basis of all civilization is agriculture." Can we measure the importance of what agriculture is to the world to day? In fact, agriculture has always been a gage to indicate the progress of a nation or a people. Every nation that has comprehended the significance of its own existence has done what it could to promote the intelligence of the farming class. Look at the nations of the world to day, that are almost useless, where ignorance prevails and civilization does not flourish, and no doubt it will never flourish nor advance until its farmers and the common people feel the uplifting influence of agricultural education. What is it that will make this Canada of ours a greater Canada? What is it that will make these provinces down by the sea, the great east of Canada? Is it anything more than a better knowledge of the art of agriculture and the things that pertain to it.

"Perfect Agriculture is the true foundation of trade and industry," —it is the foundation of the riches of allcivilized domains. We will be nearing the perfect. when we can grow two blades of grass where one grew before, when seting out trees and flowers to improve the looks of the farm home will be the rule rathsr than the exception; when we take better care of our orchard; when we improve our stock and take better care of it. Ontario is nearing the perfect. What is doing it? Who will say that it is not the reading of agriculture literature and the influence of the Ontario Agricultural College in creating an awakening among the farming class? In a nut shell, it is a better understanding of the things pertaining to farm life.

It is at Truro we Maritime farmers can get a better understanding of farm work and learn to elevate our calling to show that there is plenty of room in it for the exercise of all the brain power a man may possess and to point out how farming operations may be improved and conducted to the best advantage to the tiller of the soil. Perhaps there are some who will say that there were farmers, and there are farmers to day who have made a grand success of farming.

(Continued on page 201.)

HORTICULTURE.

Harvesting Onions.

If you have white onions, pull them as soon as a majority of the tops fall. Lay them in rows with the tops at right angles to the rows. Consult the weather man, and don't pull at the beginning of a wet spell. Put on your whole force when they are fit to pick, and do it quickly. In a day or two the roots will be killed, then top, and if dry, store immediately in a well ventilated room, dark, if you can make it so. Light turns them green, and if they get wet and dirty they will never get clean again. This rule applies to red and yellow, although not in so marked a degree, for the outside layer will dry and peel off from these varieties, but they will get weather beaten and faded if left long in the field.

My rule in selling is to let the buyers have them when they want them badly. I have sometimes taken less than my neighbors who were holding for more money, and I have known them to haul theirs to the dump. If prices are good when they can be hauled from the field, it will be a long time, probably before they are better, and the shrinkage in onions is large and increases toward spring. However, prices are usually better in February than November, all things considered, and it generally pays to keep them if they are well stored.

As a rule, white onions are best sold in the fall, for they are very liable to a black mold that gradually spreads over the outer skin and even through the under layers and effectually cuts the price, or may render them wholly unsalable.

It is well before selling to pass the white and yellow over an inch and the red over 1¼ inch screen, leaving out the small ones, which are useless, excepting the small white, which may be used for pickling. If they are not uniform in size, again separate the large white and yellow from the small, for the latter are the best sellers to the best trade.

Finally, don't try to beat the buyer by smuggling in dirt and poor onions. That hurts the market and therefore hurts your neighbor. It hurts the confidence of man in man, and at least reverts back to yourself, whom it hurts worst of all.

Why Fertilize Apple Trees?

Is it necessary to fertilize an apple orchard? For 15 years U. P. Hedrick, of the New York Experiment Station at Geneva, has been carrying on experiments to determine whether or not apple trees need fertilizers other than those in the soil. The following are his conclusions as published in a recent bulletin:

"The fertilizers have had no sensible effects upon the yield of fruit in this experiment.

"The size of the apples is possibly increased by the fertilizers since the percentage of culls and seconds is a trifle higher in the check plats.

"The several current generalization as to the effects of fertilizers on apples find no verification in this experiment.

"All the trees in the several plats have born crops very uniform in maturity, keeping-quality, texture and flavor of apples.

The foliage in the plats receiving nitrogen was greener than in other plats during the last season, the first difference to be certainly counted as an effect of a fertilizer.

"There was also a measurable effect of the nitrogen in the weight of the leaves.

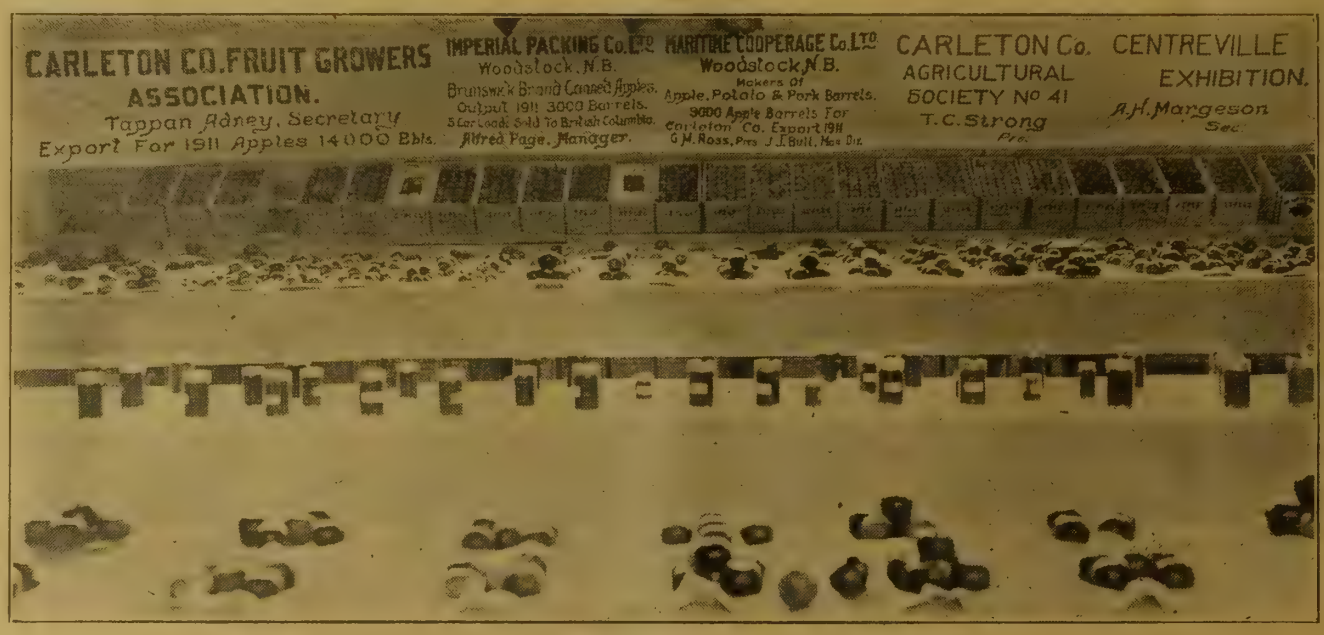
"There is slight evidence that the trees in plats to which nitrogen is applied are making a greater annual growth of branches.

POTASH FOR 713 YEARS.

An analysis of the soil before the experiment was begun shows that at that time there was, in the upper foot of soil, enough nitrogen per acre to last mature apple trees 183 years, of phosphoric acid, 295 years, of potash, 713 years. From this well-nigh inexhaustable storehouse, tillage, cover-crops and good care have made available all the plant food these trees needed.

"A fruit-grower may assume that his trees do not need fertilizers if they are vigorous and making a fair amount of new wood. If the trees are not vigorous the drainage, tillage and sanitary conditions of the orchard should be looked to first and the fertilization afterward if then found necessary. Lastly, before using fertilizers the fruit grower should obtain positive evidence by the experimentation as to whether an orchard needs fertilizers, and what ones. A distinction must be drawn between fertilizing apples and fertilizing grass and apples. In Mr. Hedrick's experiments no crop was taken from the land but apples. Intensive cultivation and cover crops were used.

General View of the N. B. Fruit Show.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T.C. Strong Pres.
CENTREVILLE EXHIBITION.
A.H. Margeson Sec.

The Carleton County Display at the Recent N. B. Fruit Show.

Make a second and a most thoughtful inspection of all fruit and vegetables before placing them in storage-pits or cellar-bins. The least abrasion of the skin of fruits will be rot later on, and a speck of rot at this time will mean an entirely ruined product in midwinter, to say nothing of the other products it may contaminate and spoil by coming in contact with them. Reject all of these undesirable products at once, and thus save handling them in a worse condition after you have gone to the trouble of storing them.

Saving the Sunshine.

Most true conservationists will agree with the Secretary of the Interior in his condemnation of those loud talkers who spend their energies in discussing the wickedness of waste without at the same time being willing to assist in any practicable plan to stop the evils they so greatly deplore. We suspect, however, that few, even of those good citizens who believe in the wisest use of natural

IE POOR DYSPEPTIC

Suffers Untold Agony After Every Meal.

Nearly everything that enters a weak, peptic stomach acts as an irritant; ce the difficulty of effecting a cure. Burdock Blood Bitters will relieve all distressing symptoms of dyspepsia in a short time effect a cure.

Mrs. F. C. Gross, Berlin, Ont., writes: I have been troubled with my stomach the last seven years and tried all kinds medicine for it, but none of them ever ed me, for as soon as I would quit ng any of them, the same old trouble uld come back. Last fall I was ad-d to try Burdock Blood Bitters, which d, and used four bottles, and now feel strong I can do all my house work ly and can eat almost anything with-it affecting me in any way.

Our boy is also using it; he always plained of pain in his stomach and over, like rheumatism, and at the age en had to stay home from school. He n't quite used two bottles yet and is ing good, can attend school regularly eats heartily."

B.B.B. is manufactured only by The Milburn Co., Limited, Toronto, Ont.

ources and who are sincerely eager safeguard the public good both and here-after, realize how easy s to neglect opportunities for con-vation which lie at your door. coal and forests in Alaska are of t importance, but the discharge of duty with regard to them will occupy much of our time. A rer need is to see that we make best use of natural resources in own back yards. How about king "two blades of grass grow re one grew before"? Why isn't t just as important as keeping the l or saving the streams or doing of the thousand and one things t we individually can only talk ut? Our truest conservationists those gardeners and farmers who ch the sunshine and husband the and strive intelligently to keep e in production with the increase the non-agricultural population.

he need of conservation of food-plying resources is obvious. There more people in America every r and every year the soil if unre-lished is impoverished. The area rich land decreases and the cost of ng rises. Conservation of the ential power of sun and soil is the y reasonable solution of the pro-m of nation-feeding and just here our opportunity. What is for the ion's good is also for our individ-profit. The wise use of the soil ans money in our pockets.

he very greatest product of land derived from "intensive garden-." Through generations of intel-nt selection and breeding thor-hbred seeds have been developed se yield far surpasses in quality l quantity that of the ordinary ains. You can be a true conser-ionist if you have a successful den. Be sure, however, to start ht by planting thoroughbred seeds. se can be bought of seedsmen hav-sufficient capital and experience know what they are about and a utation to maintain.

Protect Trees Against Borers.

Young orchards are injured by bor-, rabbits and mice and should be protected against these pests.

A very simple remedy is to take the dirt carefully away as far down as the white bark of the roots and let the tree trunk dry. Then paint it with a mixture of pure white lead thinned to the consistency of cream with pure raw linseed oil. Let the paint dry before replacing the dirt.

But before you paint the trees be sure and dig out the borers with a wire. They will be found near the ground line. Paint the trees a foot or more above ground line.

For young orchards paint in the spring not later than June 15th and in late fall—twice a year for young trees, once a year for older ones, and once in two years for old orchards. The object is to paint the bark as fast as it grows and cracks open.

Caution. Do not use house paint. Any paint containing drier is fatal to the trees. Pure lead and raw linseed oil is safe.

AVE YOU a Lump in the Breast, or a Growth on any part of body, or a Sore that will not heal? you have, write, describe the trouble, and ntion this paper and we will mail **FREE** in in envelope, particulars of the

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Annapolis—1st, E. P. Fellows, Bridgetown; 2nd, Jas. Crandall, Bridgetown.

Hants—1st, W. B. Wallace, Newport Landing; 2nd, Thos. Aylward, Falmouth.

Pictou—1st, John R. Fraser, Royal Hill; 2nd, N. M. Hamblin.

Colchester—1st, Geo. M. Anderson, West New Annan; 2nd, J. R. Semple, Brule.

Antigonish—1st, Herbert Smith, Antigonish.

Cumberland—1st, D. M. Brown, Pugwash; 2nd, Edgar Harrison, Maccan.

BEST COUNTY COLLECTION, NEW BRUNSWICK.

Victoria—1st, J. W. Burns, Carlingford; 2nd, John Stevenson, Gladstone

Kings—1st, Orchard Hill Farm, Brown's Flats; 2nd, A. R. Gorham, Grey's Mills.

Sunbury—1st, F. A. Hubbard, Burton.

St. John—1st, W. R. McFate, Up. Golden Grove; 2nd, St. John Agricultural Society.

Queens—1st, Cecil W. Peters, Queenstown; 2nd, W. P. Fox, Lr. Gagetown.

Albert—1st, W. L. Colpitts, Mapleton; 2nd, W. A. Colpitts, Mapleton.

Charlotte—1st, C. N. Vroom, St. Stephen.

BEST COUNTY COLLECTION, PRINCE EDWARD ISLAND.

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Queens—1st, A. E. Dewar, Charlottetown; 2nd, Oliver C. Saunders, Trilby.

Prince—1st, Chas. N. Black, Bedeque.

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Sec. 2—Best 1 doz. jars Honey, medium—1st, Julia Corbett, Amherst Pt.; 2nd, B. W. Baker; 3rd, Todd Bros; 4th, Craig Bros.

Sec. 3—Best 1 doz. jars Honey, dark—1st, Julia Corbett; 2nd, C. W. McLellan, Falmouth, N. S.; 3rd, Todd Bros.; 4th, B. W. Baker.

Sec. 4—Best doz. sec. Honey in Comb, light—1st, W. G. Asbell; 2nd, Todd Bros.; 3rd, Craig Bros.; 4th. C. W. McLellan.

Sec. 5—Best doz. sec. Honey in Comb, medium—1st, W. G. Asbell; 2nd, Craig Bros.; 3rd, Julia Corbett; 4th, Todd Bros.

Sec. 6—Best doz. Honey in Comb, dark—1st, Craig Bros.; 2nd, W. G. Asbell; 3rd, Todd Bros.; 4th, B. W. Baker.

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DAIRYING.

Development of the Dairy Cow.

One of the best instructive addresses at the meeting of the Maine Dairymen's Association at Norway, Maine, recently was the address by Prof. P. A. Campbell of the Maine College of Agriculture, on the subject of the "Development of the Dairy Cow." This was the first part of his address, and it should be extremely interesting and instructive to the man who is raising or buying cows. Prof. Campbell is himself a successful dairyman and speaks with considerable authority in these matters because of the careful study he has made in connection with his educational work. Prof. Campbell said:

There are three things which seem to be pre-requisite for a successful dairy cow. These are stamina or vigor, capacity for food, and well developed organs for milk production. The question is sometimes asked what is stamina, and it is hard to reply without illustrating so that anyone can determine whether a cow has it or not. It does not necessarily mean size, for we have seen large cows which were materially lacking in this respect, just as we have seen large people that are not particularly strong and able to withstand hardships. It is necessary that the cow have a good breathing apparatus if she is able to take a sufficient amount of oxygen. This is indicated by a large nostril, a wide breast, and good width across the floor of the chest. Good width here and also a good girt indicate a good heart. It must be recognized, however, that the actual inside capacity is what we are endeavoring to determine and not the outside measurements. Good muscular development will frequently give a good heart girt when in reality the capacity and room inside the thoracic cavity for the heart and lungs is considerably limited. The eye is also indicative of strength and good physical condition of the animal as well as of temperament; a mild, bright eye of good size usually belongs to an animal that is all right in these respects. A strong nerve system also is demanded in a vigorous animal. We sometimes unfortunately speak of the dairy cow as being of a nervous temperament, when in reality it means that she has strong nerves. If we put our hand along the top line of the cow in the region of the chine, we like to find that it is open. If it is, we speak of her as having a good, strong nervous force; in other words, we have indicated that she has got good protection and a good amount of room for the spinal cord to run in. Knowing this, we anticipate that the spinal cord will be large and will carry the nerves well back to the exterior portion of the body so that she will be able to do the work that is demanded of her, for there is a strong relation between the nervous energy of the cow and the work that she does.

The dairy cow that is a heavy producer must have large organs of digestion in order to utilize the large quantities of food necessary to produce milk; consequently we expect the dairy cow that has these qualifications to be wide in the head, with a face dished between the eyes, and to have a strong under jaw. The head should also be of medium length. In the correlation of parts, it has been determined that a head of this character goes with a large barrel capacity of the cow. She should have wide, open, and well-sprung ribs, giving both length and depth to the abdomen. The loin should be wide and strong, and the depth from the loin down to the flank should be good. A light-waisted cow—although she has all the other qualifications which pertain to the true dairy type—is not equal to doing the work of her sisters which are not light at this point. The hips should be wide apart, level, and accompanied by a long, wide, and level rump, with high and wide pin bones. This permits the cow plenty of room in the pelvic region and insures strength and ease at parturition.

The thighs and legs of the dairy cow are of a more importance than is frequently given them by many in selecting their cow. They should be strong and wide at the stifle joint, while carrying a sufficient amount of flesh to give uniformity and strength they should be well opened up between them in order to give plenty of room for the development of the udder. The cow standing with hocks together never can have the room for the udder that the cow that stands perfectly square will have.

The udder should commence well up and should extend down and along the underline until it gradually blends with the underline, thus insuring the greatest capacity of the milk secreting tissues. The veins should be prominent, indicating that a large amount of blood in its circulation is coursing through the udder. The milk vein which extends from the udder along the underside of the abdominal wall should be large, crooked, and long; opening through the abdominal wall in large milk wells; branching veins and those which enter through several wells are desired. In other words, the veins that seem to carry a large amount of blood are the ones that are desired, for there is a direct relation between the amount of blood which passes through the udder and the milk that is secreted. The physiology of milk secretion is unfortunately not well understood, but it is known that the milk constituents are taken from the blood, consequently it is easily seen that the more blood that is passing through the udder, well loaded with material for milk production, the more opportunity there will be for converting it into milk.

During the first few days that may elapse before the fertilized ovum becomes attached to the uterus, it is fed by the food materials carried by the germ cell. From the time of its attachment, the nourishment comes from the dam's circulation; the only influences that the dam now has comes entirely from the blood, and then not by direct circulation but only in the form of nutrition.

The nervous system of the cow is not as well understood as we wish it might be. Anything that will affect the blood of the dam will affect the growing fetus satisfactorily or adversely. With the heifer that has never milked, the growth must be maintained; with the milch cow, aside from food for maintenance, enough nutrients are required for the milk production. The embryo or fetus at the end of the third month is about 5½ inches long; by the end of the fourth month it is about 10 inches long and weighs between four and five pounds. Up to this time it has not been sufficiently large or its demands sufficiently great to prevent the heifer or milking cow from making a normal growth or doing the work required. During the fifth month the fetus increases materially in length and weight, but at the beginning of the sixth it can be seen that if the calf is to weigh 75 pounds at birth, that there is something like 65 pounds of weight to be gained in the last four months, or at least a gain of half a pound per day. This alone would indicate to you the necessity of feeding the heifer well at this time if neither the heifer or the fetus are to suffer. Our milk records show that even the heaviest milkers usually begin to slack off about this time. The cow that has been milking also has another duty to perform for herself; during the earlier lactation period she gradually but continuously has torn down the body tissue in order that she might use it toward production. If then she so that she can go through the same is going to put herself in condition work after calving out, it will be necessary to feed her so that she will put herself in condition. We must continually remember that there are two bodies to support, and that the food should not be cut down too severely when the cow goes dry, but that she should be given enough so that the fetus may make its natural growth and that the cow may be ready to do a full period ol lactation work.

In going over some of our records, we find that the cow that has gone dry, while perhaps not requiring the same amount of food nutrients that she required when milking heavily, still uses an amount far in excess of

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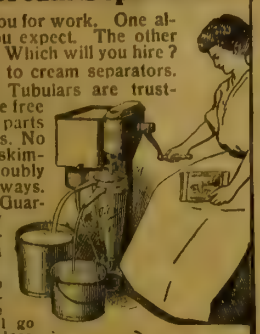

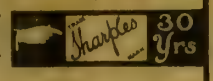

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what would be required simply for her maintenance. The birth of the calf changes its form of existence. Whereas, before it was getting its food in a form all ready for building tissue, now now it has to digest and assimulate it for herself. The cow, however, assists for a time by supplying an easily digested and easily handled food for the calf, and if we take this milk which nature intended for the calf, we must give the calf an equal allowance of food nutrients, either in the form of milk or some other form, to take the place of that which it would naturally get from its mother.

During the fetal life the calf has been gradually accumulating in the alimentary tract the general waste of the body. In order to free this, nature has provided a natural purgative in the form of colostrum. Some. times the calf is unable to have this colostrum depending to a certain degree upon the physical condition of the animal. If for any reason this first milk is not available for the young calf, due to the fact that the cow may have been milked regularly up to the time of calving, or milked previous to calving as the result of an abnormal condition of the udder, then some form of physic should be given the calf. Castor oil is usually employed.

The young dairy calf learns to drink readily, and as soon as it is evident that the colostrum has been effective, it is just as well for the cow and calf to be separated, for the results in working the cow to a full production are better, and the calf gets along just as well. It must be remembered, however, that this method of handling the calf is in part unnatural, and that greater precaution must be observed if no setback is to be experienced. One of the greatest troubles is over-feeding at this time. It is also necessary that the temperature of the milk be at about blood heat, or but a degree or so below, and that the calves be fed from clean pails. Some feeders use but little new milk in starting the calf, while others use it for a long time. In our experience the best results have been obtained where the calf was allowed whole milk at least ten days or two weeks. Calves that are fed whole milk all during the earlier part of their life, or are allowed to suckle the dam, make a rapid growth for a time and seem to be ahead of their less fortunate sisters that have to subsist upon skim-milk and rougher feeds; but it has been demonstrated time and time again that they make no better cows or excel in growth. When the whole milk is stopped, it takes them some time to become accustomed to the change, and before they have become accustomed to the change, the others have caught up with them.

If possible, I believe that it is desirable to give the calves more of a chance to rough it than we usually do. Some of the breeders are now growing their calves where they can run out and in at will after the first few weeks of their life.

It has been quite definitely proven that a calf well fed from birth reaches sexual maturity on the average earlier than those scantily fed; however, even under those conditions it varies considerably. The breed also influences it somewhat. It is safe to say, however, that no heifer should be bred to freshen before two years of age. The last three months of pregnancy the heifer does well to maintain herself and nourish the growing fetus, without making any perceptible gain. Consequently, it must be figured that the heifer must be of about the size that you wish to bring her into milk at least three months before parturition. It is possible with the larger breeds to have

Buy an IHC Cream Harvester Instead of Another Cow

FIGURE up the profit per year and the total profit your average cow pays during her lifetime. Then get the facts about the profits an I H C Cream Harvester makes—in extra butter-fat, in extra hog-profits from skim milk, in work and time saved, and in the many other ways, all shown in our catalogues. It won't take you long to see how you could profitably buy an I H C Cream Harvester instead of another cow. The total profits paid by an I H C Cream Harvester will amount to much more.

Keeping cows without a separator is like harvesting wheat without a binder. But you must be careful what you buy. If you want to be sure of getting the closest skimming, easiest turning, and easiest cleaning separator made—choose one in the I H C line—

Dairymaid and Bluebell

These are the only separators with dust-proof and milk-proof gears, which are easily accessible. The frame is entirely protected from wear by phosphor bronze bushings. These separators have large shafts, bushings, and bearings; the flexible top-bearing is the strongest and most effective found in any separator. The patented dirt-arrester removes the finest particles of dirt from the milk before the milk is separated. I H C Cream Harvesters are made in two styles—Dairymaid, chain drive; and Bluebell, gear drive—each in four sizes—to meet every condition and the need of every farmer. Whichever I H C you select, it will make more money for you per year, and will last longer than any other separator you could buy. The I H C trade mark should be your guide in buying a cream separator. The I H C local dealer will be glad to point out the above features and many others, or, write nearest branch house for catalogues and other information you desire.

IHC Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizer, etc., write to the I H C Service Bureau, and learn what our experts and others have found out concerning these subjects.

CANADIAN BRANCHES: International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

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WINDSOR DAIRY SALT

The wise housewife knows the importance of always keeping a good supply of Windsor Dairy Salt on hand.

She knows that Windsor Salt makes the best butter—and she is not satisfied to make any other.

Windsor Dairy Salt is both a money-maker and a money-saver.

It makes money for farmers and dairymen because it makes butter that brings the best prices.

It saves money for them because, being absolutely pure, it requires less to properly salt the butter. 39

PRATT FOOD COMPANY
GUARANTEE

We guarantee all our preparations to do exactly what we claim for them.
If they fail to satisfy you we authorize our dealer to promptly refund your money.

Pratts
Honesty Proved the Best Policy

Animal and Poultry Regulators

are made honestly—advertised honestly—sold honestly—guaranteed honestly and it takes an honest dealer to sell honest goods when poor ones pay him much greater profits. **Pratts Animal Regulator** is the most valuable stock tonic and conditioner ever put on the market, and is guaranteed to make horses, cows and hogs more profitable, or every penny is refunded—you are to be the judge.

25 lb. pails $3.50. Also in smaller packages and 100 lb. bags.

Pratts Poultry Regulator prevents disease, is a guaranteed egg producer and fine for raising little chicks.

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Everything that's *Pratts* is

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We authorize our dealers to refund purchase price to dissatisfied customers. If your dealer can't supply you, write us.

Get either our Poultry Book or our Stock Book. Free for the asking.

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How to Completely Cure

farm stock ailments is told in FLEMING'S VEST POCKET VETERINARY ADVISER. We will send you this 96-page book, illustrated, indexed, and well bound, free on request. It tells how to cure

HEAVES

Generally considered a lung or windpipe trouble, Heaves is really caused by stomach derangement, which, through the nerves, affects the breathing. The heaving disappears when the stomach is put right and the whole system toned up by

Fleming's Tonic Heave Remedy

Mailed prepaid for $1.00 per package.
Your money back if any of Fleming's Remedies does not do what we claim—you to be the judge.

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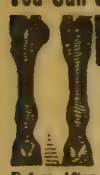
You Can't Cut Out A BOG SPAVIN, PUFF or THOROUGHPIN, but



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will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. $2.00 per bottle, delivered. Book 4 E free.

ABSORBINE, JR., liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Goitres, Wens, Cysts. Allays pain quickly. Price $1.00 and $2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by

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MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.

Personal attention given to sales of Butter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 1905.

A Des Moines man had an attack of muscular rheumatism in his shoulder. A friend advised him to go to Hot Springs. That meant an expense of $150.00 or more. He sought for a quicker and cheaper way to cure it and found it in Chamberlain's Liniment. Three days after the first application of this Liniment he was well. For sale by all dealers.

them of sufficient size to calve at least by the time that they are thirty months of age.

The way the heifer or dry cow is handled the last two or three months before parturition has much to do with the production after calving. It is evident that the vast majority of the cows in this state are not working up to the point of production that their natural inheritance would permit. The cause of this may be in several directions. In some cases they are not fed a sufficient amount above maintenance; in other cases they are not fed the right proportion; and in many cases the milking function is not incited sufficiently at parturition time. Or in other words, the heifer or dry cow, not being in the producing list, is too frequently given too little thought and care.

With the heifer the milk glands have not been developed; in the dry cow they are dormant. Approaching parturition brings them into activity and growth. The development of these is going to determine to a large degree the production for the next lactation period. If your cow is not well bagged at the time of calving, you cannot expect the best work from her. Although you can help it a little sometimes, no amount of feeding is going to put it where it ought to have been. Consequently the cow that has not been dry for two months or so, or is not in good condition at calving time, is hindered for a full year's work.

The herdsman's duty does not all end here. Some will say that there is more danger from caked udder, milk fever, and other troubles; and such is true. But feeding the cows succulent and cooling feeds will tend to prevent this, and milk fever is not to be feared with the present method of handling it. After calving, the cow should be brought to her full flow as soon as it can be done without injury to the cow.

Here the daily milk records will assist and guide the feeder. Care should be exercised to feed the cow to that point of economical production, and in so doing the feeder will exhibit the utmost skill. Very few cows will respond sufficiently to the point where they are likely to be over-fed when the products are sold at a normal price. To keep the cow working steadily is the next consideration. A shortened food supply and the lessened needs of the offspring formerly were incentives for the milk flow to slacken and finally stop. With a plenteous food supply and common sense, there would seem to be no physiological reason why the production should noy keep up until the next fetus becomes of sufficient size to turn the food nutrients from the channels of milk production to those of its own development.

It may be easy to say how to develop the dairy cow, how she should be bred, and how she should be fed, but it finally resolves itself into a thorough study of the principles of both breeding and feeding, combined with common sense and actual experience of the man that is handling the herd.

Bad Cream in Winter.

Jack Frost will now take charge of the cooling of milk and cream on the farm, and creamery patrons are feeling relieved that this work is taken off their hands. We creamery men do not view the satisfaction of our patrons with equanimity. Of course it is much easier to cool the cream during cool weather and we receive it cooler, but the idea that milk and cream cannot go wrong in the winter time is very far astray.

Cream does not cool down so quickly when it is merely set out in the cool air as when the can is set in a tub of cold water. The germs that have gotten access to the cream,

CURIOSITY Prompted Many Women To Try PURITY FLOUR

THEY were curious to see exactly what results would be produced by flour *consisting entirely of the high-grade portions* of the best Western hard wheat.

They were curious to know more about a flour that contained none of the low-grade portions, which are found in every wheat berry, but which are separated and excluded from the high-grade in the process of milling PURITY FLOUR.

THEY were curious to know whether an ALL HIGH-GRADE hard wheat flour was really superior to a mixed hard and soft wheat flour.

They were curious to see and taste the kind of bread, buns, biscuits, cakes and pies PURITY FLOUR would make.

Curiosity prompts you to seek the knowledge they discovered. It's urging you to try PURITY FLOUR.

REMINDER: On account of the *extra* strength and *extra* quality of PURITY FLOUR it is necessary, for best pastry-results, to add *more* shortening than you are accustomed to use with an ordinary flour. Add *more* water when making bread.

Add PURITY FLOUR to your grocery list right now

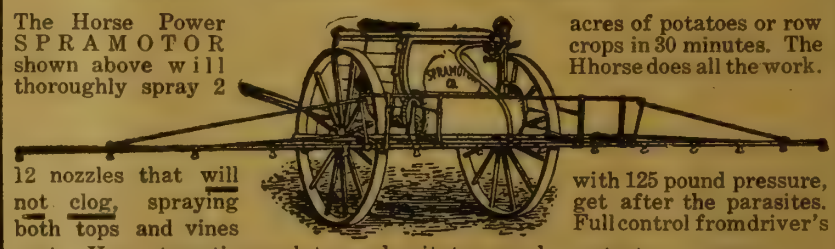
PURITY FLOUR

"More bread and better bread"

110

THE PEST PARALYSER

The Horse Power SPRAMOTOR shown above will thoroughly spray 2 acres of potatoes or row crops in 30 minutes. The Hhorse does all the work.



12 nozzles that will not clog, spraying both tops and vines with 125 pound pressure, get after the parasites. Full control from driver's seat. Has automatic regulator and agitator nozzle protector, pressure relief, 12 gal. air-pressure tank, draining, air and controlling cocks. Equally efficient on row crops or orchards. Made for 1 or 2 horses or hand. Awarded gold medals at National Horticultural Congress. Write for free treatise on crop diseases. AGENTS WANTED.

W. C. HEARD, 1379 King St., LONDON, CANADA.

Maritime Farmer Ads. Give Best Results.

Haul Bigger Loads Without Tiring Horses

The money you spend for a T-K Handy Farm Wagon is just as safe as if you spent it for a government bond. You are sure of the returns, for this wagon will carry greater loads without tiring the horses and is so easy to load and unload that only one man is necessary to do the work.

T-K Wide Tire, Steel Wheels and Handy Farm Wagons

Fit all your farm wagons with these wide tire steel wheels. You can haul heavier loads in deep mud or on the rockiest road without accident or delays. Besides they lessen the wear and tear on all farm wagons usually due to wooden wheels.

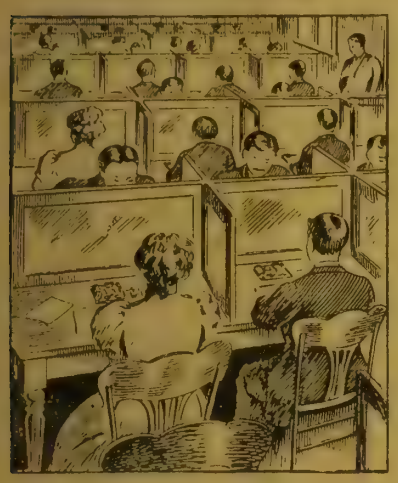
Write for catalogue telling how T-K wagons and wheels save and make money for you.

Tudhope-Knox Co., Limited, Orillia, Ontario.

Farmer's Sons Wanted!

To Take a Course at the

G. T. P. School of Telegraphy and Railroading



and prepare for positions as Operators and Agents on the Grand Trunk Pacific in N. B. Big demand. $50 to $75 monthly.

Brother Farmer Got a Good Position.

Mr. George Campbell of Gordensville, Carleton Co., N. B. has been selected and recommended by the "Great Trans-Pacific School of Telegraphy & Railroading," EMPLOYMENT DEPARTMENT, to fill the position as Asst. Agent and Operator at Sherman Sta., on the Bangor & Aroostook Railroad. Word has just been received that he has been transferred to Patten Station, (with an increase of salary).

Station Agents, are provided with Free House, Coal, Oil, etc., in addition to their salary, $55 to $120 monthly. "THINK IT OVER," Can YOU find any better position? Mr. Campbell don't think so.

Another Position.

Mr. Harold G. Meisner, of Springhill, Annapolis Co., N. S., has been selected and recommended by THIS school's "Employment Department," to fill the position as Assistant Agent and Operator at Milo Jct. on the Bangor & Aroostook R. R. What we have done for him we can do for you. Winter term begins TUESDAY, JANUARY 2nd; 1912, residental school. Free catalogue, rates and full particulars, address

W.T. Little, Principal, Fredericton, N. B.

Read the Advertisements in the Maritime Farmer.

therefore, have every chance to develop and produce bad flavors before the cream is cooled. These flavors are bound to show up in the butter. Milk and cream cannot be first class unless the animal heat is expelled quickly.

Another mistake that patrons are making is in delivering their cream at too long intervals. Because cream can be easily kept cool does not mean that it is not deteriorating in value. I believe that cream will rot no matter how cold it is kept.

We creamery men should continue our educational work right on into the winter season. The two points that we need to emphasize at the present time is the necessity for good cooling and also for more frequent delivery at the creamery.—Farm and Dairy.

Bacterial Standards.

For the feeding of an infant with milk nature provides but one way which is perfect. This "perfect" way consists in giving the infant breast milk, the milk of its own mother. As the supply of mother's milk is much too small to meet the demand for infant milk, we are forced to substitute cow's milk for mother's milk. In doing so we encounter difficulties owing to the difference between cow's milk and mother's milk, which are not generally known to the public, but which are well understood by professional sanitarians, bacteriologists, and chemists. Sanitarians who have investigated infant mortality in connection with milk supply are unanimous in declaring that cow's milk is a poor substitute for mother's milk unless it is kept clean and cold, or unless the number of bacteria in it is kept low and the disease breeding varieties of bacteria shut out altogether. One of the several big differences existing between cow's milk and mother's milk, viz. the difference in bacteria, may be readily understood by every layman with the aid of the following simple considerations:

Mother's milk contains hardly any bacteria when it reaches the baby because it is less than one minute old, and because the baby's own mother protects it from dust and from pollution. Cow's milk contains generally thousands or even millions of bacteria in each cubic centimeter before it reaches the babies of the larger cities, because it is frequently 36 hours old, and because it is exposed in milk pails, can's etc. to pollution of various kinds. As bacteria multiply so rapidly that their number is doubled every hour under moderately favorable conditions, it certainly makes all the difference in the world whether infant milk is 36 hours old or only one minute old, whether it is exposed to pollution in pails, cans, etc., or whether it is supplied to the baby directly in the natural act of nursing.

Manifestly, in order to imitate nature and supply the infants that milk which experience has shown to be the best substitute for mother's milk, it is indeed necessary to keep cow's milk intended for infant feeding clean and cold, and the number of bacteria in it as low as possible.

Health Boards are to be praised for fixing a limit to the number of bacteria in market milk, more especially in infant milk, for it is an important forward step in the problem of imitating mother's milk. They are not however to be praised when they suddenly adopt a bacterial standard so severe that a majority of the milk dealers cannot live up to it and so exacting as regards cost of production that it necessarily must raise the price of milk. If, in addition to this, a standard adopted is not enforced or enforced rarely, it operates in the direction opposite to that intended. It spoils the milk supply instead of improving it, since the unscrupulous, the dirty milk dealer is encouraged, while the concientious clean milk dealer dealer is discouraged by the non-enforcement of an existing standard.

Instead of having a law which is too severe to be inforced, it is certainly much better to have a reasonable law and to enforce it effectively. The law should certainly be one which every milk dealer can comply with, and not one which forces him out of business, at the same time creating a milk famine.

A legal bacterial standard should be reasonably low for a year or so when first adopted. We cannot work a great reform suddenly any more than we can stop an express train suddenly by putting a steel bar in its path. We must do it gradually. The city of Chicago adopted a severe bacterial standard three years ago with the result that a fight was precipitated in the City Council and in the public press, in which the milk consuming public who clamored for a cheap milk, backed up the milk dealers to a considerable extent. In the mean time, milk inspection was paralized completely by a suspension of the ordinance fixing the standard.

Other cities can profit by the experience Chicago had. The Chicago limit for bacteria in milk was 50,000 per cubic centimeter in winter and 100,000 in summer. It seems to me that any city which contemplates adopting a bacterial standard should not fix it at less than 100,000 per cubic centimeter the first year. This standard could possibly be made more severe the second year. A more severe standard, say a standard of 50,000, could not be enforced the frst year, or at least not in the summer of the first year.—Hugo Jone.

The "Bissell" All-Steel Rollers

The "Bissell" Roller is all steel except the Pole. It is braced and stayed to stand all kinds of hard work and wear well. The bottom of the frame is all steel too.

The end frame Hangers are formed from bar steel and there is no twisting or warping on "Bissell" Roller frames

The (18) anti-friction Roller Bearings make light draught.

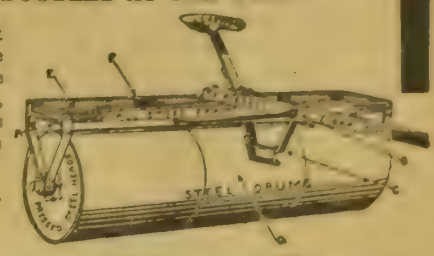
The Draw Bracket and low hitch does away with neck weight.

The Axle revolves with the drums and there is no squeaking or grinding.

The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL.

These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is 'built for business," that stands up, against lots of hard work.

Ask Dept M for free catalogue. 59



T. E. Bissell Co., Limited, Elora, Ont.

FREE

Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 58 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address.

THE DR. BURDICK MEDICINE CO., Dept. 109 Toronto, Ont.

LIVE STOCK.

Sheep Raising in Newfoundland.

Editor Maritime Farmer:—

I have been requested to write an article on Sheep Raising, so I will begin by giving you some quotations from high authority.

"No animal in existence has the power to adapt itself to local conditions like the sheep."

"The world is short of sheep and no other farm animal presents such profitable inducements."

The Islands of Cape Breton and Newfoundland are each famous for the production of a superior flavoured mutton. The cause of this is to be found in the pasturage; there are certain grasses indigenous to these islands which produce this peculiarly high flavoured mutton.

We are only a few miles distant from London and if in the course of time we should produce a surplus of mutton we have the easy outlet of a frozen meat trade.

New Zealand sends annually, over one hundred and eighty degrees of longitude, no less than 5,000,000 carcasses of mutton to the London market.

The sheep gives the best results when domesticated. No animal more readily becomes a "pet." A handful of salt, a piece of turnip, or the rinds of potatoes will bring a sheep home regularly every night to the fold. Sheep so treated, seem to thrive better and produce better fleeces than those which remain throughout the year away from the habitations of men. Wild hay and rations of turnips will bring sheep through the winter in good condition. In spring the ewes will be strong and have abundance of milk. The lambs will be strong and fit for the early market.

Sheep require a comfortable shelter so constructed that they can go in and out as they choose. In cold dry weather they prefer to lie outside at night but in stormy weather they prefer to stay inside the building.

The dog is the deadly enemy of the sheep. It seems as if a dog had a conscience in everything but the sheep. Some of the best sheep farmers in Canada have been compelled to give up their flocks on account of dogs.

If people would only think the matter over for a little they would come to a rational conclusion.

I was a great dog fancier during all the early part of my life but latterly I find that one of my dogs helped to destroy some sheep belonging to my neighbour. I had the dog shot and procured another one, shortly I found this dog guilty of the same mischief. I had this dog shot also and since that have not owned a dog. Now I have changed my mind. I consider a dog a nuisance I find that I do not require him as an assistant, an associate or in any other capacity.

The Woolen mills have been established in St. John's in connection with a policy of prompting Sheep-raising in this colony. The industry will create a ready and profitable market for all wool that may be grown.

A further result will be that all kind s of woolen clothing, blankets, hosiery, etc., will take the place of cheap cotton goods. The people will be able to substitute the best woolen blankets for the thin, useless articles that are imported into the colony. Good health-giving woolen underwear will take the place of cheap fleece-lined shirts which are made from the cotton waste swept up in the big American mills and dumped into this market.

It will be the object of the Company to supply at reasonable prices the very best of woolen goods the most of which will, in due course be made from wools produced on this Island.

The economical value of increasing the industries of the country can hardly be estimated. No country can be truly prosperous which subsists on a single industry.

What has built up the American States? Industries. Wherever you travel there you will find avenues of employment opened up for the people. Push, perseverance, and prudence are characteristic qualities of any progressive country. Newfoundland possesses these qualities. Progress. Progress is the watchword of this country to-day. The establishment of the Woolen Mills here is one of the many proofs of this. These large mills, situated in the most thickly populated district of St. John's West will afford employment for many in factory, office, store and shop. The encouragement given to Sheep-raising will increase the quantity of mutton, lower the price, and thus lower the cost of living, which is certainly a necessity now that beef is so scarce and therefore in great demand, and so high in price that it is beyond the reach of many and is one of the causes of the prevalence of tuberculosus. Sheep Raising will help in many ways, and it needs and deserves to be encouraged at once, especially in St. John's. What is happening now? Each year more fish is being sent direct from the outports to foreign markets, and now American companies are buying it up in the outports so that a lesser quantity will reach St. John's each year, and less cash also, from this source, because more large firms are starting in the outports each year and importing direct, therefore the people of St. John's should favour the starting of more industries here to give employment to the people—their only hope. The Woolen mills is one of these and even this cannot prosper if people refuse to encourage the Sheep Raising industry by keeping destructive dogs in their possession. I would go so far as to say that not only would the majority of the people outside the municipality of St. John's sign the petition, but the majority of those in the city, and why not? If it is fair to kill the poor man's dog in the outport it is equally fair to kill the rich man's in the city. If these dogs which are kept for watch dogs are not kept chained they will have to go too, that is certain—the first offence will be sufficient cause for the starting of a petition in the city as well; but so far there has been no cause.

No one admires a dog more than I do. I could fill this paper writing on their merits, their faithfulness, sagacity, and nobleness; but sentiment must give way to necessity—to "bread and butter" for the people.

Many fishermen will resent the killing of their dogs without compensation. In the case of Petty Harbour they would have just cause. There are no less than 400 dogs there used solely for hauling wood in the winter—a proof of their great need. To kill the dogs in this settlement is just as bad as to kill the ponies in Torbay, and would be just as hard on the people. These people should be helped to provide ponies instead. I feel sure the Government will be prepared to back up the people of Petty Harbour in this matter. They should be given one pony for every four dogs or a sheep for a dog, and they will if I can help it, before one of these dogs is shot, but someone should move in the matter in the interest of Petty Harbour, at once, before further steps are taken. Again the skins of the dogs are worth something for coats, and the carcasses for fertilizer. In the past the economic side of this was entirely ignored and the carcasses were allowed to decompose. Not so in this case. Already a large fur manufacturing house in Canada is ready to buy, not 400, but 4,000 dog skins if they can be procured, and the money realized should go to the people who own the animals in addition to ponies and sheep. A few years ago the people along the South Shore of Conception Bay were contented with dogs; but as soon as these dogs were shot they quickly got ponies, and to-day they are an independent and successful people, owning not only ponies but carriages and live and travel in comfort. They can thank those who signed the petition.

The people of Petty Harbour will be able to do the same. I don't believe they will object when they see how it will benefit them. Again, how much this will save on fish. At present they have many quintals of fish, worth $6.00 a qtl., destroyed by dogs each summer, and they have to keep the dogs as idle expense for the sake of hauling the wood in winter. Ponies would not cost as much to keep because they would feed among the hills; dogs do not except when they can get sheep to eat, and if they get hold of any of the Society's sheep, of course these will taste so good to them, they will eat nothing else—a rather expensive luxury. The conclusion is that St. John's West must either "go to the dogs," or vote for the sheep. Which will it be? The petition will answer the question.

As the law stands a majority of the people in any place, places or district can do away with dogs by merely signing a petition for the purpose. The St. John's Agricultural Society with its 3,000 members could carry this out within a week; but they are not going to do so, they prefer waiting until after the winter to give people their chance and to try and convince people that sheep and ponies would be more profitable for them and all concerned and if possible secure some alternative for them first. This is very reasonable and just.

A sheep for a dog would be a good exchange. Supposing a man has four hauling dogs he receives four sheep for them; these and all he could rear afterwards would bring him in $8 or $9 each and at least $56.00 in one year; this would pay him well, not to mention the benefit of having a good frozen carcass of mutton for Christmas besides from his fold every year. Attend the annual meeting of the St. John's Agricultural Society in January next and vote for sheep; then ask the Government to be preuared to help out this great industry extensively throughout Newfoundland.—P. G. Butler, St. John's, N'f'l'd.

3 FEEDS FOR ONE CENT
This is all it costs you to keep your stock in prime condition with the world's most famous animal tonic—
International Stock Food
Every cent invested in this wonderful health-giver, brings back dollars in strong, healthy horses, cows, sheep and hogs.
Careful tests show that 4 quarts of oats and the regular feed of INTERNATIONAL STOCK FOOD will keep horses in better condition than FIVE quarts of oats without it.
INTERNATIONAL STOCK FOOD will make your cows gain 1 to 4 quarts of milk per day.
Nothing like INTERNATIONAL STOCK FOOD to fatten animals for market. Your hogs need it. Ask your dealer for it.
We have a copy of our $3,000 Stock Book for you. Send us your name and address, and tell us the number of head of stock you own.
TESTIMONIAL
Mayfield Sta., Man., Nov. 15, 1911.
International Stock Food Co. Ltd.
Toronto, Ont.
Dear Sirs.—I want to say that your Stock Food is all right. I have had more good from its use than any other kind I ever used, and do not care to start winter feeding without it. Please ship as soon as you can to Carroll. Yours very truly (signed) JOHN ROGERS
INTERNATIONAL STOCK FOOD CO. Limited
TORONTO ONTARIO
MENTION THIS PAPER.
63

THE SIXTEENTH

ANNUAL CONVENTION

OF THE

NOVA SCOTIA FARMER'S ASSOCIATION

WILL BE HELD AT

YARMOUTH, N. S.

OPENING

Tuesday Evg., January 23

at 8 o'clock, continueing in session Wednesday and Thursday, January 24th and 25, 1912.

A full and interesting programme is being prepared.

Return fares at single rates are arranged for on the Standard Certificate plan.

CHAS. R. B. BRYAN, Durham, N.S.
Secretary-Treas.

Prominent Guernseyman Praises Tuberculin Test.

One of the strongest arguments ever made for the tuberculin test, rightly applied, is to be found in the experience of William Nicholls, a Wisconsin breeder of Guernseys. At one time this well-known stockman shared with many others in the belief that physical condition alone was a sufficient index of the health of an animal. But his indifference or lack of faith in the test cost him several thousand dollars for, in all, he lost twenty-one splendidly bred cows and three equally good bulls. Coming early in his career as a breeder and at a time when he could little afford to meet it the loss was a heavy tax upon his resources.

Mr. Nicholls' difficulties came about in this manner: Believing that the future of the breed, which he had adopted to follow, particularly bright and desirous of enlarging his then small herd he purchased a consignment of cattle from a Minnesota breeder who was retiring from business. Application of the tuberculin test was not required for the herd seemed to be in excellent condition physically. The state had not as yet passed a law prohibiting the introduction of cattle which had not been tested for tuberculosis, for as Mr. Nicholls himself has since said, "Wisconsin was not at that time protecting its buyers who did not protect themselves."

The Minnesota purchases were turned in with the home herd and with it were housed in a well lighted and ventilated barn. "The cows," said Mr. Nicholls a short time ago talking to a group of fellow Guernsey breeders, "did very well and I notic-

ed nothing unusual about them other than that one cow was somewhat lame in a hip joint and that another of the older cows was coughing considerably."

"About eight or nine months after making my purchase I priced six of the cows to a man who had more foresight than I had shown when I was buying for he asked that they be tuberculin tested. This I readily agreed to do not fearing but what they would pass the test for I had sold several of my own breeding a year previous which came through the test in fine shape. To my surprise, however, and, I think, to his as well, five of the six cows reacted. I studied the situation for a time wondering if the test was reasonably accurate and wondering also, if any of the reactors would ever show any physical effects of the disease.

"Postmortem examination confirmed the findings of the test and, then and there, I determined that I would test my entire herd, in order that I might rid it of any possible affection. To my utter astonishment I found that nearly all of my cattle were tuberculous, only four or five cows and a few of the young things passing the test. These were placed in a smaller barn and the two herds kept separate. As most of my cows were valuable I decided to keep them until they dropped calves and in the meantime I would have an opportunity to watch the workings of the disease.

"I had but a short time to wait, for soon some of the cows began to break down, among the first being the cow that had coughed so much. In the next few months the disease began to manifest itself in various forms throughout the herd. Some of the animals became emaciated. One heifer, in splendid condition when I purchased her, dropped away in about a month's time to a mere skeleton, and another had the lymph glands of the neck so swollen that it became necessary to kill her; two or three others were going about with swollen hind legs and another was lame in the hip showing the presence of the disease in that joint. As soon as a cow showed these physical signs I killed and buried her unless she was very close to calving. Funerals were frequent on my farm those days and I was so thoroughly disgusted that I resolved unless I could clean up my herd and keep it clean, I would forever quit the cattle business.

"The calves were taken as soon as dropped and placed in clean quarters and were fed on the milk from these tuberculous cows after heating it above 160 degrees Fahrenheit. Some of the cows were quite emaciated when the calves were dropped but the calves were apparently thrifty, and I wondered if the Bang system, advocated in this country and so much practiced in Denmark, would work out all right in my case. (It was entirely successful for not one of those calves ever reacted to the test while remaining in my herd.)

"As most of my cows had dropped calves, and being tired of burying animals one or two at a time and completely disgusted with having anything to do with a tuberculous animal, I asked the state veterinarian to test my entire herd and condemn every reacting animal so that I could once more be free from this pestilence. As a result two or three in my 'clean' herd and, I think, with but one exception, all in my tuberculous herd reacted. This exception was a cow that I had previously tested, and as she had shown a pronounced reaction I asked the veterinarian to condemn her with the rest that we might hold a postmortem examination. This we did, and found that not only were her lungs affected but her udder was in bad condition as well. It should be remembered that there is much more danger in passing an animal in the later stages of the disease as healthy than there is in condemning a healthy animal. Had I not previously tested this cow she would have been passed as healthy and would have become a source of infection for my new herd.

"After burying the 21 cows and one bull (I had previously lost three bulls, one of them a son of the great cow, Auricula 2d, and another a son of the well-known bull, Benjamin,) I proceeded to disinfect. Everything removable was taken from the barn and both formaldehyde and chloride of lime were used freely. The job was thoroughly done and we later whitewashed, put in cementfloors and installed the healthy herd.

"I have made a practice of testing about once a year since the loss of my original herd and it is now six years since I have had a reacting animal. I have purchased many animals to add to my herd but have always tested them myself, and until a year ago never came across a reacting animal. At that time, in a herd supposed to be free from the disease, although, untested, I found a cow whose temperature went above 105 degrees, and of course I did not want her.

"My experience covering quite an extended period of years gives me almost complete confidence in the test. I recently tested forty-eight head above six months of age and in the past six years the aggregate number of tests in my herd has been upward of 200 without one reacting animal, which gives me confidence that an animal free from tuberculosis seldom shows a reaction. However, should I now have an animal respond to the test and I was sure she had not been exposed to a source of infection I would put her in isolated quarters and hold her for a second test. I believe that such a course would be advisablewith all valuable animals whenever any doubt exists as to the accuracy of the test.

IT MADE A MAN OF ME

Read what Mr. Isaac Soule, Granby, Que., says, who was cured of Catarrh of bladder, at age of 70:

"Dear Sir,—Your Belt has done me more good than all the drugs I have taken. I would not have lived much longer if I had not got it when I did. I just received it in the nick of time. It did me good from the start to the present and has, I believe, cured me of my ailments. It was a Godsend to me."

Mr. V. E. Brazeau, Box 66, Sturgeon Falls, Ont., writes:

"Dear Sir,—Since wearing your Belt, I have been in far better health than I ever was before. It did me more good in three weeks than all the drugs I ever took and the old symptoms have never returned, as I expected they would. It has certainly built me up in every respect. I consider that your belt saved my life I tell every one I can about your Belt."

Mr. Wm. Honan, Cochrane, Ont., expresses his feelings in these words: "Dear Sir,—I cannot say too much for your Belt. I consider it completely cured me of Rheumatism and I never felt so well for the last thirty years. I would recommend it to any Railroad man suffering from weak back or kidney disease. I only wore my Belt for one month."

Letters like that tell the story which means a good deal to a sufferer. They are a beacon light to the one who has become discouraged from useless doctoring. I get such letters every day.

Give me a man broken down with dissipation, hard work or worry from any cause which has sapped his vitality. Let him follow my advice for three months, and I will make him as vigorous in every respect as any man of his age.

My Belt has a wonderful influence upon tired, weak nerves. It braces and invigorates them and stores up a great force of energy in a man.

Are you weak or in pain? Are you nervous or sleepless? Have you Varicocele.. Rheumatism, Weak Back, Kidney Trouble, Weak Stomach, Indigestion or Constipation? Are you lacking in vitality? I can give you the blessing of health and strength. I can fill your body with vigor and make you feel as you did in your youth. My Electric Belt is worn while you sleep. It gives a soothing, genial warmth into the body. This is life—vigor.

After you read the above, write to me, explain your case, and I will at once tell you if I can cure you or not. To prove to you the confidence I have in the curative power of my Belt, I am willing to accept your case, and

AFTER I HAVE CURED YOU, THEN PAY ME

All I ask is reasonable security You may then use the Belt at my risk.

Tell me where you are, and I'll give you the name of a man in your town that I've cured. I've got cures in every town. That's enough. You need the cure. I've got it. You want it. I'll give it to you or you need not pay a cent. Come and get it now. The pleasurable moment of this life, are too few, so don't throw any away. While there's a chance to be husky and strong, to throw out your chest and look at yourself in a glass and say: "I'm a man." do it, and don't waste time thinking about it.

CALL TO-DAY

Come and see me and let me show you what I have, or if you can't, then cut out this coupon and send it in. It will bring you a description of my Belt, and a book that will inspire you to be a man among men; all free.

M. K McLAUGHLIN

214 St. James St., MONTREAL, QUE.

Dear Sir,—Please forward me one of your books as advertised.

NAME .....

ADDRESS .....

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday till 8.30 p.m.

Keeping the Flock Healthy.

There is nothing so important in connection with the sheep business, or especially the management of the farm flock, as to keep all its members in good, healthy, thriving condition. If the owners of a few sheep on the farm would give them one-tenth the attention in the matter of observance as to their health that they do their hogs there would be less complaint of the sheep not doing well or that "one of the sheep died; they seemed all right ten days ago, the last time I noticed them, except one looked a little thin and humped up more than the others."

All animals on the farm, it makes no difference to what class they belong, need the trained eye of the farmer every few days to see that they are all right, that there are no ailments of any nature started among them. It is especially true among sheep; lambs just after weaning are often troubled with parasitic ailments that are easily corrected if taken in time.

A stupid lamb, a thin lamb, one showing evidence of being purged or having slight attacks of scours, can readily be relieved by giving a few doses of turpentine and raw linseed oil, or crude castor oil, equal parts. A teaspoonful of this mixture is a dose for a lamb; a little larger dose should be given a grown sheep. This treatment is frequently effective by giving one dose only, but a safer course is to give a dose each day for three days, then give the animal ten days to determine whether it needs the treatment repeated. Ordinarily the three doses will cure all parasite ailments; stomach worms, intestinal parasites or lung worms—a very common ailment among young sheep in many localities all over the sheep-raising districts.

When a sheep indicates that it is not doing right, catch it and make an examination for the trouble, and if you cannot find any special evidence just try the turpentine and oil treatment, and nine times out of ten your patient will show indications of improvement in a very few days! Don't be afraid to use this same treatment, only in larger doses, on your pot-bellied calves and colts that have been neglected and become the subjects of parasite ailments.—G. W. Hervey.

The Calf.

Never let the calf do the first milking, it gets the calf into bad habits, and it can not do a good job anyway. The cow will do better if she is milked by hand.

There is something in the first milk that the calf needs, and should have.

It is easy to teach a calf to drink before it sucks. Remember the sign is always right when the calf is hungry.

Keep your calves in clean separate pens for about four weeks, and then if the weather permits, turn them out with the herd, and they will not suck the cows, or the other calves ears.

Fall calves grow about as much in twelve weeks as the spring calves would in eighteen, is an assertion frequently made.

The calf born in the fall does not have to wage the ceaseless war against flies that the spring calf does, while the cooler temperatures prevailing causes the milk to be in better condition. Scours are a rarity in fall or winter.

During the first few months the calf must be fed on milk, and considering the fact that fall calves make much larger gains, it is better to breed the cows so as to freshen in September or October.

The increased prixce of the feed will more than be offset in the greater value of the animal raised. An additional incentive would be the fact that fall bred cows gibe a longer and more profitable flow of milk. It has been noticed that milk fever very rarely occurs in fall.—W. A. Freehoff, in Successful Farming

THE HORSE.

Soil Character in Horse Breeding.

There is no point which is of more vital importance to success in breeding horses than that the land on which they are reared should be of a suitable character for the purpose. This, in fact, constitutes the chief fundamental requirement in horse breeding as all experienced breeders will agree. The nature of the soil plays a great part in molding the type of horses, their size, the development of their bone, and their general conformation are all very largely influenced by this factor. And not only does it have a bearing on their outward type, but their whole inward quality—their constitution, the quality of texture of bone, toughness or otherwise of sinews, etc.—are also affected by it to a material extent.

The requirements of horses as regards the nature of the soil vary according to their breed. A soil which is suitable for one class of horse may be quite unsuitable for another. When the conditions of soil are not congenial to its particular nature, a breed cannot flourish, and sooner or later loses its type or actually degenerates. For this reason, horse breeds do not bear being indiscrimately transplanted from one kind of soil to another. Yet the mistake is commonly made of attempting to breed a particular class of horses on land totally unsuited to its character.

For instance, heavy and massive Shire horses can be raised only on rich and fertile land of a heavy character where the grazing is of the best, as well as very abundant. Such horses cannot be bred on lightish soils, because the grazing on these lacks the elements which are necessary for the production of this type. Transplanted on to light land, Shire stock quickly deteriorate in size and weight, and the true type, with its massive proportions and powerful build, is gradually lost. Cart horses bred on this kind of soil are always on the small side and of a lightish stamp. Their weight and size in fact bear a direct and close relationship to the richness and fertility of the soil. The richer the latter is, the more does it promote the development of these characteristics. The heaviest and biggest Shire draft horses are bred in the low-lying marshy and rich lands of the Fen country in Lincolnshire and Cambridgeshire, which kind of soil favors the production of extreme weight and a huge framework to a greater extent than any other kind.

"In the case of the light breeds of horses also, richness of soil tends toward massiveness of shape, just as it does in the case of cart horses. But the requirements of this class of horses regards suitability of soil are, of course, of a different nature. The biggest and most powerful light horses can be bred on soil which would not be suitable or good enough in point of richness for producing weighty and first-rate Shire horse stock. Moreover, the marshy, low-lying, rich pasture grounds, such as are found in the Fen districts and elsewhere, which are so admirably adapted for raising heavy draft horses of the light class, while some light breeds cannot be bred successfully on them at all. For instance, they are suitable for raising thoroughbreds, or stout and tough hunters or polo ponies. Light horses bred in this class of soil, it is true, develop much weight and grow to a big size as a rule; but they are more or less coarse in type, and lack the quality and refinement which one looks for in well-bred animals, while invariably they are more or less soft in constitution. Furthermore, the quality of their bone and sinews is of an inferior character, these structures being deficient in toughness; and this last applies also to their feet, which generally incline to be of a flatter shape and more spreading than one likes to see in horses of the light class which are worked at fast paces and whose feet consequently are sublected to a great deal of concussion. Really tough, hard-wearing and stoutly constitutioned, light horses with strong legs, steely tendons and good feet, can be bred only on uplying pasture lands,

"In no other direction does the nature of the soil exert a greater degree of influence on the horse bred on it than it does in regard to the size and quality of the bone, and also the quality of the structure intimately connected with the bone—namely, tendons, sinews and ligaments. The principal ingredients which go to build up the bones are lime and phosphates; hence, where the soil is deficient in these important constituents the feed it produces does not contain a sufficient amount of bone-forming material to assure a full development of the bones in young horses, and under these unfavorable conditions they naturally remain light-boned and weedy. It is impossible to breed big-boned horse stock on such land.

The quality of the bone also varies on different kinds of soil. Some soils tend to produce dense, tough and finely-textured bone, more or less ivory-like in its substance; while on others the tendency is for the bone to be of an inferior character, porous, soft and of a coarse texture, although it may at the same time be abundantly developed. Quantity and quality of bone, in fact, by no means always go hand in hand. The quality of the tendons and ligaments is in all cases most closely associated with that of the bone. When the latter is flinty, flat, and ivory-like, the former structures are of an equally good quality, and possess toughness and strength, so that they are found to wear well. And similarly, when the bone is poor in quality, coarse, and with a tendency to roundness, instead of being nice and flat, the sinews are also inferior, and do not stand wear well, being neither strong nor tough.

Of the various kinds of soils, no other is so favorable to the development of big bone—and that of the very best quality—as a good limestone soil. This is admittedly the most suitable for the breeding of good horses, and especially of light horse stock of a tough and hard-wearing sort. Our stoutest and best horses are bred on land of limestone formation.

Trotting a horse fast down long and steep hills will in time cause him to become knee-sprung, but don't expect that trotting him up the hills will counteract this tendency or straighten the already sprung knees. A change of gait on the road is always easier on the horse, and if he trots on level roads, he surely deserves to walk up and down the hills.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevent the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it. Very truly,

RODERICK McKENZIE.

DEAR SIR:--I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.

Hillsboro, N. S.

MESSRS FRASER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASER THORNTON & CO., Cookshire, Que.

DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASER THORNTON & CO., Cookshire, Que.

"After Effects" of Fertilizers.

Extract from

"Record of Fertilizer Experiments."

By Walter Shipley.

Sometimes, owing to adverse weather conditions, either extreme drought or excessive rainfall, the application of even a complete fertilizer does not give a profitable increase during the first season. In such cases it must be borne in mind that the Potash and Phosphoric Acid part of the fertilizer, not used by the crop that year, is retained by the soil and invariably has a marked beneficial "after affect" on the succeeding crops for two years at least. A practical example of this is shown in a letter received this fall from one of our experimenters, Mr. Harry A. Acheson, Elmsville, N. B.

The following is an extract: "I might make mention of the "after effects" of the fertilizers. On plots Nos. 2 and 3 I have a fine catch of grass seed but practically none on Plot No. 1 (unfertilized). This is on the plots where I sowed oats this season. Where I raised potatoes two years ago, applying the fertilizer in the drills, no difference could be seen between the plots owing to the dry season, but last year I had a fine crop of oats. This year I cut a splendid crop of clover and to-day the rows are there to show where the fertilizer was applied in the drills two years ago."

The

Dominion Agricultural Offices
of the
Potash Syndicate
Temple Building, TORONTO, ONT.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

HE BEST LINIMENT
OR PAIN KILLER FOR THE HUMAN BODY
Gombault's
Caustic Balsam
IT HAS NO EQUAL
For the Human Body
—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.
We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.
A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and
all Stiff Joints
REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER
Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

POULTRY.

11 Annual Meeting Maritime Poultry Association.

he 1911 Annual Meeting of the ritime Poultry Association was d in the Board Room of the Win- Fair Building, Amherst, N. S. on cember 6th at 2.30 p. m. J. P. ndry, president of the association upied the chair. About thirty en- siastic members were present. e Secretary read the minutes of last Annual Meeting and they e approved.

he President referred in feeling ms to the loss sustained by the ociation in the death of the faith- co-worker, Mr. Wm. Robertson. e increased number of exhibits in Poultry Department had taxed cooping capacity and the time l arrived when a double decking tem of cooping must be arranged, ess some other provision can be de. In future any new coops that ght be needed to accomodate the ltry exhibit must be paid for out the funds of the Poultry Associa- n. The quality of the exhibits in Dressed Poultry Department was ter than in previous years but re was still much room for an in- ase in point of quantity.

he Maritime Stock Breeders' As- iation was bearing all the expens- of the Show and it was only fair t the Poultry Association help m with their work by handing ov- to them at least fifty cents out of h and every membership fee.

he Treasurer's report showed a stantial balance on the right side the ledger after all expenses had n paid.

C. Craig, Director for Nova Sco- said he would like to see more mbers present at the Annual Meet- . There was strength in numbers it should be the duty of every mber to be present.

eth Jones, reported for the Prize t Committee. Nothing had been e towards extending the prize list include Pet Stock as the object of Fair was to increase the interest Utility lines rather than in fancy s. He also explained the placing the Silver Cups and told why the nge had been made.

r. L. H. D. Foster, another mem- of the Prize List Committe, had been present owing to not receiv- notice of meeting in time to make essary arrangements re his busi- s during his absence.

Mr. L. A. Haszard did not think the Prize List Committee was justified in changing the conditions under which the Poultry Association's Cup must be won. Messrs. Foster and Burke sustained Mr. Haszard's views. Several other members spoke to this question and upheld the Committee's action as they had two Cups at their disposal and as the last year winner of the cup had withdrawn from the show ring no intentional injustice had been done to anybody.

The Prize List Committee's report was then voted on and carried.

J. B. Daggett, seconded by I. C. Craig moved the adoption of the following resolution:—Resolved that when a Cup has been awarded for competition for a series of years, no change shall be made until the series of years in conditions have been completed. This resolution was unanimously approved.

The President reported that the prize ribbons had been received from the Rhode Island Red Club.

Mr. Fuller explained that owing to matters over which he had no control, he had to call the Prize List Committee together on short notice.

The old question of properly and expeditiously indicating the owners birds as soon as the judges had completed their work was again brought before the Association and on motion Mr. Seth Jones was appointed a committee to devise a workable scheme.

Mr. J. B. Daggett was appointed a committee to interview the powers that be in regard to getting a grantfor the furtherance of the Poultry Industry in the Maritime Provinces.

Mr. Craig asked that the resolution passed last year asking that the wording of the conditions governing pens of poultry be changed so that cockerels might be penned with hens and cocks with pullets, be again brought to the notice of the Prize List Committee.

Mr. Daggett spoke of the excessive express charges exhibitors from points west of St. John must pay but thought the proposed Valley Railroad would alleviate the difficulty as soon as transportation was established over that route.

Mr. Haszard thought exhibitors should know who the judges were before they left home. He thought Island Poultry Men did not receive a square deal in this matter. In reply the president said it was impossible to give the exhibitors this information and he did not think it was at all necessary.

Referring to the matter of alleged unfairness, Mr. Daggett said the members of the Association ought not to indulge in any sectionalism or provincialism. It was a mistake to do so, particularly when these grievances were more imaginative than real. The members should all work in harmony and talk of the various provinces in the collective spirit.

I. C. Craig moved a resolution that a letter of condolence be forwarded to the wife and family of the late Wm. Robertson and that it be incorporated in the minutes of the meeting—carried.

The election of officers resulted as follows:—

President—L. H. D. Foster, Marshfield, P. E. I.; Vice-Presidents—W. H. Henry, Shubenacadie, N. S.; S. Jones, Sussex, N. B.; L. A. Haszard, Charlottetown, P. E. I.; Directors—I. C. Craig, Amherst, N. S.; P. P. Gunn, Sussex, N. B.; A. Boswall, French Fort, P. E. I.; Geo. Kaulback, Summerside, P. E. I.; Prize List Committee—L. A. Haszard; S. Jones; J. P. Landry; Sec.-Treas.—J. P. Landry.

Keep Fowls Confined.

Reasons are often given why it is most profitable for the farmer and all other poultry keepers, to have their fowls confined to yards instead of running at large. Now we will give one reason why it is better for the consumer of eggs and poultry that they should do so. It is the same which we once heard a man give for wanting his hens let out instead of remaining confined in the yard: "When the hens are let out they pick up lots of feed, and eat just what suits them best."

Now in the matter of choosing her food, the hen has neither wisdom nor good judgment. She will eat anything that is fit to eat and many things that are not. Nothing is too filthy nor too disagreeable in flavor for her. She seems to lack the senses of taste and smell. Not having tried them, we will not say that the ordinary bugs and worms, butterflies anf grubs are not as good flavored and wholesome as beef-steak, but she would as readily eat meat in the last stages of decay and take her water from the drainage of the barnyard or cesspool as from the purest brook.

We always had some sympathy with the young lady from the city, of whom it was said that she declined chicken at the dinner because she had been watching them at work in the barnyard, and she preferred a piece of the tripe insted.

Whatever may be the cause, and we think it is this lack of discrimination in feeding and drinking, we know that the egg of the hen or the flesh of the chicken that has an unlimited range on the farm has a rank flavor usually which makes it far inferior to the product of those which are yarded and fed with a suitable variety of feed all of which is selected as being sweet and wholesome.

Everyone may not notice it, as we have heard some say they could not tell the difference between a fresh-laid egg and one that had been kept three weeks, or, if in cold storage, lor months possibly. Luckily all people are not alike in their tastes.

Increase the Prolificacy of the Flock.

Every poultryman should endeavor to increase the prolificacy of his flock.

How can this best be done? By breeding in line for the best results. If egg production is the desired end trap nests will determine the best layers. A system of marking the chicks and pedigree record will determine the progress of the flock. Egg records and receipts for the marketed product as well as the grain bills will assist the keeper to estimate the profit.

No poultryman in this day of competition and small margins can afford to keep hens without a definite knowledge of what his flock is doing. Nor can he afford hens without following some system of mating and pedigreeing. No one keeping hens for profit can afford to stay in the business without a knowledge of which his best layers are. There is no doubt but what thousands of people keeping hens are in the dark as to their most profitable fowls. Such people cry: "There is no money in hens." There would be no money in any business unless managed with extreme care and intelligence. The thing to do is for one to manage the poultry business with the same skill as he would manage any other business.

By careful and proper mating for a number of years any intelligent person can build up a strain of fowls that will pay a profit nearly double that of an ordinary flock per fowl.

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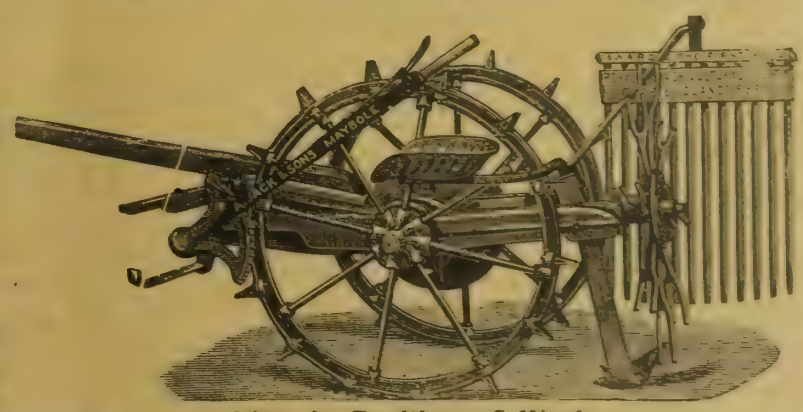
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The Christmas Tree.

It blooms one day in all the year
Not when the roses blow
But when the fields are brown and sere
Or robed in gleaming snow.

Upon its branches bending low,
All beautiful to see
Both flower and fruit together grow,
Oh, wondrous Christmas tree!

And children dance in merry glee
And lovers whisper vows;
And trembling age draws near to see
And rest beneath its boughs.

And up above, in starlit space,
Beyond the gates of gold,
Perchance through all the heavenly place,
Rolls round the song of old.

"Peace on the earth—to men good will,"
That sweet and glad refrain—
Should not the angels sing it still
When Christmas comes again?

Green be thy branches, Christmas tree
Thou plant of heavenly birth,
Thou hast the summer's heart in thee
Though winter rules the earth.

(Anon).

Love's Barrier.

(Continued from last issue).

CHAPTER XIV.

THE RENT VEIL.

Jane hesitated a moment, and under the glow of the firelight on her cheek the slow colour rose.

"Well, since you ask me, Helen, I don't actually think he is looking very well."

"He certainly is thin. I noticed it as he went down the path this morning. But why is he thin? Why should he not look well? I look after his creature comforts well, and I think he eats enough."

"It is not a question of food," said Jane, calling a spade a spade with her usual frankness. :'Of course; he is worried, any body can see that."

"About me, I suppose?" said Helen a little hardly.

"About you, of course; what else would there be to worry him?"

"Two lumps of sugar, is it? I have forgotten for the moment; and don't knit your brows at me, Jane; I won't have it at any price. The house of defence should never have a frowning portal."

Jane smiled a little unsteadily as she took her cup. Helen lifted her own, and they drank their tea in a silence that could be felt.

"I am going to tell you, Helen. Claude came to see me yesterday."

"He did? That was where he was for a long afternoon, and why he did not need any tea when he came back. But why couldn't he tell me frankly where he had been?"

"Well, if you wish the truth, and indeed I think it best always to be truthful, I suppose he did not wish you to know he was talking about you."

"To you?"

"Yes."

"But I should not have minded that. He has a perfect right to talk about me to you. You see, I have a perfect confidence in you both. You are my friend, aren't you? If I thought you were not, everything would be impossible. Well, and what have I done?" asked Helen; and the tone of her voice was not very encouraging.

"It is not what you have done—that is perfect, and Claude loves you to distraction. It is rather what you leave undone. He loves something else, the work to which he has consecrated his life, and your attitude towards it is killing him."

"But I promised him nothing. I did not pose as a religious woman. I told him all along, even on the very day of our marriage, that I would fall far short. I think honestly, Jane, that I have kept my part of the bond, the part I undertook. I have made him a home." ...

"A home!" repeated Jane. "What is that? I have never had one. I have lived in several houses, but I don't think I know what it is to have a real home. But so far as I have thought about it, a home does not seem to me to be summed up in material things."

"They are the groundwork, the essentials, you may believe that," said Helen primly. "A man will say he is indifferent to externals; but he isn't, not even the best of them. Claude likes his creature comforts as well as any man I have ever met."

"But surely, Helen, there is something else?"

"Well, I am very amiable; I strive not to lose my temper, though once or twice I have felt frightfully provoked. What else is there?"

"Personal sympathy, warm personal interest, community. I am a single woman, but surely I am right in saying these must be the essential basis of a happy marriage."

"I never expected a happy marriage and I warned him. He was passing good to me in my extremity, and I was tempted. It was a mistake, but it can't be undone. Why can't he accept me with all my limitations, and leave the rest?"

Jane set down her cup and leaned her elbows on her knees. She had not expected that the veil would be so suddenly rent, but, on the whole, felt glad of it.

"Perhaps you will tell me exactly what Claude said yesterday; what is the ground of his complaint? Indeed, you must tell me; it is my right."

Jane did not dissent, but cast about in her mind for the fitting word. She had not Helen's choice of words, her clear, sharp, incisive tongue, her quick woman's wit; but she had her own strong native common sense, and her unswerving devotion to the truth—no bad weapons to match against the other. And because she loved these two creatures—her brother and his wife—above and beyond anything else, because they represented her all, she prayed that she might use her weapons aright.

"I don't express myself very well, dear," she said very quietly. "But it is your continued absence fron church, your standing absolutely outside the work of the church, which is killing him. It is doing him harm, mentally, morally and spiritually, and it is not a good thing for the parish. Don't you see it weakens his influence, for if a man has so little spiritual power over those of bis own household, what must people think?"

Jane spoke with great deliberation, realising that the time had come for plain speech, and not afraid of offending Helen. She believed that the understanding between them would bear even this heavy strain.

"Mentally, morally and spiritually, he is the worse for me," said Helen with a sharp note in her voice. "It is rather a heavy indictment, isn't it?"

"It is true," replied Jane invincibly. "Don't you see he loves you so devotedly that he can't bear that you should shut him out of your life like this, that you should absolutely refuse to share his interests. What is it that keeps you back?"

"Nothing, except what I have said. I have never been a church-goer. I think there is a lot of hyprocrisy and even wickedness done under the name of religion; why, my stepmother, who is one of the worst women in the world—I say it quite deliberately, because she is absolutely without a heart—is both devout and exemplary in her church attendances. She, who would not move a little finger to save another woman pain, would get up on the coldest winter morning to the early celebration. She would not miss it for the world. I have no use for anything that bears that kind of fruit."

"She is only one woman," said Jane stoutly. "Think of all the others you have known who bear a different record."

"I have not known any, only you. You are certainly the best woman in the world, Jane Secretan, but I believe you would have been that had you been brought up among the heathen. It is your natural goodness, which is totally independent of outward aids."

Jane shook her head.

"There you are quite wrong. My faith has made me what I am, though I fall far short of what you say about me. Listen, dear. I am naturally a bad-tempered woman, hot, jealous, and I could be vindictive. In the old days I used to be very angry against my brother, especially in his Oxford days, when it cost so much to keep him, and we were stinted at home, and he took it all as a matter of course, never seeing how our father aged, nor how the lines deepened on our mother's dear face. I was angry for myself, too, for I wanted things. I wanted to be educated, to have his chances, to go abroad even, and I was often cross and horrible to him. It was only God who showed me the hardness of my heart and helped me to overcome it."

"But I don't in the least see that you were called upon to overcome it. It was a perfectly legitimate indignation. I should have felt it myself. Indeed, I feel it now every time I look at you. Claude has been polished at your expense, Jane, and there is no fairness in it."

Jane, a little breathless, even shamed at secret confession, sat back in her chair. "He was worth it. See what a power he is in the pulpit, and how much beloved in the parish. Supposing I had had the chance instead? What should I have made of my life? I could never have used such talents as I possess in that way. No, no, Helen, it is right that men should have the best. It is they who carry on the work of the world."

But Helen only shook a rebellious head.

"The best of them are inferior to us, Jane, and in your heart of hearts you know it."

"To get back to the question of real religion and the false, let us come nearer home, Helen. What was it, do you think, that gave me power over myself so that I was glad instead of angry when you came? I had my sharp hour, my battle with the powers of evil, but God was by my side, and showed me the hardness and selfishness of my heart. And when I saw you that day come so sweet and smiling into the house, my heart was just melted within me. I don't know whether you saw it."

Helen set down her cup and ran to Jane's side, and, kneeling by her, threw her arm about her waist, and for the moment they held one another close.

"Dearest," said Jane, with the sweet mothering note in her voice. "It is the true thing, the great thing, the only thing in life, it consecrates everything. For your own sake and Claude's sake, and—and for the sake of those who may come after, don't harden your heart."

"There will never be anybody to come after," said Helen, with her face hidden. No, no, don't talk about it. It was a frightful mistake I made to marry without love, and without realisation of all marriage meant. I would go back if I could."

"There can't be any going back; but don't you think, Helen, that in time you will feel different? Claude is very lovable. I found him so, and many women have thought so. I am sure."

"It isn't that. He is far too good for me; but I'm done with that sort of thing, Jane. My heart is seared. Claude understands—I have told him. He quite promised that too much should not be expected of me, and though I don't mind you and he talking about me like that, still it hurts a little, don't you see. I don't think it is quite fair."

Jane was silent a moment. "We had not seen one another except on Sundays for quite a long time, and I was very glad to see him. Helen, I think he knew that, and blurted out things in a little rush of—of feeling. He did not come to the Court with the intention of discussing you with me. I am quite certain of that."

Helen did not for a moment reply;

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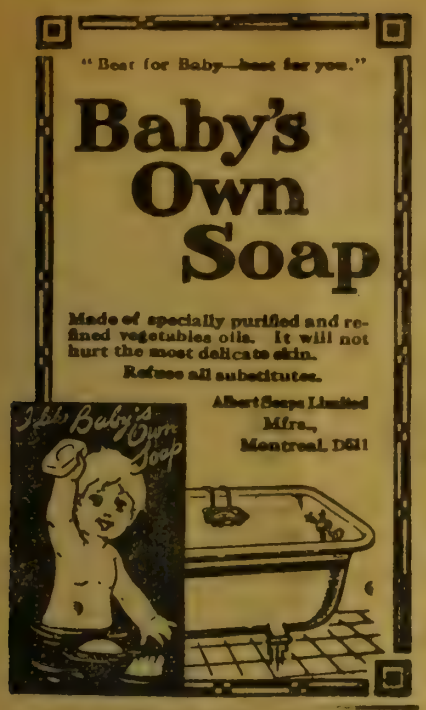
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then Jane went on again, speaking with great earnestness.

"Couldn't you at least brace yourself to go to the morning service regularly?"

"I have been there two or three times, Jane; don't speak as if I had never gone at all."

"But, regularly, Helen, make it a part of your day. I think you might do that just in the same spirit as you arrange the house, or order the meals."

"Ah, but that is different; there would be hyprocrisy in that, Jane, and I am surprised to hear you. But why won't Claude and you let me alone? I—I try to do my best, and I think the village people at least don't misunderstand me. Ask Ann Coyne for my character."

Jane smiled.

"I don't need to do that; I love you, dear. Well, don't let us talk any more about it. I'm no believer in too much talk. It is worse than silence. Please God, it will come all right one day. I shall go on praying. I'm full of worries about the Court this afternoon. It's incredible how foolish a man can be."

"You mean Tom Courtney?"

"Yes. The new squire came to see him this afternoon. Have you seen Sir Anthony, Helen?"

"Oh, yes, we dined at Mardocks! The Duchess looks very nice. Her face is so interesting. She looks as if she has had a great deal of experience."

"She has. Her life story would fill a book. She would like to know you, Jane, and I'm going to bring her to call at the Court one of these days, only you must let me know when Tom Courtney is out of the way quite safely.

"Didn't he get on with Sir Anthony, then? He's a dear, a man anybody could love, so clean and honest and wholesome. He has never made any money, and the fortune which enabled him to buy Mardocks was left to him. I feel sure he will squander it unless somebody looks after him."

"He was very nice to Tom, and Tom was rude, yes, quite rude," said Jane vexedly. "But then he had been drinking. Do you think, Helen, I might take it upon myself to remove all the drink out of the house? Sometimes I think I will."

"Try it. I should if I were you. And if he cuts up rough, all you have to do is to pack off and trundle over here. I shall never put anybody in that cherry-coloured room, Jane. It's sacred to you."

Jane smiled a little tenderly as she jumped up.

"You are very good, dear, and though I don't say much, I think about that cherry-coloured room you fitted up for me. It gives me a warm, cosy feeling about my heart just to feel that it is there."

"Why are you in such a hurry? It isn't much after five. I suppose you can't stop to dinner and see Claude?"

"Not to-day; I must go and see Ann Coyne. I'm hunting for a daily governess for the children, and her niece would suit, if she still wanted to come home. Good-bye, dear Helen, I am often thanking God for giving you to me."

"And I, if I prayed, would thank Him, too," said Helen, with a sudden full note in her voice. "My house of defence."

She sat pondering on the talk they had till the fire nearly burned out on the hearth; then she bestirred herself to find out how the evening meal was progressing. Helen gave her whole attention to her household details, and was not above giving Hannah practical instruction in the art. She had taught the raw country girl, trained only in the rudiments of household science, all sorts of dainty dishes and dainty ways, with a surprising result.

Hannah did not lack intelligence, and her ambition was now awakened, never to sleep again. Helen did not know that their joint achievement in the Rectory kitchen was the subject of much boasting at the Girls' Club, which still met once a fortnight, under the supervision of Miss Jane. It was the only parish work she had retained, and that only because Helen refused, and she could not bear the idea of dropping it.

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About ten minutes to seven Helen heard her husband's key in the door.

She moved out to the hall to greet him, and saw at once that he looked unusually tired and pale. She, on the contrary, had a high and rich colour, and her eyes were brilliant.

"I'm afraid you've had a horribly tiring day, Claude. Is it necessary to sit out these dreadful diocesan things."

"There was no meeting, dear," he answered mechanically. "I went to see the Bishop on a private matter. He was to be in Bradfield, and said he would spare me an hour."

She stood quite still, with her hands lightly clasped in front of her, looking at him with a mute inquiry in her eyes.

He came near to her, laid his two hands on her shoulders, and turned her sweet face to the light.

"Helen, I don't think you have any idea how precious you are to me, how you fill my whole life, to the exclusion, I had almost said the shameful exclusion, of everything else."

Her colour deepened ever so slightly, and she drew herself away with a touch of genuine embarrassment. She did not permit much love-making, but sometimes she could not keep it back. And nobody knew, least of all Helen herself, that slowly but surely some responsive echo was beginning to awaken in her heart.

"What did you want to see the Bishop about? Remember, Claude, I don't want to leave Midcar. I'm happy here. I should simply hate and loathe a new place, so if that was your business with the Bishop, it is off."

His heart beat a little faster as his hungry eyes cleaved to her face. Never had he heard such an intimate note in her voice, and the admission that she was happy meant much to him. There were moments when he had feared the reverse.

"We'll talk about it after dinner. I'm hungry, Helen, and you have spoiled me with your Parisian feasts. I can't go out into the country inn as I used and revel in the eighteen-penny ordinary."

She laughed spontaneously.

"I'm glad I'm educating you. Dinner will be on the table as soon as you are ready for it. Jane was here this afternoon."

"Jane? Ah, yes, Jane," said Secretan, and a little uneasiness crept into his expression. But, looking at Helen's serene face, he decided that Jane had been quite loyal. She had not even hinted to Helen the subject matter of their yesterday's talk. Yet as he ascended the stairs to his dressing-room to remove the dust of his journey, a scarcely perceptible sigh escaped his lips.

(Continued in next issue).

Mother's Christmas.

Mother was dreaming in the dark by the great hall fire-place. She loved to dream there for the hall was generally dark, and at home they used to have a fire-place. Suddenly, she was disturbed by voices in the sitting-room. It was Madeline, her adopted daughter, who was speaking in her shrill, agitated tones, and before mother could actually realize that she was the subject for discussion, she heard Madeline saying:—

But Charles we simply can't take mother to tea at the Beresford's. They are the most elegant people in town and mother is getting so old-fashioned and childish. She does the most outlandish things and nearly drives me frantic on the streets by picking up old blue platters and other hideous, useless articles in the cheap shops, and the other day at that frigid Miss Chillenger's, she told about how poor Ralph and I were, when she and Uncle Cyrus took us, and, how they worked night and day on the old farm to educate me. Ralph died, you know, a little while after we went there. Of course I am grateful, but I don't think it's necessary to have our affairs aired in public, and it's quite impossible for her to go to the Beresford's; but Mr. Beresford's mother especially invited her, so what are we to do"

"But we must go to the Beresford's," her husband replied "you may arrange the matter any way you please, but we go, for Beresford has the clearest head for business I have seen for many a day, and he and I have much in common, so if his new plan succeeds, we will be so many rungs further up the ladder of prosperity."

He began crashing the keys of the piano to put an end to the conversation, and in the meantime poor little mother had fled to her room having heard just enough to wound her cruelly. With her head in the pillow, she wept until she could not weep any more; then arose hastily, arranged her room and began packing a small satchel. "I never dreamed I was a bother," she moaned pitifully, "Oh, it seems as if my heart could break, for I loved them so. But never mind mother will never trouble you any more," and putting the last touch to her preparations, by writing a note, she lay down to broken slumbers.

Before anyone in the house was stirring next morning, she slipped away to the depot, leaving the note which caused such consternation on the dining-room table. A heavy snow was falling when she entered the car, and before they were fairly into the country, it had increased so that it was impossible to see out. She devoted her time to wondering whether her maiden sister would be willing to board her or not and how

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YEAR after year, your crops take nitrogen, phosphoric acid, and potash out of the soil. These elements are absolutely necessary to the growth of plant life. What are you doing to replace them?
You can keep your soil from starving by spreading fresh manure, evenly, in proper quantities. Manure, spread in this way, puts back into the soil the very elements the crops have taken out. To spread manure evenly, you must use a manure spreader. When buying a spreader get a good one.

IHC Manure Spreaders

have proved their quality. Owners like I H C Spreaders because of their simplicity, strength, durability, and light draft. The superiority of these machines is due to the following constructive features:
The method of transmitting power from the wheels to the beater is simple and direct. There are no unnecessary parts to wear. The beater is large in diameter and the teeth are long, square, and chisel-pointed. By using this style of tooth, the manure is thoroughly pulverized and is thrown out before it wedges against the bars. This reduces the draft.
The apron is supported by steel rollers and the slats are placed close together, so that manure does not sift between. The steel wheels have ample strength to carry many times the weight they will ever be called upon to bear. Rims flanged inwardly, prevent cutting of meadows and accumulation of trash.

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are machines that will merit your heartiest approval. They are made in many sizes, for field, orchard, and vineyard. Get complete catalogues and all information from the I H C local dealer, or, if you prefer, write nearest branch house.

CANADIAN BRANCHES: International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

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I H C Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizers, etc., write to the I H C Service Bureau, and learn what our experts and others have found out concerning these subjects.

Why take Chances when You Don't Have to?

It is poor policy to buy a cheap stove to save a few dollars in the first cost and pay twice as much extra EVERY YEAR for repairs and additional fuel.
If you install in your home an

Enterprise Monarch Steel Range

you will run no risk, as it will save you money and your wife care and anxiety. Just think, wouldn't such a Range be a Christmas gift that would benefit the whole family?
The **Monarch** with its modern equipment is the stove makers' greatest gift to the housekeepers of Canada in recent years.

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The Enterprise Foundry Co., - - Sackville, N. B.

the old home would look. "I suppose Becky will think me 'a queer little piece' like she used to," sighed poor mother "and I guess now I must be, but it gives one comfort to think there is one home waiting for them at the end of life, even, if they are 'queer little pieces."

The storm outside was raging in fury now and the great iron monster struggled and groaned as it tore through the forests, panted for breath as it mounted the hillsides and finally when mother was growing drowsy, it gave a tremendous jerk and ceased the battle.

There was a cry of "snowed up in the valley!" a rush of feet, a murmur of troubled voices and then a big conductor with a lantern 'bent over mother and asked her if she would be able to stand the cold if he were to carry her to a farm-house where she would be made comfortable.

Mother consented in trembling tones and wrapping her in a great coat, he battled with the surging sea of snow underfoot and the blinding force of it overhead until he set her down in a farmhouse kitchen where a cheerful, little farmer's wife brought her hot drinks and she was rubbed, heated and cheered until some warmth was instilled into her feeble body, but the cheeriest ray which warmed her heart was a little cherub of four years old, who crept into her arms and whispered, "I love you, cause your like my grammuzzer."

She clasped the soft head against her cheek and great homesick tears came as she remembered how she used to hold little Madeline in days gone by. Then the other children kissed and petted her, and the cheerful farmer's wife, Mrs. Drew by name tried to comfort her by saying the roads would probably be cleared out by the day before Christmas so she could get home.

This only caused the salt tears to flow faster and impulsive as ever, she told the kind-hearted lady all about it, but true to her children, she pretended she had found out she was in the way, herself.

Mrs. Drew understood and a letter was written to tell of her whereabouts so when Christmas came they could not do without her until it was over.

How mother enjoyed those Christmas preparations; she made candy, baked old-fashioned cookies, told them stories and even went with Mr. Drew to the store where she selected presents which made five little Drews happier than ever and that is saying much, you may be sure.

Then on Christmas Eve when the final task was done, they held a jubilee in the kitchen. Brown heads, yellow heads and black heads bobbed hither and thither. Mr. Drew waltzed Mrs. Drew about until his foot caught in an apple-basket, he, being unaccustomed to this form of exercise, and he came down with a crash sending apples hither and yon. At this critical moment two snow-clad figures appeared in the door-way. The children tried to hide behind their mother, Mr. Drew rose with alacrity, but mother alone knew who they were.

Just for a moment a pang of regret swept over her, then she was gathered into the penitent arms of Madeline; somehow everybody got to talking at once, Mrs. Drew was wiping her eyes and Mr. Drew blew his nose so violently it brought them to a startled standstill, and through her tears mother bade them forget it all and join in the fun.

That Christmas was a memorable one in the Drew household. Madeline and Charlie both refused to go back Christmas morning; and in the forenoon the former, enveloped in a big blue apron, basted the goose for dinner and it gave her husband such an appetite that he threatened to banish the cook when they got back home.

But when dusk was gathering, they wrapped up mother and carried her back to their city home. Happy little mother! She never felt again that she was in the way and when the angels carried a sweet-faced baby to the Wordsworth home, her happiness was complete.—Hilda Lorne.

Make the Home Comfortable.

The material things to make home comfortable are several in number, and vary somewhat according to the home; but some things every home should have, to be truly comfortable in winter. Perhaps the greatest necessity to comfort when coming in shivering from the cold is a good fire. What a comfort is a cheering heat, whether it comes from the blazing logs in an old-fashioned fire-place or the radiator or register in a modern home. Let the house be kept warm, not overheated. An average temperature of 70 degrees is sufficient then there is not the likelihood of taking cold when one steps out. When you see a home where the thermometer soars between 80 degrees and 90 degrees all winter, you will also see a home where colds are prevalent.

Perhaps next to a plentiful supply of fuel a bountiful table is necessary. During cold weather we need a greater amount of heat producing foods. We can readily consume beans, pork, mince pies, etc., in winter which would put us on the sick list if indulged in during the summer. The larder, the cellar; the meathouse and the granary should be well stocked for winter comfort.

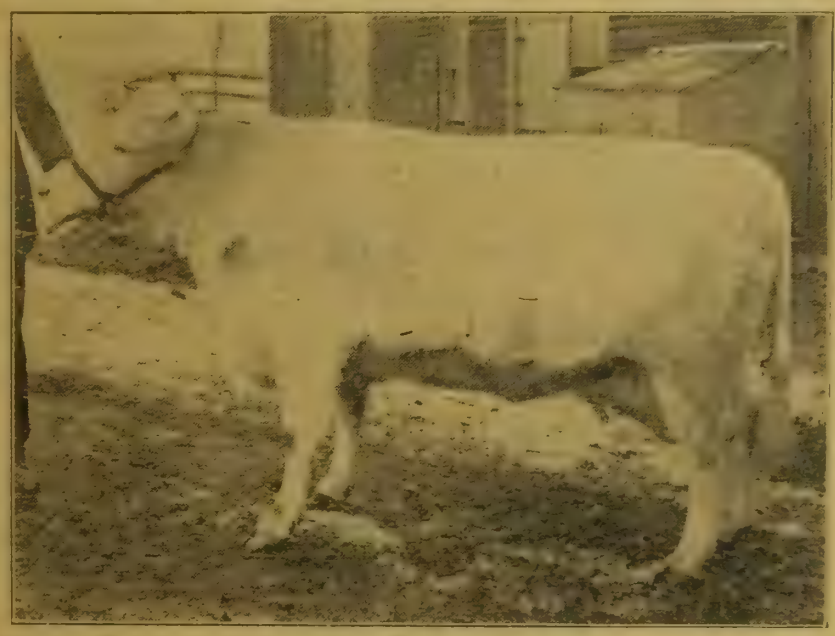
Good warm clothing, especially underwear for the whole family, from the father to the wee tot, is a necessity to comfort and health. "To prevent colds and sickness in children," a doctor said, "dress them warm and let them run." If the proper clothing is worn, a regular temperature observed in the house, good fresh air admitted without stint, and some out-door exercise taken every day no matter how low the temperature, colds would soon be a thing of the past for old and young.

The house, especially the bedrooms, should be thoroughly aired every day. At night put on plenty of bed clothing and leave a window open, at least a foot, all winter long. If some are too sensitive to a draft, a muslin screen over the opening will be beneficial.

While caring for the physical man, the mental should not be overlooked. What a comfort on cold winter nights with the wind whistling fiercely around the house and the snow piling high, to sit snug and warm with the loved ones at home, reading from favorite books or periodicals. Good reading should always be at hand. Now with books so cheap and such excellent periodicals to be had at such reasonable prices, no home should be without a plentiful supply of literature. What picture could be more alluring to a traveller than a scene around a cheerful fireside, with all the folks, father, mother, brothers and sisters, and perhaps a friend or two, under the evening lamp, reading and studying; and as a diversion eating light, fluffy popcorn or rich, full nuts brought out by the thoughtful mother?

In the comforts of home we may become too self-centered. A home cannot be truly happy unless it sheds its beams on other homes. The home that brings the most sunshine to others will have the most sunshine within itself, be it a one-roomed log cabin or a palatial residence. If a home seeks but its own comfort and happiness, being selfishly forgetful of others, happiness will flee it as persistently and elusively as the pot of money at the end of the rainbow. But the bread of kindness cast upon the waters in thoughtfulness for others will surely return to you some day, perhaps most unexpectedly.

But after all it is not the external things that make a house a home. It is an intangible something hard to define that makes a cabin or a palace a very Paradise on earth, or the lack of it that leaves it but four walls—merely a place to stay. What is it that brings that atmosphere of home? Love is surely the foundation. But there must be the proper expression of love in patience, kindness, unselfishness and thoughtfulness for each other. We have all seen families where there was absolutely no doubt of their love for each other, but they had such a queer way of showing it. If some great trial should come upon them, they would stand by each other to the death, but in the little, petty annoyances of life they were cross and crabbed. In such a home there is not the truest happiness. To bring the genuine peace of home life we must all bear and forebear with each others' weaknesses, because no two of us see or act or think alike. The old Quaker expressed an universal truth by saying to his wife, "All the world's queer but thee and me, and sometimes I think thee's a little queer." If every member of the family would recognize that difference and apply the Golden Rule to the others' "queer" ways, and make up his or her mind to open a fresh can of smiles every morning and be as pleasant and agreeable to the home folks as one is expected to be in company, we would hear far less of family jars, quarrels and divorces. If anything has gone wrong at the office or the store or the school room we take out our spite on the folks at home by being surly and disagreeable, forgetting that one cross person in the family circle will put a damper on the good spirits of all the rest. Have we any right to thus vent our spleen in the home? Surely we owe it to our dearest ones at home to be there at our very best at all times and under all circumstances, thus adding the first and greatest comfort to a home—happiness.—J. E. H. in Indiana Farmer.



Lady Ruler.

Winner of the M. J. O'Brien Silver Cup lor the best Shorthorn animal, any age, at the recent Maritime Winter Fair, Amherst, N. S. Owned and exhibited by Harold Etter, Westmorland Point, N. B.

Rogers Hill in the Line of Improvement.

(Continued from page 185).

here and scarcity of water, cows have not made as good a showing as for corresponding months last year, but as the number of patrons are steadily increasing, the output of the creamery will be the largest in its history. Crops were fair in this locality, hay about an average crop. The continued drought was hard on grain and roots, and they were considered rather light. Fruit did well but a considerable quantity dropping off the trees, owing to dry hot weather, did not go as large a crop. Stock of all kinds was scarce and brought good prices. Prices in local markets were also good, and although there was not so large a crop as last year, yet we are optimistic, and by trying to improve our methods in farming and also in breeding our stock, our society will, we hope, make greater advancement in the future.—W. S. McKean.

Annual Meeting of the Maritime Bee-Keeper's Association.

The Annual Meeting of the Maritime Bee-Keepers' Association was held in the Board Room of the Winter Fair Building, Amherst, on the evening of the 6th. inst. The following officers were elected for the ensuing year:

President—E. L. Colpitts, Petitcodiac, N. B.; Vice-President—C. W. McLellan, Falmouth, N. S.; Sec'y.-Treas.—B. W. Baker, Amherst, N. S.; Directors—R. L. Todd, Milltown, N. B.; W. B. Wallace, Newport Landing, N. S.; W. N. Tanton, Charlottetown, P. E. I.

The reports of the officers of the past year showed an increasing interest in bee-keeping and the Association in good financial condition. Messrs. B. W. Baker, Amherst, N. S.; I. C. Craig, Amherst, N. W. Bf Wallace, Newport Landing, N. B. were appointed a committee to revise the Apiary Departments of the prize lists of the Maritime Exhibitions.

The Association will continue the work of distributing literature and answering inquiries concerning bee-keeping, and any person requiring information along those lines will always find the officers ready to give any assistance.

E. L. Colpitts.

FLORICULTURE.

H. E. S., St. John, writes:—

Please tell me what to do with a Lace Cactus that has been in the earth since the latter end of August. I thought it had rooted but it does not seem to have any roots although the top is nice and green. I have two Hoya slips that have been in the earth about the same length of time as the Cactus and the rootlets are very tiny but the leaves are about the same as when planted. They may have grown a very little. What had I better do with them? I have scraped the dead parts of the Cactus roots. I have lost several Chinese Primroses—they rot off just above the earth. I put matches in the earth, what else can I do?

Ans.—The Cactus will undoubtedly root in time, if the soil be well drained and only fairly moist. Drainage is most essential, when soil is used. like Nasturtium can be obtained? You did rightly in removing the decayed roots.

The Hoya or Wax Plant also roots slowly, especially during winter. The period of growth usually commences during the month of March, when if alive your cutting will probably "take hold." Keep it moist and see that drainage is good.

I fancy that you have rotted the Primrose by watering over the crown of the plant. Water should never touch the centre of a Primrose but should be applied around the edge of the pot. I am afraid that if your plants have started to rot off they cannot be saved. I do not think matches will help much. I would not use them.

St. John, North End, wants to know if we can tell where a plant that looks something like a Balsam, with leaves that are rose like with bright pink flowers that have tails Also how it is grown, whether from seed or cuttings. She has heard it called Siberian Rose.

Ans.—The plant referred to is evidently the Sultana, the seed of which can be obtained from all seedsmen. Sown in February it will bloom the balance of the year if carefully treated. These plants are very easilt grown and are quite showy. It is a wonder that they are not more appreciated.

Mrs. B. A. B., St. John, writes:—

Please tell me what the best variety of ferns would be for a parlor. There would be no sunlight but the rooms are warm and large windows admit plenty of light? I have tried the Scotch fern with indifferent results. Will the Boston fern thrive under such conditions? I am told they require sunshine in order to suceeed.

Ans.—You should have good results with the Boston ferns under conditions named. Sunlight is not absolutely necessary for this class of ferns. In fact, I have seen some fine specimens, in this city, that have never seen the sun.

If you desire a large fern get the old Boston or any of the so-called Ostrich Plume type. On the other hand if a short, compact, bushy plant is desired the Boston Scott fern is best, but remember that where there is heat, plenty of moisture about the foliage is absolutely necessary in the form of spraying, sprinkling and washing at least once a week. Good drainage is also imperative.

Primrose, Hampton, writes:—

I have a small Primrose plant, the lilac shade. It grows well but I find the underside of the leaves covered with little white flies that are very agile. These pests are also on some little Geraniums in the same window. Will they hurt the plants, and if so, how can I destroy them? One of my neighbors complains of these same flies and thinks that they are injuring a Calla Lily.

Ans.—The white fly is a most persistent pest and one not easily killed. Their damage is, however, not so great as their numbers would imply. Dust the plants thickly with pyrethrim insect powder and kill all that fly about wherever you find them.

They are, usually, more troublesome in the spring when if you put the plants out of doors they will leave the plants for some weed that suits their fancy better. In this manner you can easily get rid of them. We seldom have a complaint of these pests in the fall.

The Sword fern is very apt to lose its foliage if it is not watered freely, and the foliage sprinkled. This is the cause of the dry or light green color of the leaf. Before fires were started watering twice a week would likely be sufficient, but after the air is dried with artificial heat the plant must have more moisture.

Barrels and Boxes of Export Apples at the Recent N. B. Fruit Show.

Exhibit From Centerville, Carleton Co., N. B., at the Recent N. B. Fruit Show.

Some Factors in Potato Improvement.

The subject of breeding potatoes for seed, improving a variety of potatoes or breeding a new variety, was interestingly discussed by Prof. Raymond Pearl, Maine Experiment Station, under the subject of "Some Factors in Potato Improvement," at the closing session of the convention. Prof. Pearl said:

"The method of improving potatoes most often used is that of tuber selection. The man selects the tuber whica appears to him to be most like what he wants, and then plants where he can know and watch his hills. The tuber, however, is not really seed but a part of the plant, and what he is really doing is planting a part of the plant. Frequently in doing this, one does not get potatoes anything like the one which he planted. It very often happens that if one plants single eyes, the potato from one eye may be entirely different from those produced from the other eyes. This is bud variation, for the eyes represent buds. Bud variation has been very little studied and really little is known on the subject.

"The yield of potatoes has been slightly increased by continued selection. These Luther Burbank stories about marvelous increase by breeding are largely fairy tales. The man who has been doing this work considers that he is doing well if he makes a small improvement.

"I think we can safely say that such selections as picking out two or three hundred tubers and planting a few of the very best will insure some improvement. There are three things to remember and work up to —type, yield, and disease resisting. While I do not want to say that we can breed in this way a disease resisting strain, I do not think it can do any harm to select from a field which has been struck hard by blight the few plants which have not been struck. It is well for a person to keep his eyes open and take a chance, for it is often the unexpected which brings results. The greatest discoveries have often been made by accident.

"Regarding really new varieties, these are raised by propogating from seedlings. This is the only way that really new varieties can be originated. In some cases new varieties have been originated by careful control of pollenization but most of them have originated by chance. Any one who is interested can have a good deal of pleasure and possibly strike something that will be very valuable by planting potato bolls and cultivating the seedling.

"I am not advocating this as a practical proposition in breeding potatoes, for it is perhaps the most impractical thing you can do. But you will certainly learn a good deal about potatoes which you would discover in no other way.

"In regard to the running out of seed, no one has carried on experiments in pedigree selection to know whether the improved seed will offset the tendency to degeneration. There is no explanation and no evidence to show why potato seed runs out. In Colorado it is said that seed which is running out shows an increased tendency to blossom, and they select seed from plants which never blossom. Therefore, the following suggestions for potato improvement are well to keep in mind:

"The best seed potato, the fewest blossoms.

"Eyes shallow and simple, instead of compound.

"In getting new seed, bring it from less fertile to more fertile land.

"In exchanging seed it is desirable to make exchnage between localities not very far apart.

"It is desirable to take seed from fields which uniformly produce seed of uniform size and type."

THE MEN WHO ADVERTISE in the Maritime Farmer are experts in their business. It will pay you to consult them about your needs in their line. Tell them you are writing them because you saw their advertisement in the Maritime Farmer where all ads are guaranteed.

Hog Killing Simplified.

As the scalding is the most important part in dressing off a hog, let us consider the water first. As a rule, the ordinary farmer has the old-fashioned scalding tub, an appliance good enough for anyone. If he has not a set kettle he must depend upon the kitchen stove for heating and for two or three hogs it will take all the water that can be heated in this way or in a set kettle. Keep one thing in mind, the water must be boiling, in order to make the rule a success that I am about to give.

As soon as the water all boils, stick the hogs, all of them if there are only two or three. Then immediately pour the scalding water into the tub, counting accurately the number of pails. For every eight pails scalding water add one of cold and stir well, and put in the heaviest or oldest hog head first. Keep the animal turning and try the bristles very often and strip the feet and legs, also the belly, at the very earliest time. As soon as the bristles start very good haul out the hog and let the other end into the water.

It is needless to say work lively. With a good scraper clean the head and forward part while the hog is still in the tub. Haul him out at the earliest possible time and put in the next hog. In the meantime have a little kettle of extra boiling water to add as the scalding progresses, because the water will cool some, especially if the weather is very cold and windy.

Have all knives as keen as a razor so that all cutting can be clean instead of ragged. I have always liked the idea of washing off and shaving with a sharp knife after the hog is hung up; still this is immaterial and can be done according to the fancy of those doing the work. Wash off very clean with cold water. Split the hog the whole length of the belly sawing the bone at the hind part and the breast bone. Remove the intestines and stomach at one operation; then the liver, heart and lungs, and finally the tongue. Some leave these in for inspection. Wash out immediately with plenty of cold water, and split the back from end to end with saw or cleaver. Many a good carcass is lost from poor and insufficient cooling. Trim out the bloody neck neatly with a sharp knife and the hog is ready to cool off. Tackle blocks will assist much in the work of lifting the animal.

KILLING 15 OR 20 AT ONCE.

Guesswork does not enter the operation of dressing of hogs, and this refers more especially to the proper temperature of the water. The man does not live who can determine the proper temperature by dipping the finger tips in the hot water. The rule as given never has been known to fail, and where a thermometer is impossible is a most convenient rule to follow. If everything works well from 6 to 10 minutes is sufficient to dress off a hog under farm circumstances. Where there are 15 or 20 hogs to dress off the scalding arrangement should be a little more extensive and a common molasses hogshead used in place of the common scalding tub. Two set kettles of water will be necessary to start operations in good shape Then the animal can be completely submerged and should be kept turning continuously and tested very often to know when the bristles and scurf start easily.

It is customary with many to add various substances to the water for the removal of the hair. Long experience has proved that these are all unnecessary in successful hog dressing. The farmer who has a little something in the way of a steam plant can simplify matters very much by running a steam pipe into the scalding tank and when the temperatures reaches 160 degrees shut off the steam and begin to stick the hogs. For hogs eight months old and less a temperature of 148 degrees is the most satisfactory, and for hogs' older than this from 148 to 150 degrees, but never more than this. There is danger of setting the bristles from too great heat. A hot water thermometer must be secured in a metal tube inside the tank and raised occasionally by a string to note the temperature. Keep the steam dry and hot till the last hog is scalded. The best dressing bench is made of 1½-inch ash plank laid loosely across some sawhorses. Never use chestnut under any circumstances, because of the very objectionable stain.

STICKING IS VERY SIMPLE.

Sticking the hog is the simpliest operation of all. It is needless to say that any method that successfully opens a free incision in the jugular vein is a perfect method. For myself I like the plan best of turning the hog on his back, insert the knife 2 inches front of the breast bone and point as accurately as possible for tne tail. I have given this plan to dozens of young men and never have seen a failure yet. So I think it must be easy to comprehend.

The cutting up for the farmer's purposes is very simple and can be made a very neat, tidy job. There are no two packing houses that have the same style for cutting, each having its own peculiar method. For curing pickle that will float a good sized egg is as nearly right as possible. For curing the bacon an excellent mixture is six pounds good clean salt, coarse fine is good, two pounds granulated sugar and four ounces saltpeter, mix and use for 100 pounds meat. Pack the strips in a sugar barrel putting the mixture between each layer. Stand in a cool place. The meat will be ready to smoke in six weeks.

The Value of Agricultural Education.

(Continued from page 185).

who never saw an agricultural college, to say nothing of ever attending one. It is quite true that there are such. At one time the farmers but "tickled the ground with a hoe and the land laughed with a harpest." At present average conditions are vastly different.

The farmers of yesterday did not have so many things to battle with, as the farmers of to-day. Take the insect pests, it is only of late years that the fight against them had to be started. How to fight these pests, is one of the many things learned at Truro. How many hundreds of bushels of grain would have been saved last year through Maritime Canada if all the farmers had known how to treat for smut? How much better the orchards would be, if all who own fruit trees knew how to give them better care? So we go up the line; anything that we want to know along farming lines may be learned at Truro.

By talking with intelligent farmers who congregate at Truro, from the different parts of the Maritime Provinces, we learn how they carry on their work and their way of farming. There is another advantage of attending the short courses, we see out beyond oue own limited atmosphere as it were, and we find out that we are not the only ones who meet with troubles in farm work. In a few weeks hence, when the short courses open for 1912 let there be a grand turn-out from New Brunswick, farmers and farmers' sons, a far larger number than has ever gone to attend the short courses before. Let there be an awakening, the result of which will go on for years to come. The Governments are doing much for the farmers; it is up to us farmers to do our part, the government cannot do it all. The New Brunswick government will, this year pay the railway fare for the students attending the short courses.

I am not a prophet nor the son of a prophet, but I believe that great things are going to be accomplished along agriculturgl lines in Maritime Canada, as the years go by. The N. S. A. C. has already become an important factor in exercising much influence on the progress of agriculture in these Maritime Provinces. It is bound to continue the good work.

Can we see in its true light, what it will mean to these Provinces, when hundreds of its young men are taught and aroused to carry on farm work in a more progressive manner? If there is anything that will arouse a young man, the short courses will do it. As we look ahead into the future, I think we are safe in saying, we can see that most of the Truro farmer students will have made good. We will see more interest taken in stock-raising, in dairying, in fruit raising, in every branch of farm work that is carried on, and in setting out trees and shrubs to make beautiful the farm home. "What will it mean to New Brunswick when many hundreds of its farms are thus improved? Kingsley has said." Nothing is so infectious as example." One farm's improvement will spread to another, so that New Brunswick will be such a glowing province, that the grandeurs of the far West will fade away like the morning star at the approach of day.

Attend the short courses is the advice of one who has been there on three occasions and I venture to say you will never regret that you went.—Irvine H. Dunfield, Portage Vale, Kings Co., N. B.

H. M. C. S. NIOBE.

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TWO UNPARALLELED BARGAINS
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1R-3450. CORSET COVER BARGAIN. A case where the selling price is in unusual contrast to the value offered. Fine soft cotton, charmingly trimmed, back and front, with a deep yoke, with many rows of dainty lace insertion and pretty embroidered lawn. Perfect-fitting Cover, having just the right amount of fulness over the bust, and shaping in nicely at the waist.
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Smoking Bacon Without Fire.

The fol,owing recipe for the preparation of a liquid to be used instead of smoke in the curing of bacon and ham is given in an American journal: —"Mix 2oz. rectified spirits of tar [illegible] 40z. of ordinary alcohol, and add to 20oz. of crude pyroligenous acid (crude acetic acid). Shake well, and filter through a filter wetted with the acid (not water). Let the meat dry well after salting, then apply the liquid (called 'liquid smoke') with a brush to one side of the meat. Let it dry a few hours, and then apply to the other side. After drying for a few hours hang up for several days. Then repeat the process, and in another week the meat is ready to be eaten. One quart of liquid smoke is enough for 250 to 300 pounds of meat."

Mix the manure from the horse stable with that from the cattle as it is deposited in the yard. It will prevent heating.

Never use anything but pure bred sires of any kind, even down to roosters.

METALLIC CEILINGS

are everything that plaster, wood and wall paper are not.

Metallic Ceilings are fireproof, absolutely.

Metallic Ceilings don't crack or crumble—don't get damp or mouldy—don't need repairs.

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MONTREAL, P.Q.

We will send free to every trapper who sends us furs, our book "The Trapper's Loyal Companion".

Maritime Winter Fair Prize List.

CLASS 153.

SPRING WHEAT.

Sec. 1—White Fife or Red Fife—1st, Jas. S. McFarlane, Up. Corner; 2nd, John Stevenson, Gladstone; 3rd, Henry Gordon, Chatham, N. B.; 4th, H. B. Parlee, Sussex, N. B.; 5th, J. R. Harrison.

Sec. 2—Any other variety—1st, Wood & Son, Hazelbrook; 2nd, Ronald Chisholm, Antigonish; 3rd, Taylor Bros., Willow Farm; 4th, J. H. Arsenault, Urbinville; 5th, J. R. Harrison.

OATS.

Sec. 3—Banner Type—1st, A. E. Mc Lean, South West Lot, 16; 2nd, E. W. Bulman, Rusticoville; 3rd, Jos. H. Arsenault; 4th, W. H. McGregor, Miscouche, P. E. I.; 5th, Henry Gordon.

Sec. 4—Any other White variety—1st, John R. Harrison; 2nd, A. E. Mc Lean; 3rd, B. A. Mallett, Lt. York; 4th, E. W. Bulman; 5th, Donald Innes, Tobique River.

Sec. 5—Black, any black variety—1st, J. R. Harrison; 2nd, E. W. Bulman; 3rd, C. McLellan, Arlington 4th, Peter Brodie, Lt. York; 5th, John M. Stevenson.

BARLEY.

Sec. 6—Six Rowed—1st, E. W. Bulman; 2nd, A. E. McLean; 3rd, Jos. H. Arsenault; 4th, Donald Innes.

Secf 7—Two Rowed—1st, Wood & Son; 2nd, B. A. Mallett; 3rd, A. G. Mallett, Union Road; 4th, L. A. Arsenault, Urbinville; 5th, A. E. McLean.

Sec. 8—Hulless—1st, L. A. Arsenault; 2nd, Donald Innes.

BUCKWHEAT.

Sec. 9—Smooth—1st, H. B. Parlee, Sussex, N. B.; 2nd, W. H. McGregor.

Sec. 10—Rough—1st, H. B. Parlee; 2nd, J. E. Harrison; 3rd, J. R. Harrison.

PEAS.

Sec. 11—Field—1st, J. E. Harrison; 2nd, H. B. Parlee; 3rd, Edgar Harrison; 4th, John Stevenson.

Sec. 12—Field, Small—1st, Henry Gordon; 2nd, Edgar Harrison; 3rd, Donald Innis; 4th, Gordon Bros., Chatham.

Sec. 13—RYE—1st, Thos. Aylward, Falmouth.

Sec. 14—FLAX—1st, L. A. Arsenault; 2nd, A. E. McLean; 3rd, W. H. McGregor.

Sec. 15—TIMOTHY SEED—1st, J. E. Harrison' 2nd, Elie E. Arsenault; 3rd, Edgar Harrison; 4th, J. R. Harrison.

Sec. 16—FIELD BEANS—1st, M. B. Harrison; 2nd, Edgar Harrison; 3rd, John Stevenson.

Secf 17—FIELD BEAES, COLORED—1st, Jos. LeClerc, Urbinville; 2nd, M. B. Harrison; 3rd, Jos. H. Arsenault; 4th, John Stevenson.

POTATOES.

Sec. 18—Round White—1st, John R. Harrison; 2nd, Retson Bros.; 3rd, J. E. Harrison; 4th, Jas. J. Stewart.

Sec. 19—Long, White—1st, Retson Bros.; 2nd, Peter Brodie; 3rd, Benj. A. Mallett; 4th, Henry Gordon.

Sec. 20—Rose Type—1st, J. R. Harrison; 2nd, Retson Bros.; 3rd, Benj. A. Mallett; 4th, Peter Brodie.

Sec. 21—Red Type—1st, Henry Gordon; 2nd, J. E. Harrison; 3rd, W. J. Gibson, Marshfield; 4th, Jas. J. Stewart.

Sec. 22—Dark—1st, Benj. A. Mallett; 2nd, H. B. Parlee; 3rd, Peter Brodie; 4th, J. E. Harrison.

CLASS 154.

Field Crops Competition, New Brunswick.

Sec. 1—WHEAT—1st, Gordon Bros.; 2nd, Christen Adams, Salmonhurst.

Sec. 2—OATS—1st, Donald Innis.

Field Crops Competition, Nova Scotia.

CLASS 155.

Sec. 1—OATS—1st, Ronald Chisholm; 2nd, W. K. McFarlane, Fox Hbr.; 3rd, R. D. McKay, Balmoral Mills; 4th, Wm. Kempt, L'Archivique; 5th, Abner Webber, Chester, N. S.; 6th, Albert C. Rose, Port Maitland; 7th, Robt. S. McCurdy, Md. Musquodobit.

CLASS 176, SWEEPSTAKES.

Cup donated by Wm. Ewing, Montreal, for best exhibit of seed grain—Ernest Bulman, Rusticoville.

DRESSED POULTRY.

CLASS 142.

Sec. 1—Best 2 Turkeys; over 1 year Male—1st, Hartland Poultry Yards.

Sec. 2—Best 2 Turkeys, over 1 year Female—1st, W. H. Henry' 2nd, Thos. J. Etter; 3rd, Hartland Poultry Yards.

Sec. 3—Best 2 Turkeys of 1911 Male—1st, Thos. J. Etter; 2nd, W. H. Henry; 3rd, Hartland Poultry Yards; 4th, Hibbert Lawrence.

Sec. 4—Best 2 Turkeys of 1911 Female—1st, Hartland Poultry Yards; 2nd, W. H. Henry; 3rd, Thos. J. Etter; 4th, Hibbert Lawrence.

Sec. 5—Best 2 Geese, White—1st, W. H. Henry; 2nd, Thos. J. Etter; 3rd, L. H. D. Foster; 4th, Hibbert Lawrence.

Sec. 6—Best 2 Geese, Colored—1st and 4th, Thos. J. Etter; 2nd, L. H. D. Foster; 3rd, Hartland Poultry Yards.

Sec. 7—Best 2 Ducks, White—1st and 3rd, Thos. J. Etter; 2nd, Hartland Poultry Yards; 4th, W. C. Black.

Sec. 8—Best 2 Ducks, Colored—1st, Hartland Poultry Yards; 2nd, J. R. Harrison; 3rd and 4th, Thos. J. Etter.

Sec. 9—Best 2 Barred Plymouth, Cockerels—1st, John R. Harrison; 2nd, Mrs. Geo. Ripley; 3rd, Hartland Poultry Yards.

Sec. 10—Best 2 Barred Plymouth Rock, Pullets—1st, John R. Harrison.

Sec. 13—Best 2 White, Wyandotte, Cockerels—1st, Robt. Black; 2nd, Mrs. Wm. Robertson.

Sec. 14—Best 2 White Wyandotte, Pullets—1st, Mrs. Wm. Robertson.

Sec. 15—Best 2 A. O. V., Wyandotte, Cockerels—1st, C. R. McKay; 2nd, W. H. Henry.

Sec. 17—Best 2 Orpington, Cockerels—1st, Mrs. Wm. Robertson; 2nd, W. E. Harding; 3rd, Ripley Bros.

Sec. 18—Best 2 Orpington, Pullets—1st, Mrs. Wm. Robertson; 2nd, Ripley Bros.

Sec. 19—Best 2 R. I. Reds, Cockerels—1st, C. R. McKay; 2nd and 3rd, W. H. Henry; 4th, Hartland Poultry Yards.

Sec. 20—Best 2 R. I. Reds, Pullets—1st and 2nd, W. H. Henry; 3rd, Hartland Poultry Yards.

Sec. 21—Best 2 Cockerels, A. V. having yellow legs—1st, C. R. McKay; 2nd and 4th, W. H. Henry; 3rd, Ripley Bros.

Sec. 24—Best 2 Pullets, A. V. having white legs—1st Ripley Bros.

Sec. 25—Best 6 Chickens of any variety all of one breed—1st, John R. Harrison; 2nd, Hartland Poultry Yards.

DRESSED POULTRY SPECIALS.

Maritime Poultry and Pet Stock Association, for the best 12 Chickens packed in suitable box for export—1st, R. B. Black; 2nd, Hartland Poultry Yards; 3rd, W. H. Henry.

CLASS 144.

Gunn, Langois & Co., of Montreal, donate a 100 egg Incubator value $20.00, for best exhibit of Dressed Poultry. A Universal Hover for 2nd, best—1st, Hartland Poultry Yards; 2nd, Thos. J. Etter.

CLASS 145.

Donated by Martin's, Ltd., Dry Goods Merchants, Amherst, N. S., for eggs heaviest and best.

Sec. 1—One dozen white—1st, Edgar Harrison.

Sec. 2—One dozen brown—1st, Craig Bros.

Sec. 3—Best case 12 doz.—1st, Edgar Harrison.

CLASS 147.

Ladies Judging Competition. Dressed Poultry. For best judging of Dressed Chickens, Duck, Geese and Turkeys. Ladies Hospital Aid.

Donated by the Terrace Hotel, Amherst, N. S.—1st, $8.00, won by Mrs. E. E. Hewson; 2nd, $7.00 won by Mrs. F. Donkin.

Donated by Barkers, Ltd, open to farmers' wives only—1st, English Rain Coat won by Mrs. Fred Black 2nd, Suit Case, won by Mrs. Kellow Carter; 3rd, Tea Set, won by Mrs. S. J. Coates.

Plucking Competition. Boys over 15 years—1st, Thos. Latham; 2nd, Wm. Weiss; 3rd, Elbert Black; 4th, Fred Noles.

Boys under 15 years old—1st, Harold Black; 2nd, Geo. McWilliams; 3rd, Norman Towers; 4th, Kenneth Baker.

MAXWELL'S HIGH SPEED CHAMPION

Is The Most Satisfactory Washer Ever Placed On The Canadian Market

Last year, Maxwell's "Champion" was the recognized leader of all high speed washing machines. This year, we have put the final touch to it, and offer you the ideal machine, that includes every important improvement known to modern washers.

Maxwell's "Champion" has the largest opening of any washing machine. As you can see, the Wringer attachment is at the side, and practically the whole top of the washer opens up. This makes it easy to put in and take out clothes.

No other washer has this feature. No other washer can be worked with crank handle as well as top lever

In design, finish and appearance—in ease and quickness—in service and durability—Maxwell's "Champion" is the peer of them all. If your dealer does not handle it, write us for illustrated catalogue.

Have better butter. Use Maxwell's "Favourite" Churn. Recommended by best butter makers the world over. More of them used in Canada than any other. All sizes from ½ to 30 gallons.

DAVID MAXWELL & SONS, ST MARY'S, ONT.

We wish to call your attention to the fact that most infectious diseases such as whooping cough, diphtheria and scarlet fever are contracted when the child has a cold. Chamberlain's Cough Remedy will quickly cure a cold and greatly lessen the danger of contracting these diseases. This remedy is famous for its cures of colds. It contains no opium or other narcotic and may be given to a child with implicit confidence. Sold by all dealers.

An Advertisement in the Maritime Farmer will sell your surplus stock.

A WEAK ACHING BACK

Caused Her Much Misery.

Mrs. W. R. Hodge, Fielding, Sask., writes:—"A few lines highly recommending Doan's Kidney Pills. For this last year I have been troubled very much with nasty sick headaches, and a weak aching back, which caused me much misery, for I could not work, and had no ambition for anything. My kidneys were very badly out of order, and kept me from sleeping at nights. I tried many kinds of pills and medicines, but it seemed almost in vain. I began to give up in despair of ever being well and strong again, when a kind neighbor advised me to try Doan's Kidney Pills, which I did, and am thankful for the relief I obtained from them, for now I am never troubled with a sore back or sick headaches.

"I will always say Doan's Kidney Pills for mine and can highly recommend them to any sufferer."

Price, 50 cents per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct specify "Doan's."

A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser." also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

I was cured of terrible lumbago by MINARD'S LINIMENT.
REV. WM. BROWN.

I was cured of a bad case of earache by MINARD'S LINIMENT.
MRS. S. KAULBACK.

I was cured of sensitive lungs by MINARD'S LINIMENT.
MRS. S. MASTERS.

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Trappers, Hunters and Dealers in any kind of Raw Furs, cannot afford to dispose of their collections without first obtaining our quotations, which we cheerfully furnish upon request, we specialize in the following:—RIGHT PRICES. LIBERAL ASSORTMENT. A remittance forwarded same day goods received, express and mail charges on shipments paid by us, no shipment too large or too small. Canada's Largest Fur Operator "Thre's a Reason" your business and correspondence solicited.

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Havinglarge orders to fill and considering the advance in market prices, we are now paying from 20 per cent. to 25 per cent. above the quotations given in our November Price List for Raccoon, Skunk and Rats. Ship your furs to us and get the full benefit of the advance.

A. & E. PIERCE & CO.,
500 St. Paul St., Montreal
The Largest Row Fur Dealers in Canada

An Advertisement in the Maritime Farmer will sell your surplus stock.

LIVE UTILITY POULTRY.

CLASS 122.

WYANDOTTES.

Sec. 1—White, pair Cockerels—1st A. C. Reid; 2nd, J. S. Thompson; 3rd, Cooke McCallum.

Sec. 2—White, pair Pullets—1st, A. C. Reid; 2nd, Kingsdale Poultry & Supply Co.; 3rd, Aaron Moreash.

Sec. 5—Silver, Cockerels—1st, David Landalls; 2nd, W. C. Black; 3rd, E. S. Brown.

Sec. 6—Silver, Pullets—1st, W. C. Black; 2nd, David Landalls; 3rd, John D. Fraser.

Sec. 8—Buff, Pullets—1st, Kingsdale Poultry & Supply Co.

Sec. 9—Columbian, Cockerels—1st, Orchard Hill Farm.

Sec. 10—Columbian, Pullets—1st, C. R. McKay; 2nd, W. H. Henry.

PLYMOUTH ROCK.

Sec. 11—Barred, Cockerels—1st, Melbourne Goodwin; 2nd, Mrs. Geo. Ripley; 3rd, Craig Bros.

Sec. 12—Barred, Pullets—1st, Craig Bros.; 2nd, Melbourne E. Goodwin; 3rd, Craig Bros.

Sec. 13—White, Cockerels—1st, Cooke McCallum; 2nd, Albert Boswall, Jr.

Sec. 14—White, Pullets—1st, Geo. Callbeck; 2nd and 3rd, Cooke McCallum.

Sec. 15—Buff, Cockerels—1st, L. H. D. Foster.

Sec. 16—Buff, Pullets—1st, L. H. D. Foster.

ORPINGTONS.

Sec. 17—Buff, Cockerels—1st, Mrs Wm. Robertson; 2nd, Cooke McCallum.
lum.

Sec. 18—Buff, Pullets—1st, C. H. Wisenet; 2nd, Mrs. Wm. Robertson; 3rd, Cooke McCallum.

Sec. 19—A. O. V., Cockerels—1st, E. H. Parsons, Springhill, N. S.; 2nd, C. H. Wisener; 3rd, Kingsdale Poultry & Supply Co.

Sec. 20—A. O. V., Pullets—1st, E. H. Parsons; 2nd, Kingsdale Poultry & Supply Co.; 3rd, Ripley Bros.

DORKINGS.

Sec. 21—Cockerels—1st, Donald G. Robertson, Amherst.

Sec. 22—Pullets—1st and 2nd, Donald G. Robertson.

RHODE ISLAND REDS.

Sec. 23—Cockerels—1st, C. R. McKay; 2nd, W. H. Henry.

Sec. 24—Pullets—1st, W. H. Henry.

Sec. 26—Brahmas, Pullets—1st, Warren Watt, Pictou, N. S.

Sec. 27—First cross from any pure bred pair Cockerels—1st, C. H. Wisener; 2nd, Robt. Black.

Sec. 28—Firs cross from any pure bred pair Pullets—1st, Ripley Bros.; 2nd, Robt. Black.

UTILITY BREEDING PENS.

WYANDOTTES.

2nd, J. A. Simpson; 3rd, Aaron Moreash.

Sec. 1—White—1st, J. S. Simpson;

Sec. 3—Silver—1st, J. D. Fraser; 2nd, Thos. Latham.

Sec. 5—Columbian—1st, Orchard Hill Farm; 2nd, C. R. McKay.

PLYMOUTH ROCKS.

Sec. 6—Barred—1st and 3rd, Craig Bros.; 2nd, L. H. D. Foster.

Sec. 7—White—1st, Cooke McCallum 2nd, Albert Boswall, Jr.; 3rd, Geo. Callbeck.

Sec. 8—Buff—1st, Haszard & Duchemin; 3rd, Wm. Weiss & Co.

ORPINGTONS.

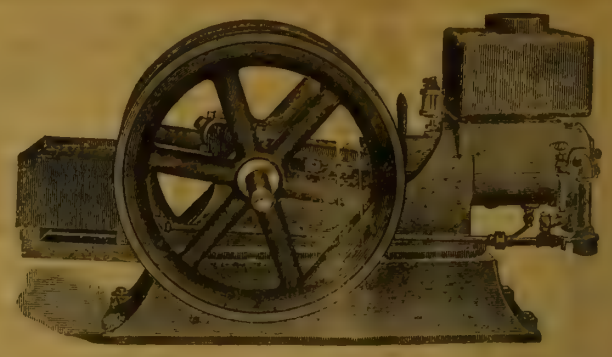
Sec. 9—Buff—1st, Haszard & Duchemin; 2nd and 3rd, Mrs. Wm. Robertson.

Sec. 10—Black—1st, C. H. Wisener.

Sec. 11—White—1st, Ripley Bros.; 2nd, C. H. Wisener; 3rd, Kingsdale Poultry & Supply Co.

Sec. 12—DORKINGS—1st, Donald G. Robertson, Amherst; 2nd, Thos. Lathem.

Sec. 13—RHODE ISLAND REDS—1st, Glenview Poultry Yards; 2nd, W. H. Henry.



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

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THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

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$100.00 Cash
GIVEN AWAY
Absolutely Free
In this great puzzle contest

VALUE $325.00

1st Prize---MAGNIFICENT UPRIGHT PIANO AND STOOL TO MATCH. VALUE $325.00
(It is on view any business day from 9 to 5 at our factory.)
2nd Prize.....$25.00 In Cash
3rd Prize..... 15.00 In Cash
4th Prize..... 10.00 In Cash
5th to 9th, 5 Prizes of $5 each.. 25.00 In Cash
and 25 prizes of of $1.00 each, 25.00 In Cash
TOTAL CASH PRIZES . $100.00

CONDITIONS

1. This contest is absolutely free. No one is asked to spend a cent to enter.
2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in this contest are awarded according to handwriting and general neatness. Be neat and you may win a good prize.
5. Judging will be done by three gentlemen having absolutely no connection with this firm. Their decision is to be acceptd as final.
6. There is a simple condition to be fulfilled which we ask of all contestants. As soon as your answeris received we will write advising you if it is correct and telling you of this condition.

THE PUZZLE

GEPNINIW
NOTRAELM
ORTONOT
XFAILAH

The jumbled letters given above represent the names of 4 well-known Canadian cities. To help you solve them we have underlined the first letter in each name. The first is Winnipeg, now guess the rest and send us in your solution of all four name in your very neatest and best handwriting.

Address: INTERNATIONAL MANUFACTURING CO., Dept. 323 Toronto, Ontario

Sec. 14—ANY OTHER VARIETY—1st, Kingsdale Poultry Yards; 2nd, Thos. Latham.

MATING PENS.

Sec. 1—Barred Plymouth Rock Breeding Pens to consist of 1 male, 4 females, mated to produce exhibition cockerels—1st, Glenview Poultry Yards 2nd, Craig Bros., Amherst.

Sec. 2—Same as above, except that they are mated to produce exhibition pullets—1st, Craig Bros.; 2nd, Glenview Poultry Yards; 3rd, Watson Lutz

Sec. 3—Brown Leghorns Breeders' pen to consist of 1 male, 4 females, mated to produce exhibition cockerels

Sec. 4—Brown Leghorns Breeders' pen to consist of 1 male, 4 females mated to produce exhibition pullets—1st, Glenview Poultry Yards.

POULTRY SPECIALS

Sec. 1—For best cock, hen, cockerel and pullet in American Breeds—1st A. C. Reid, Tignish.

Sec. 2—For best cock, hen, cockerel aod pullet in English Breeds—1st, Mrs. Wm. Robertson, Amherst.

Sec. 3—For best cock, hen, cockerel and pullet in Mediterranean Breeds—1st, Glenview Poultry Yards.

Sec. 4—For best cock, hen, cockerel and pullet in Asiatic Breeds—1st, Harold W. Weeks, Amherst.

—1st, Glenview Poultry Yards.

Sec. 5—For best cock, hen, cockerel and pullet in French Breeds—1st, Earl T. Roach, Amherst.

Sec. 6—For best cock, hen, cockerel and pullet in Bantam Class—1st, Haszard & Duchemin, Charlottetown.

CLASS 126.

The Poultry Advocate, 184 Adelaide St., Toronto, offers one year's subscription for—Best White Plymouth Rock female, Best White Wyandotte female, Best Buff Orpington female, Best R. I. Red female, Best Barred Rock female—1st, A. C. Reid; 2nd, Hartland Poultry Yards; 3rd, Albert Boswall, Jr.; 4th, Craig Bros.

CLASS 127.

Canadian Poultry Review, 184 Adelaide St., Toronto, offers the following subscriptions—For the best White Leghorn male, For the best Brown Leghorn male, For the best Wyandotte other than White, For the best Asiatic, For the best Bantam—1st, Glenview Poultry Yards; 2nd, H. D. Thompson, Stellarton; 3rd, S. E. Mc Kee, Moncton; 4th, Maritime Poultry & Supply Co.; 5th, Wm. A. Balsor.

CLASS 128.

Donated by Dr. C. O. H. Webster, Pictou—For best Golden Wyandotte cockerel $1.00; For the best Silver Wyandotte Cockerel—1st, Hartland Poultry Yards; 2nd, S. E. McKee.

CLASS 130.

Donated by the Reliable Poultry Journal, $2.00 worth of books for best exhibit in class 122—1st, Geo. Callbeck; 2nd, M. E. Goodwin, Sackville; 3rd, David Landalls.

CLASS 131.

Donated by the McLean Milling Co., Amherst, $6.00 in feed for best pair of cockerels or pullets in class 122—1st, Mrs. Wm. Robertson; 2nd, Craig Bros.; 3rd, A. C. Reid.

CLASS 132.

Donated by the Embree & Trenholm, Grocers, $6.00 as follows:—$2.00 for best B. P. Rock Breeding Pen—Craig Bros.; $2.00 for best Wyandotte Breeding Pen—J. S. Thompson; $2.00 for best Pen English Breeds —Haszard & Duchemin.

CLASS 134.

Donated bt F. O. Oates, Canadian Express Agent, $3.00 for best cockerel and pullet in American varieties open classes—L. H. D. Foster.

CLASS 135.

Donated by the Maritime Poultry Supply Co., for the best cock, hen, cockerel and pullet in the Barred Plymouth classes—1st, 1 bag chick feed; 2nd, 1 bag of Esso Charcoal—1st, Craig Bros.; 2nd, L. H. D. Foster.

FARMING

has become a specialized business

It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're ***living*** as well as ***working***.

The farmer has learned that it ***pays*** to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book:

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It isn't a catalogue, nor an argument for you to buy something. It is clearly written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the ***actual experience*** of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the purpose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once, we'll be glad to

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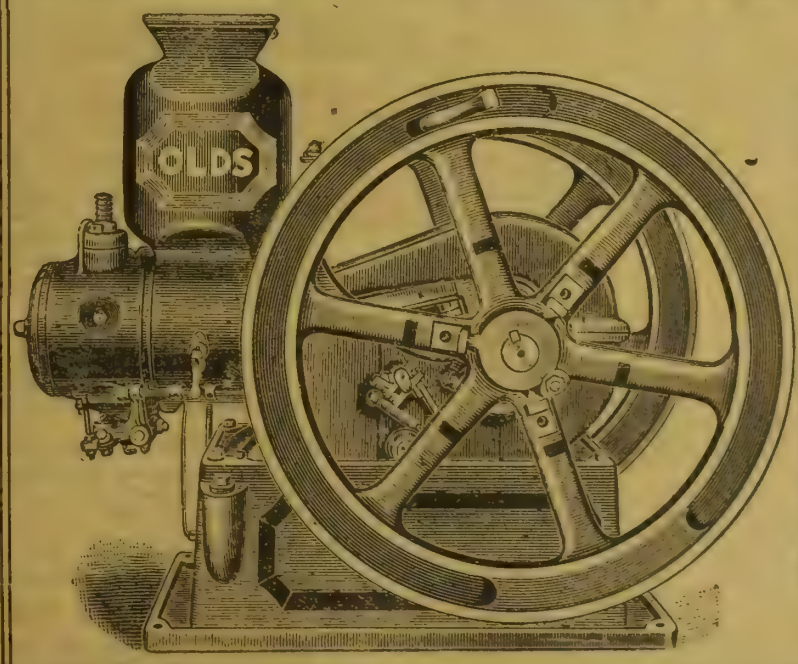
CANADA CEMENT COMPANY, Limited

National Bank Building, MONTREAL.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

CLASS 136.

Donated by the Kingsdale Poultry Co., Sussex, N. B., for best White Wyandotte cock, hen, cockerel and pullet one set Feed Hoppers—A. C. Reid.

CLASS 137.

Donated by the Maritime Poultry & Pet Stock Association, Silver Cup for the best exhibit of American Breeds of poultry—Hartland Poultry Yards.

CLASS 138.

Silver Cup donated by Percie Johnson, St. John's, N'f'l'd., for the best exhibit of poultry, excluding American breeds and Bantams—Hartland Poultry Yards.

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FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
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At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

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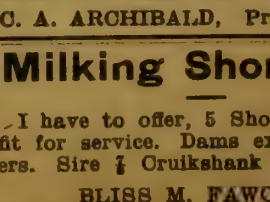

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75 Barred Plymouth Rock, Cockerels and Pullets; two yearling pens, cockerel and pullet matings, also a few Light Brahmas.

Cockerels, $2.00 to $3.00 each; Pullets, $3.00 per pair.

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We have in stock and for sale at present:—
25 Prime Shropshire Ewes
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10 Ram Lambs—a superior lot registered—also one Ayrshire Bull—2 years, a prize winner, one Ayrshire Bull, 14 months, and several Bull Calves—all registered and as good as the best.
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This bull won 2nd in class of five at Charlottetown this fall, and is an exceptionally fine animal in every way. Write for particulars to

LEA & CLARK,
Victoria, - - - P. E. I.

Charlottetown Prices.

GRAIN—Oats, White, 44c. to 45c.; Black, 46c. to 48c.

FEEDSTUFFS—Bran, Retail, $1.40 to $1.45; Shorts, Retail, $1.45 to $1.50 Middlings, $1.50; Oil-cake, $2.50; Corn Meal, $1.85 to $1.90.

LIVE STOCK—Butcher's Cattle, 3c. to 4 1-2c.; Stockers, $18 to $30; Milch Cows, $25 to $40; Sheep, 3c. to 3 1-2c.; Lambs, 3 1-4c. to 3 3-4c.

DRESSED MEATS—Beef (carcass), 7 1-2c. to 9 1-2c.; Beef (retail), 9c. to 14c.; Mutton (retail), 8c. to 12c.; Lamb (retail), 10c. to 14c.; Pork (carcass), 6c. to 7 3-4c.

HORSES—Drafters, $125 to $200; Roadsters, $125 to $200; Carriage, $125 to $200.

DAIRY PRODUCTS—Creamery Butter, solids, 28c., Pts., 28 1-2c. to 29c.; Dairy Butter, 21c. to 25c.; Cheese, 15c. to 15 1-2c.

POULTRY AND POULTRY PRODUCTS—Eggs, storage, 27c., Fresh, 30c. to 35c.; Fowl, 8c. to 10c.; Chickens, 10c. to 12c.; Ducks, 13c. to 15c.; Geese, 12c. to 13c.; Turkeys, 20c. to 22c.

FRUIT—Apples, Island grown, $1.50 to $3.00.

MISCELLANEOUS—Hay, $11.50 to $12; Straw, $5.50 to $6.50; Beef Hides, 11c.; Sheep Skins, 70c. to 80c.; Lamb Skins, 70c;. to 80c.

VEGETABLES—Carrots, 40c. to 50c.; Potatoes, 40c.; Turnips, 16c.; Beets, 40c. to 50c.; Parsnips, $1.00 to $1.25 per 100 lbs.

Weather conditions have been very favorable for Xmas trade in all lines for the past two or three weeks. The first break was to-day and the bulk of the Xmas buying was already completed. There has been a good attendance at market each market day this fall and the bulk of the produce ready for market has been moved. Prices have held steady. Oats are higher and potatoes have not been offered very freely as danger of frost has made most buyers careless about them, but there have been a lot shipped and it looks as if Spring prices for what is left will rule high. Pork is slightly easier and only choice hogs of bacon weights command highest prices. Eggs are about all cleaned up and there is no fresh gathered receipt for shipment, what few came in are not more than suffirient to supply the home demand—storage eggs are also about all cleaned up and early—the New Year will likely use up what are left. There is no cheese left except some small lots in the hands of the wholesale grocers. Butter is fairly plentiful and sufficient offering to fill present requirements, although reserve stocks are small. Beef is plentiful and prices easy, quality is only fair. Several carloads of mutton and lamb were shipped this past week to the Canadian West and there is quite a lot held here in storage yet to go forward later. Oats are scarce in this section and the bulk of what has been shipped has come in by rail from the western part of the province. Hay is not plentiful but as shipping is over for this line the requirements now are for local consumption and supply should be quite sufficient to fill the demand.

St. John Prices.

DAIRY PRODUCTS—Creamery Butter, 27c. to 29c.; Dairy Butter, 25c. to 27c.; Cheese, 13c.

POULTRY AND POULTRY PRODUCTS—Eggs, 32c. to 45c.; Fowl, 70c. to $1.40; Chickens, 70c. to $1.10; Ducks, $1.50 to $1.85; Geese, $1.40 to $1.70; Turkeys, 22c. to 25c.

MISCELLANEOUS—Hay, $10 to $12 ton; Wool, 22c.; Beef Hides, 11c.; Calf Skins, 16c.; Sheep Skins, 70c. to 80c.; Lamb Skins, 70c. to 80c.

VEGETABLES—Carrots, $1.25 bbl.; Potatoes, $1.75 to $2.00; Turnips, 90c. to $1.00; Beets, $1.70 to $1.80.

DRESSED MEATS—Beef, (carcass), 10c. to 11c.; Beef, (retail), 10c. to 20c.; Mutton, 6c. to 10c.; Veal, 9c. to 11c.; Pork, 7½c. to 8½c.

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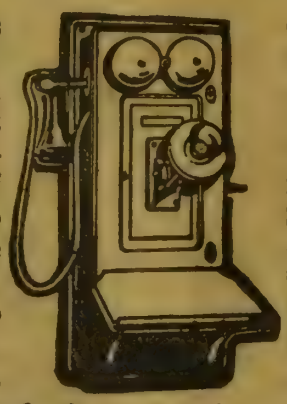

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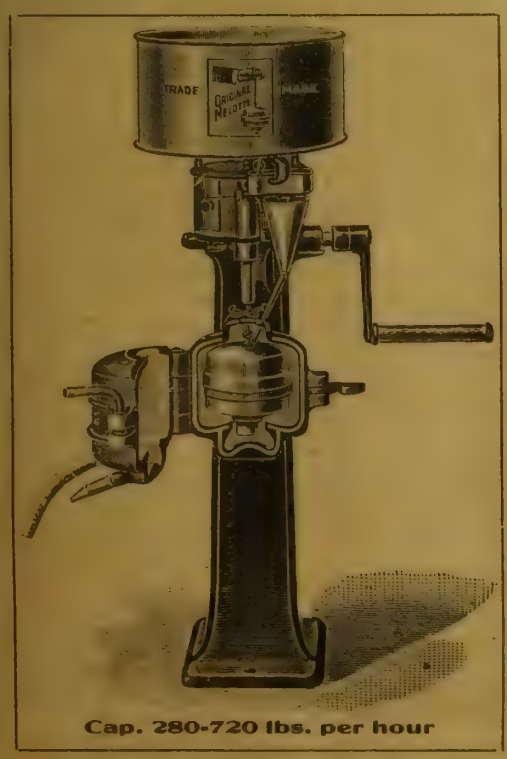

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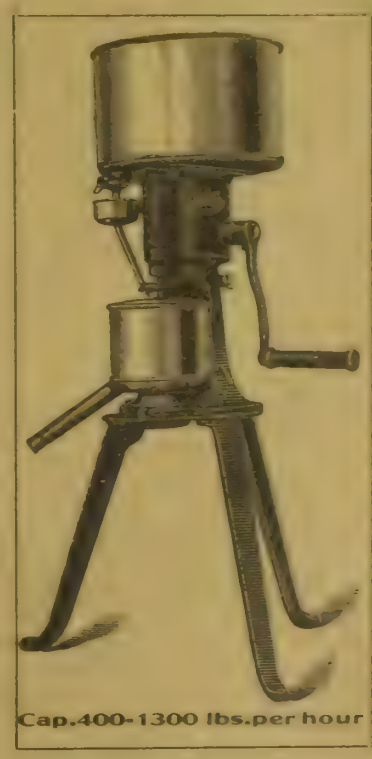
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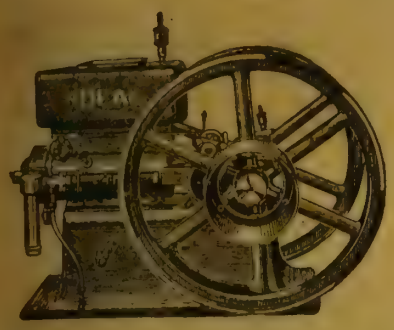

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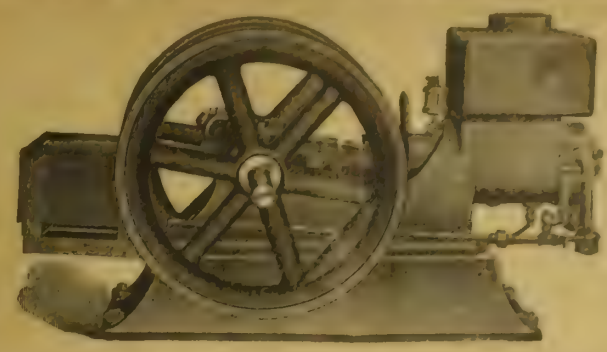

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is like a lot of people you and I know. It improves on acquaintance. You must know it to appreciate it.

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Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

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CREAM SEPARATOR

Now is the Time to Buy and Start the New Year Right.

There is no good reason to defer the purchase of a DE LAVAL cream separator until Spring. On the contrary you may buy one now and save half its cost meanwhile. Moreover, if you can't conveniently pay cash you can buy a DE LAVAL machine on such liberal terms that it will actually pay for itself.

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When it comes to a choice of separators DE LAVAL superiority is now universally recognized. Those who "know" buy the DE LAVAL to begin with. Those who don't replace their other separator with a DE LAVAL later — thousands of users do that every year. If YOU already have some other machine the sooner YOU exchange it for a DE LAVAL the better.

Why not start 1912 right in dairying? TRY a DE LAVAL machine for your own satisfaction if nothing else. See the nearest DE LAVAL agent or write us direct and we'll do the rest.

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A Convincing Argument.

A Pair of Cattle Gained 550 Pounds in 34 Days.

ON October 7th last, L. C. Prime Company, Limited purchased from Nova Scotia a pair of cattle which were in fairly good condition weighing respectively 1465 and 1585 pounds each. These animals were purchased for making a test of **MOLASSINE MEAL.** They were stabled for thirty-four days and fed on one pint Corn Meal mixed with two pints Molassine Meal three times a day. On November 10th the animals were again weighed and tipped the scales at 1745 and 1855 pounds each, making a total gain of 550 pounds. They were sold to Mr. M. J. Collins, Fairville, New Brunswick. A copy of a letter from this gentleman is published below.

We do not propose to say anything further with reference to the quality of **MOLASSINE MEAL,** as this is conclusive proof that Molassine Meal is the best food on the market for fattening purposes.

The price is low, especially as compared with other feeds at the present time.

FARMERS! Is This Not Interesting to You? Let Us Hear From You.

If you wish to try a bag of this Molassine Meal and your grocer or nearest general store cannot supply you, we will see that it is delivered to you. **MOLASSINE MEAL is made in England.**

We can furnish you with the names of a great many satisfied customers and will be pleased to hear from any farmer with reference to it.

Letter From Mr. M. J. Collins.

Fairville, N. B., Nov. 15th, 1911.

Messrs. L. C. Prime Co., Ltd.,
South Wharf,
St. John, N. B.

Dear Sirs:—

"The pair of Cattle purchased from you were knocked down the first of the week and I am now writing to inform you that we have never handled better Beef. This Beef was equal to anything coming from the West and weighed when dressed 2185 pounds."

"I can honestly say that I know of nothing that is equal to Molassine Meal for bringing Live Stock into good condition quickly."

Yours truly,
(Signed) M. J. Collins.

L. C. Prime Co. Ltd., St. John, N. B.

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, JANUARY 16, 1912. Number 7.

Systematic Breeding of Farm Animals.

By Prof. Harry Hayward,

Director of Delaware Experiment Station.

PERHAPS no phase of Agriculture is carried on with so little system as the production of live stock. Some of us think we have a well defined method or plan of work, but lines are not closely drawn as they are, for instance, in the feeding of plants or animals. There are many reasons why it takes a little more study, a deeper knowledge of more sciences, a keener appreciation of individuality to outline a definite system of breeding than is required in any other work with which the farmer has to do. The result is that there are but few really great breeders of any kind of live stock, and when some man reaches the top, we fall over ourselves trying to buy at high prices the result of his efforts, instead of attempting to emulate the methods or system that produced the desired results.

Since the discovery of Mendel's law much has been written on the subject of breeding. Not a small part of this literature has been based upon data obtained from experiments with plants, rats, mice, guinea pigs, and rabbits. A large part of these experiments have concerned themselves with the determination of the color of offspring of parents of a given color, or some other attribute that has little, if any, bearing upon the economic value of farm animals. While I am in hearty sympathy with the investigators who are working togard the solution of our problems in breeding I feel that up to the present time, the new school has given us but few new principles that we can apply in our work as breeders. Perhaps it will be found that in order to discover the principles that underlie the breeding of farm stock, it will be necessary to work with these animals under conditions that obtain on the average well-conducted farm.

In making those statements I am not denying that present investigators are constantly adding to our fund of information, facts that help us to explain some of the phenomena that we observe each day in working with our herds or flocks. There are books by famous authors that will help in interpreting natures laws as they appear to us, and I am sure will give us a new understanding of our work, as well as inspire us to greater endeavor.

Those of you who have followed the work of Burbank and other plant breeders have undoubtedly noticed that they are constantly on the watch for new things that are pure ; that is, variations that will reproduce themselves with certainty. From these reproductions, an uncertain number will be pure in the same sense, and, by using them, a new type may be fixed. Judging from our observations in the animal world, we find existing conditions which are approximately at least, analogous. We occasionally find one animal in a large number that will breed true in one or more of its characteristic attributes. An illustration is seen in many Aberdeen Angus bulls, whose get from honored cows are very largely polled. Another case in hand, although not quite so good, is some of our noted trotting sires—particularly Hambletonian 10, Red Wilks and Electioneer.

This principle applied to animals explains why some sires are so much better and so much more potent in improving their family or strain. This is, in turn, explained by another interesting fact in the physiology of reproduction. We are told that the chromosome is the hereditary factor of reproductive cell; that the number of these differ in the reproductive cells of the various classes of animals and plants, and that there are sixteen in farm animals. When the male and female cells meet to form a new cell, one-half the chromosomes in each degenerate and disappear in order that the new cell may have the required number of sixteen. Assuming that some of these sixteen chromosomes are good, some bad and some indifferent, the value of the new animal depends upon whether the good or bad chromosomes go to form the new cell-contents which originate the new cell from which the animal grows. This explains why the offsprings from the same parents may differ so widely, and why it is that individuals of the same litter may also differ so widely.

To my knowledge, the influence of nutrition and environment upon the chromosomes and their selection has never been determined. We have reason to think that some sires and dams transmit chromosomes of better quality to their offsprings than do others. This is an individual attribute, however, and it is unlikely that it can be influenced beyond narrow limits. Occasionally, however, we see a sire that has been almost a total failure under certain conditions become a star under different environment.

There is a number of ways in which we as breeders, may take advantage of this information in our work with dairy cattle. First, whenever we are so fortunate as to find a "pure bred" animal, let us use it to the fullest possible extent in fixing a desirable type. This is the method pursued by plant breeders, and it is the method used by our greatest breeders of cattle both of the dairy and beef types. If Amos Cruickshank had not been made use of the "pure bred" Shorthorn bull Champion of England, the world would not have had the Scotch Short-horns, nor would the Jersey cattle be what they are today without the fullest possible use of the pure bred sire Golden Lad, Where this principle has been applied in practice as a means to an end, most satisfactory results have been obtained. Theoretically, it is the most direct road to improvement.

Second. It is highly probable that the best and most uniform results will be obtained when chromosomes are from cells that are uniform. Or, in other words, we may expect satisfactory results when the animals mated are of the same type and breeding, and the better the type and breeding, the better and more certain the results. A well known breeder said to me once that he had his breeding operations so arranged that when anyone wanted the best they had to go to him for it. Subsequent events, have, in the main, born out this statement.

Third. When an impure animal appears, the breeder should recognize it at an early date, lest sooner or later it pulluted the entire herd. Such an animal may even be a superior individual, but an inferior breeder. While the inferior offspring of such an individual may be and frequently is a good breeder, for the best results in the end it should not be used. In other words, to reach the ideal, only the pure animals should be used for breeding.

It should be the aim of the breeder to sell bulls, not heifers or cows. If he desires to further his own interests as a breeder, he should try to limit the number of females, and in this way keep up the demand for bulls by the dairymen who need them for herd improvement. If this argument is accepted, the breeder should try to breed his bulls so pure that they will, with little doubt, meet the demand made upon them. To do this the breeder must not only carry on his breeding operations with a definite system, but he will be obliged to keep his cows up to a high level of production. Otherwise he cannot keep up with his customers in showing profitable yields. This part of his work is easy compared with the difficulties that must be overcome in breeding the pure breed header.

It requires years of time to make a bull breeders herd, and,

unless one is willing to go into the work when comparatively young, appreciating its possibilities, and having unusual tenacity of purpose, he had better choose some other line of endeavor.

The problem is to obtain the pure sire and dam, and by selection and elimination, reproduce them with a marked degree of certainty. In the solution of this problem, there is no scientific experimental data that will aid us. There are, however, a large number of classic examples of breeders whose success is recognized by nearly everyone who is interested in the subject under discussion. Not only of individuals, but also of groups of men who have worked toward a definite end but with no concerted action.

The most notable of these, and the one with which we are all more or less familiar, is the development of the American trotting horse. This example is of special import to us because the measure of the resnlts obtained is expressed in the absolute terms of minutes and seconds. It is a notable fact that the American trotting horse came largely through one horse, Hambletonian 10. If we study his breeding, we find that he was strongly inbred to Imp. Messenger, who, in turn, was rich in the blood of Darley Arabian Godolphin and Byerly Turk, three horses that formed the arch stones in the improvement of the English Race Horse. If we carry our investigations a little further, we find that Hambletonian nicked best with the daughter of Seeby's American Star, who, in turn, was as strongly inbred to the great thoroughbred Diomed as Hambletonian was to Messenger.

The blood of Hambletonian has bred so well and has been blended so successfully that to-day the successful race horse or sire, with scarcely any exception, shows in his pedigree numerous crosses to this great progenitor of speed.

That these results have been obtained without systematic effort, all will admit, but, on the other hand, it may be said that horse breeders the country over have aimed to breed their mares to the fast stallions with little regard to their relationship so long as it was not very close, as mother to son, or father to daughter. In this way, the blood of the great progenitor has been preserved with the result that we have a breed of horses that are quite uniform in type and gait.

What has been done by the use of the blood of Hambletonian has also been accomplished in another line by the Jersey breeders on the Island through the bull Golden Lad. Many of you are familiar with the history of this great sire, and of his influence upon the breed. This blood is still breeding on and is still producing the best there is in the Jersey cattle.

Another most excellent illustration of this system of breeding is seen in the results obtained by N. H. Gentry in his work with Berkshire pigs. For the past 25 or 30 years, Mr. Gentry states, he has not purchased a breeding boar, and perhaps Gentry Berkshires are more eagerly sought than the pigs of any other breeder. Further in the recent National exhibition, Gentry bred pigs have won most of the highest prizes. Mr. Gentry attributes no small degree of his success to his system of close breeding.

The great corner stone of the breeders work has been, and in all probability always will be, like produces like, and when we have bred out cattle as pure as the birds of the air or the wild animals; or in other words, when we shall have eliminated the inferior animals so completely that they have no influence in determining the quality of the new individual, we shall have reached our objective point as breeders.

Let us then go back to first principles, emulating those who have been successful in their work, and breed the best to the best, regardless of relationships, the system that has given results and the system that will give results, if used with discretion and with due regard to environment and nutrition.

MISSOURI RIOTER

No breeding except sire.

Daughters average 4836 dams 5380 or 1044 less.

Daughters average 216 dams 234 or 18 less.

Income of ten daughters with milk at 6c. was 313 less than their dams. Fat 25c. $45.00 less.

Hugorotus. Cheap bull, not many tested animals. Ten daughters fell 3770 lbs. milk behind dams, but have 100 lbs. in fat. When the herd was culled on milk records 9 out of 11 were sold to the butcher. As long as this bull was used the herd went backward.

The next bull was Lorne Merridale. This bull was well bred and his daughters without exception were superior to their dams. This bull raised the average milk production from 4542 lbs. to 5751 lbs. and the fat from 220 to 280. At butter price the ten daughters of Lorne of Merridale returned each year $150 more than their dams. If 30 daughters of this bull had been milked six years each, their product would have exceeded their dams 2700, while the same number of daughters of Mo. Rioter would have gone $939 behind their dams, or a difference of $4639 in actual income.

The next bull used was Mo. Rioter 3d. a son of the poor bull Mo. Rioter, and this son was the only good animal he left in the herd. These good qualities may have come from his dam who was his sire's half sister, both being sired by Bachelor of St. Lambert.

The best cow ever in the herd was sired by this bull Mo. Rioter 3rd. From dams with average records of 4609 lbs. he sired daughters whose records averaged 7154 lbs. milk. The dams averaged 238 lbs. fat—daughters raised it to 348 lbs.

The daughters of this bull produced 275 worth of fat per year more than their dams. Counting this on the same basis as before, thirty cows for six years, we have $4950 worth of butter fat produced by the daughters in excess of that produced by the dams.

These figures tend to emphasize the importance expressed in dollars and cents of having a good sire at the head of the dairyman's herd. It is the function of the breeder of pure bred stock to produce for the market this sort of a sire. If some of us could forget to be dealers and speculators, we might become breeders.

If by some system prepotent herd improving bulls could be bred, with a reasonable degree of certainty, we should have no difficulty in selling them to dairymen at a profit, a greater profit than is made on the animals that are now sold, and upon which the buyer often takes a long chance.

I would say, in explanation of the term chromosome, that the units of every organism is the cell, as is well known. If this cell is stained by some analine dye and put under the microscope we notice, in the interior of the cell a number of small dots; that forms the nucleus, taken together. Each one of these little dots is called a chromosome, and they are the basis of hereditary in the cell, and they differ in different types of animals and plants. In the farm animals they are all sixteen in number.

If there is anything that the breeders of live stock lack, it seems to me it is that of a clearly fixed ideal or type in their own minds. We do not know just what we want. That is proven by going into almost any herd, flock or stud and you will find in most cases, that there is an absolute lack of uniformity that goes throughout the whole herd or flock or stud.

Amos Cruickshank was a Scotch bachelor who gave his life to the one effort of producing a type of shorthorn cattle that would pay the rent up in the northeastern part of Scotland under very unkind conditions. He and his brother were men of means, and for twenty-five years, Amos Cruickshank searched the best British yards, and wherever he found an animal that pleased his fancy or approached his ideal of a type that animal was purchased and taken to his herd. At the end of twenty-five years Mr. Cruickshank admits that he was very badly disappointed with the results. He did not have any fixed type in his herd. There was a marked lack of uniformity throughout the herd, numbering about three hundred head. About this time he purchased an old bull and turned him out in the pasture in the fall of the year with some old cows that he thought a great deal of, but that were shy breeders. The result of that crossing was a bull that pleased Mr. Cruickshank's fancy, and he called him the "Champion of England." He showed him as a yearling. He did not win first prize. He placed him in the herd, and when the calves began to come he realized that he found what he had been looking for for twenty-five years. He started out to use the blood of "Champion of England," bred him to his own daughters and granddaughters and took his sons and crossed them upon their half-sisters and so forth. In that way he fixed a desired type of English shorthorn, which is to-day the popular and most desirable, the most economical type of short-horn that we have, and from that line, in the Jersey cattle, has come "Golden Lad." You all know what Golden Lad has done towards improving the type of Jersey cattle.

We have outlined at the Experiment Station one breeding problem with hogs, sheep and cattle, and I hope with horses on a small scale. We have been doing work along this line with hogs for four years, and have some animals that are very closely inbred. At the present time we have a young sow that farrowed when eleven months old and she contains sixty-two per cent of the blood of her grandmother. Her dam contains seventy-five per cent. of the blood of her mother.

We bred this sow to her half-brother. These pigs contain 56.25 per cent. of the blood of their great, great, grandmother. They had more of the blood of their great, great grandmother than if she was their own mother. These pigs are as near alike as peas in the pod, and are one of the most fashionable types of Berkshires today. We have other examples where we have had our crosses, and we got no more pigs in the litter and they are not nearly as good individually as these promise to be. So far as results go, we have seen nothing to adversely effect very close breeding with pigs. I have taken pains in every case to mate only the best individuals that we possibly could raise, and cut out entirely, disposed of entirely from the herd the pigs that did not meet our ideal.

Mr. Snavely. Do you believe that the Jersey breed has in any way been affected by inbreeding?

Professor Hayward. No, I do not. I presume that you have in mind the difference between the inbred Golden Lads and the inbred American cattle. You will find among the American cattle instances of very close inbreeding. I can cite you animals that were intensely inbred, and those animals have been prize winners in our largest exhibitions.

(Professor Hayward cites two Jerseys in the St. Lambert cattle, which were closely inbred, and which were noted for their size, ruggedness and ability as producers.)

Mr. Williams. Is there any lack or virility in breeding in that way? You are familiar with the law in Pennsylvania, for instance, which prohibits the marriage of first cousins.

Professor Hayward. Yes, and I think a great many of us get confounded because we always cite the human race. In the human race we have no possibility of selection. With the animal kingdom we have. With the human race we cannot control environments; with the animal kingdom we do have control. Close breeding does not affect the fecundity of animals. While Dr. Pearl was in Holland, two years ago this summer, he met a very wealthy merchant who had a hobby of breeding poultry. He started raising poultry and divided them into two lots. He bred them both very closely in and in. In one lot he selected only the best individuals for mating, and in the other they were taken haphazardly. He studied the results of quite a number of years' work. He had one strain which was rugged and strong and profitable, while the other strain all went to pieces. In a number of instances in America we have had men who have practiced in and in breeding. For example, Mr. Huntington, of Arab horse fame, bred in and in as the end of the work, to be accomplished, not as a means. He mated animals together without careful selection of the individuals, and he got lots and lots of weeds. People point to such experiments and they say that in and in breeding does no good. They forget the Cruickshanks, the Bates, the Gentrys and the Prices, and those men who have written their names high on the wall of fame, and who have done it by the system of breeding in and in intensely, but mating the good animals, the best of the best, regardless of relationships. Those men had a type, an ideal for which they worked. When they found two animals of that ideal they mated them together, regardless of their relationship.

Mr. Brady. I understood you that the purpose of the breeder was to produce bulls. I think I must be the champion breeder. I have a perfect score of one hundred per cent. of bulls. I presume that might be explained on the Guernsey theory of the potency of the Guernsey sire. I want to know how to get the heifers. I have heard and read a good many theories. I would like to ask whether there are any facts other than theory which go to establish a law.

Professor Hayward. There are many theories which have been advanced along this line. The man who has done some work along the determination of sex was Dr. Schenck, of Germany, and he worked with the human family and produced one very notable result. That was with the Czar's family. He has since died without doing anything further in that line of work. The best biologists today tell us that there is absolutely no way of determining sex; that it is simply a matter of combination of these chromosomes or something of that kind that takes place in the formation of cells and which cannot be controlled. It is a matter of chance largely. Take a number of sires, work it out mathematically, and you will find there are a great many possible combinations, and some bulls apparently produce a maximum or majority of one sex and some a majority of the other. I understand that in herds or in flocks where close records have been made for a number of years, at the end of a given period of time the results balanced up and there may be one or two per cent. difference in the number of animals of the different sexes, but they are practically the same.

Mr. Vaux. The Wister Institute in Philadelphia is conducting at the present time possibly the most complicated and elaborate series of experiments on the question of sex determination that have been conducted

anywhere in the world. They are being done with two classes of animals, frogs and white rats. We have in Wister Institute I forget how many thousands of white rats, but we have a number of white rats there for biological purposes that are equal to any that you will find anywhere in the world, civilized or uncivilized. These experiments have been going on for a number of years. They cover a great variety of conditions, and they go into what the ordinary mortal, in his ignorance calls vivesection in connection with them. Up to the present time absolutely no definite results have been indicated.

Professor Hayward. I might cite one illustration of what is being done along this line to determine where the seat of hereditary is and how it was worked out. Dr. Castle, whom some of you have heard talk, is working under the Carnegie foundation on Hereditary in connection with Harvard University, and has produced most interesting results, theoretical results that apparently have no good in them, at least most of them have no apparent economic value. They found when they mated two Albino guinea pigs, the result was always an Albino. They took an Albino female before she was matured, and removed her ovaries, and then took the ovaries from a black guinea pig and grafted them into the white Albino. They had an Albino guinea pig with the ovary of a black guinea pig. This white Albino guinea pig with the black guinea pig's ovaries, was mated with an Albino male, and you would have thought the result would have been a white guinea pig, but they got a black one. Every time that they found that the black is dominant over the white in guinea pigs. It is just the reverse in pigs and that shows that in that case the color, at least, was fixed in the ovary, determined by the ovary.

Metal Buildings and Lightening Protection.

Protection from lightning is a subject that recurs with the coming of each spring time. In the violence of an atmosphere electric disturbance, accompanied by the awe-inspiring flashes of lightning so common with thunderstorms, there are few who have not desired the protection of a lightning-proof shelter. The probability of an individual building being struck by lightning is really very slight, but there is always a possibility of such an occurrence, and also that the stroke might be attended with considerable violence, or the building might take fire.

HOW LIGHTNING CAUSES DAMAGE.

The formation of lightning is very imperfectly understood, but experience with its vagaries and a knowledge of the laws of high-tension electric currents has established a fairly good understanding of the methods of constructing lightning conductors for all granary, so common in the West, ordinary discharges. It is very well known that lightning is the discharge of a large amount of electricity in a very short space of time, and that whatever affords it a passage to the earth is likely to be badly damaged, unless the vehicle happens to be a good conductor of electricity and of sufficient size to transmit the amount of electric energy the flash contains, in which case it passes away, doing no damage at all.

As a storm develops, the electrically-charged clouds pass over the earth, and when the electrical intensity becomes great enough to break down the resistance of the intervening air, the resulting discharge will pass into the earth by the most convenient path. This is commonly some high object of the landscape—a building, a pole, a tree, or any other object that extends up from the earth. If the object is a conductor of electricity, and connected with the earth, the lightning will pass into the ground without the least damage being done, but if it is not a good conductor, the havoc wrought in an instant is sometimes appalling.

VALUE OF METAL-ROOFED BUILDINGS.

Buildings with metallic roofs that are properly connected with the earth have better protectors from lightning than could be given by rods. Buildings that are completely covered with sheet metal and well connected with the earth are practically lightning-aroof. Covered in this manner, proof. Covered in this manner, peatedly struck by lightning, without the least damage. The sheet-iron when well connected with the earth, may be considered lightning-proof. The ground connections mentioned above may be made of metallic rods that extend well into the earth, and securely fastened to the metallic covering of the buildings.

In considering the form of lightning conductors, it is well to keep in mind the fact that a metal-covered building well connected with the earth is practically lightning-proof, and that one with a metallic roof, well grounded, is excellently well protected, if not perfectly safe. If, then, the roof of a building possesses a metallic ridge, eaves-troughs and down-spouts, these will afford very good protection if they are well connected anh well grounded. A roof covered with a metallic screen, as a chicken screen, makes an excellent protector when properly grounded.

It must be remembered that the ground connection is a positive necessity, and too much care cannot be exercised in its construction. The earth is the great reservoir of electrical energy, and is always kept at zero potential. If a discharge of lightning can be directed into the moist earth by a conductor, its energy is soon dissipated, but the ground connection must be of considerable area, and extend well into the moist earth. A piece of galvanized iron pipe driven into the ground seven or eight feet makes a good "ground." Large buildings must have two or more such "grounds."

SIZE OF CONDUCTING WIRES.

In the matter of conducting wires, the United States Weather Bureau, in a bulletin on Lightning and Lightning Protection, recommends a No. 3 galvanized-iron wire as a ply sufficient in size for ordinary lightning protection. If metallic down-spouts are used as conductors, the connections should be made with the "grounds" with riveted joints. Copper conductors give no better protection from lightning than iron, if the iron is kept covered to prevent it from rusting.

Wire fences are often the cause of damage by lightning because of the method of construction. If the fence wires are grounded, the danger from this cause will disappear. Ground wires may be made of ordinary fence wire, and should be connected with each of the wires of the fence, and extend into the ground three feet. Such "grounds" should be made for each 100 feet of fence.—E. S. Keeney, Professor of Physics and Mechanical Engineering, in "Metal Worker, Plumber and Steam Fitter."

Spraying in the Vegetable Garden.

Does it pay to spray potatoes in New Brunswick? Does it pay to spray celery? Growers have been asking these questions for many years, while some others have neither asked nor thought about it. They have been growing potatoes as their fathers did, and really do not know whether the potato industry is a profit or not. We are well aware that in some sections up-to-date methods of spraying are practiced, but the great mass of farmers outside that section spray for the potato bettle only, while the various forms of fungi run their course without molestation, and when his crops are "struck with rust," he says: "Farming does not pay."

The truth is potato blight, which causes rotting of the tubers, is as easily controlled as the potato beetle if spraying is done in time. If applied after the plants are attacked, it is usually too late. The commonest and best fungicide for potatoes is the Bordeaux mixture—at least our experiments would so indicate. The best way of making is well known, viz., four pounds of bluestone, four pounds of quick-lime, forty gallons of water. The bluestone is dissolved in one barrel containing twenty gallons of water, the lime in another containing twenty gallons. These two are then poured together. The resulting mixture is Bordeaux. Care should be taken in straining the lime lest there be difficulty in getting the mixture to pass through the nozzles of the spray pump. Paris green may be added to this and the beetles and fungi are thus controlled at the same time.

When the farmer speaks of the rust on his potatoes what does he mean? When he sprays what does he hope to do? The "blight" of potatoes is a plant. True, it is a very low form of plant life, but a plant just as surely as the potato, buckwheat or oat is a plant. The body of the plant consists of threads. These threads throw up little stalks and are known as fruiting bodies. These contain numerous bodies called spores. These spores have the power of reproducing themselves just as seeds do in the higher plants. They are very light, so that they are blown by the wind from place to place. When these spores fall on the leaves of plants, they germinate, that is, they grow. They have no power of taking up plant food and using it as the higher plants do, but they are fortunate in being able to take up food manufactured by other plants and feeding on it. Thus they are true robbers, or parasites in the vegetable kingdom.

Just as oats would not germinate if placed in kerosene oil, so the spores of many plant diseases cannot germinate in Bordeaux mixture. If the leaves of plants are coated with this substance, spores falling on the plant fail to develop, but little value comes from the application if put on after the disease is within the tissue of the plant, for then it cannot be reached by the spray.

Two forms of "blight" attack potatoes, the early and the late. The early blight was described in 1882. In New Brunswick it may be found from July to the end of the growing season. This is often mistaken for "tip burn." Tip burn is simply a burning of the tips of the leaves in very dry weather, owing to the evaporation being greater than the moisture supply. Early blight may be distinguished as follows: The spots are brown, circular or elliptical, and are distinctly marked with target-board markings. Leaves attached by flea-beetles are especially liable to attack so that flea-beetles and early blight usually go hand in hand. The losses caused by early blight are frequently heavy but this is not usually the case.

This fungus causes no rotting of tubers, but arrests the normal development of the plant, and a consequent lessening of the yield. The late blight is much more serious. It is a very old potato malady and has caused great disaster in many potato growing regions. The serious famine in Ireland was very largely due to the failure of the potato crop, because of the prevalence and unusual destructiveness of this disease.

Blight is not caused by warm moist weather as many suppose, but warm moist weather favors its development. Oats will not germinate if deprived of heat and moisture. The spores of blight are equally dependent on these climatic conditions During a warm moist season in autumn whole fields may be devastated in a few days. Very high temperatures quickly check its spread. The characteristic purplish tint of the leaves, together with their water soaked appearance are usually sufficient to identify the disease. The odor arising from the affected field is well known to everyone. This disease gives rise to dry rot, and not the soft rots, which are usually bacterial in origin.

Very often the late blight does not make its appearance. At Macdonald College this year we had none and expected none (the year being very dry), yet we sprayed. Apart from the insurance which spraying always gives, we are confident that it pays, when there is no blight, in increased yield. Bordeaux mixture acts as a tonic to plants. It certainly stimulates plants to greater activity. Just why we do not know. The foliage is greener owing to increased amounts of green coloring matter, which is an important factor in starch production, and the tuber gets the benefit.

Celery is seldom sprayed. Without spraying, however, the whole crop is often a failure. This year we kept the spray pump going in the celery field. The leaves were kept coated so that the spores were not able to develop as they would have done. Even with this it was questionable at one time whether we could save the crop. The row not sprayed (left by way of experiment) was valueless, while the sprayed was of good quality.

In vegetables, as in fruit, the New Brunswick farmer must accept the verdict: "Spray or surrender."—E. M. Straight, Macdonald College.

Good Sheep Story.

Here is a good true sheep story: Two boys, Lewis and Cyrus Cram of New Sharon, were given three lambs by one of their neighbors—two ewes and one buck. This was in February. They taught them to drink milk out of a dish, and after they were two weeks old began to give separator milk, and grain as they got older. When the grass got good enough, these lambs went out to pasture and were not fed milk or grain after that time.

In December the buck was sold for ten dollars. In February, when the ewes were one year old, they had two lambs, which were sold in August for $10.05 At shearing time, one ewe sheared 12 pounds, the other 17 pounds, which at 20 cents per pound would be $5.80, making an income of $25.85 out of the three little lambs in one and a half years, with the mother sheep left. One of these has a fine lamb two weeks old by her side. The other will soon have a lamb again, making twice in one year for both of them. These lambs coming now will, no doubt, bring $25 by the time these sheep are two years old. Can any of the boys beat this?—W. A. G. in Main Farmer.

We have received the announcement of the marriage of Miss Laura Rose, Guelph, Ont., to Mr. W. F. Stephen, Huntingdon, Que.

Miss Rose is well and favorably known throughout the dairy world as an ardent teacher and advocate of up-to-date profitable dairy methods. Her book on Farm Dairying should be in every farm home.

Mr. Stephen needs no introduction to our readers. He has been judging at our Maritime exhibitions for many years and has always given universal satisfaction.

The Maritime Farmer wishes Mr. and Mrs. Stephen a happy and prosperous career.

Something Concerning the City Milk Supply.

By Neil Roach, Kentucky.

THE CUSTOMERS.

IT is a well-known fact that it not only requires elbow-grease to run a herd of cows, but brains and thought; and it is equally well-known that to be a city milk dealer only requires a bunch of money, some horses and wagons, and a few bottles. Brains are not needed, for the customers will run the business. All the milkman has to do is to sit back and pocket his losses. The greatest trouble comes about, however, in that the customers, not being properly organized, present their suggestions independently and with no accord or system.

What Mrs. A. deems absolutely essential, her next door neighbor thinks "perfectly atrocious." Mrs. B. is convinced that children should not have rich milk, while the lady across the street is not satisfied at all unless the cream line is mighty near the bottom of the bottle. Mrs. C. thinks all well-conducted milk concerns should follow up each driver and see that he not only knocks but calls out "Milk!" when he puts down his bottles and her best friend "will positively not deal with a house who don't know better than to make such a fuss." Mrs. D. is a new member of the humane society and is constantly on the lookout for abuse or unkindness (fancied or otherwise) to any horse that delivers at her home, while the woman in the apartment above thinks the arrival of her milk on the minute is certainly far more important than any mere animal.

One day last February a sleet came up suddenly during delivery hours, and it was necessary to stop the wagons midway their runs and send them to the nearest blacksmith shop to be rough-shod. It happened that a customer saw one of the wagons turn back just before reaching her. Almost immediately our office 'phone rang and she wanted to know why. The matter was explained. "Well!" she said, "I should think you would at least have had business sense enough to have attended to that last fall."

Of course all these things are the humors of the businesss. As a matter of fact the majority of customers do appreciate good milk and good service; and though their suggestions may sometimes sound funny to us, and our methods and rules no doubt arbitrary on occasions to them, on the whole it is true in this work as in any other that courtesy and fair dealing evoke a like response.

FRESH DELIVERY.

The real problem of the milk business is the milk. It would not be very farfetched to paraphrase the old proverb and say: Take care of the milk and the milk business will take care of itself. Of course this is not literally true. The marketing of the product, with all that that implies in obtaining the customer, dealing with him, handling the necessary labor, managing accounts and whatnot, is a complex and exacting undertaking. And of course in my work—"certified milk"—the customer has to be educated to begin with. But the fact remains that if you have good milk you will get the customer. And of course good milk is what we are all trying to put out.

On the farm it is difficult to realize that in the cities there are many persons, particularly children, who have very amusing notions as to what milk is. Recently the New York Park Board, as a matter of education, put a cow in one of the parks, in order that the children might find out that milk was not made in a factory and that it came from some other place besides a wagon or a bottle.

In many foreign localities, to be sure, even the most crowded, the cow is a comon sight. My first daylight glimpse of Europe years ago came when I was waked in Naples the first morning after landing by an argument under my window between a milkman and a customer. In the street stood several cows, one of which had just been milked; and the argument was as to whether or not the foam ought to count. The milkman said "Of course!"—"Not on your life!" said the customer; and finally in his utter contempt for such airy stuff as return for hard-earned soldi, with one gouge of his dirty finger he scouped the foam from the measure and shook it into the cobble-stone.

It is not always the cow that is made into the animated milk-wagon however. In Barcelona it is likely to be the goat, in Havana the donkey, or in Canton the buffalo. This is an effort to deliver the milk fresh, and even, it might be said, in the original package—a somewhat misdirected effort, however.

It is a rather nice question what constitutes fresh milk. Milk as it comes from the cow is still a living part of a living creature, and it is in this condition incidentally that it is at its best as food. Moreover, as a living thing it has in itself certain powers to resist infection—from bacteria of the souring kind, of the putrefying kind, of the disease types. If overloaded with bacteria through having been contaminated with dirt and allowed to stay at a temperature which is particularly suited to the growth of bacteria, its life is soon spent in a frantic effort to rid itself of the invaders.

If, however, it is milked in surroundings and under circumstances that practically preclude contamination, and is then cooled below the temperature that conduces to the growth of bacteria, its life is prolonged over several days. Consequently milk that has been properly milked and handled is fresher at 48 hours than dirty milk two or three hours old, though of course the right sort of milk two or three hours old is better than either. Thus the problem consists in getting the milk from the cow to the city in the best shape and the quickest time. And more and more in the future, the producer whose farm is so situated that he has neither frequent nor quick service to the city will find himself at a disadvantage.

Another thing that solves the problem of freshness is the bottle—that is, delivered in the original package. It was a great step in advance when the city dealer began to bottle his milk in the quiet and comparative cleanliness of his own plant instead of drawing it from a faucet-can into an open measure amid all the blowing dust and hurly-burly of the street. But it is a greater one that many dairymen are now beginning to bottle the milk, themselves, within five or ten minutes after it is milked, and then selling it, so that it is not again exposed until it is opened for use in the customer's home. The bottle can be iced so much better than the can, too, during shipment and delivery, And that is another point in its favor and as a help toward solving the problem of freshness.

In the minds of many city people, as I said before, milk is associated more with the bottle than with the cow; but, though this country bottling of milk is beginning to bring the bottle to the country, it has done so as yet, only as a matter of city requirement, and, indeed of finickiness, as is shown by the entire community around one of the certified dairies when it first started speaking of its product as "certified milk!" I sincerely hope, however, that the day is not far distant when even the farmer with one family cow will see to it that her milk is properly drawn, quickly cooled, and immediately bottled and sealed, and kept so—covered and cold—until needed for use in his own house.

CLEANLINESS.

It used to be that the city milk consumer was easily taken in by mere utsubstantiated claims to "pure" and "sanitary" in connection with his milk, while nowadays it is more apt to be fancy city plants or expensive dairy buildings that impress him.

Real cleanliness in the dairy is costly. Not that it takes such elaborate equipment, but that there must be the most minute care from the proprietor and every employe, so that it requires a higher class of labor than can be afforded when working under slipshod methods. It requires more men, more water, more hot water, more steam, more ice. It requires a higher class of intelligence, or at least the application to that particular work of a higher class of intelligence than has usually so far been devoted to it. But above all, it requires a keener sense of social obligation, a thoroughly-awakened conscience, and absolute honesty and integrity of purpose.

THE BABIES.

I do not believe there is a dairyman in Kentucky who would not risk his life in an effort to save a baby or small child from danger. It is only the failure to realize what he is really doing and what is really involved that lets any honest man go on in ways and with methods that when you come to the point, actually endanger children. And yet it is true that a large percent of the appalling infant mortality of the United States can be and must be laid to the milkman. Dirty milk—that is, milk running a high bacteria count—is responsible for a great number of infant deaths from diarrhoea.

Please notice that when I say dirty milk I don't mean merely milk that looks dirty, but milk that has been contaminated in any way. It may be visible, it may be invisible. The visible dirt may be taken out but the harm it has done remains. Manure, hairs, flies, etc., are not appetizing, to be sure; but they may not actually be any worse than handling and exposing the milk in bacteria-laden air or letting it stand warm.

There is no way in which milk can truly be cleaned of either the visible or invisible dirt. The only way for it to be cleaned is for it to be clean and kept clean from start to finish. If milk were as transparent as spring water the bacterial growth would show, the milk would become cloudy and eventually opaque, and bacteria-laden milk would cease to have sale. The fact that clean and dirty milk both look so nice and white has led many to scoff at this whole idea of clean milk, and many more to be careless.—Neil Roach.

Fence Gossip.

Any man who keeps stock should have good fences and strong gates. Broken down fences and old dilapitate gates are a constant source of annoyance and danger. Many valuable animals are injured by broken fences and gates, not always by the fence or gate itself, but by getting through the fence or gate into a field of grain and eating enough to cause bloat, or by strolling on to a railroad track and being hit by the cars.

Perhaps the whole herd breaks through into a neighbor's fields and destroys his crops. Such things are mighty unpleasant, and cause bad feeling among the best of neighbors.

Good fences and strong gates are cheaper than good stock and damage suits. Good gates and fences add to the permanent value of a farm. If a man has not sufficient pride in his farm to keep up his fences, economy should compel him to give these matters attention.

It is poor economy to allow a pure-bred cow to break through a two-dollar gate and get with calf to a neighbor's scrub bull. The poor gate is the weakest link in the fence. There is nothing that adds more to the appearance of a farm than good, substantial gates and fences. Such appearances amount to hundreds of dollars if we are selling our farms.

Workmanship as a Factor in Buttermaking.

By Prof. Carl E. Lee of Wisconsin Dairy School

A few years ago very little thought and consideration was given to workmanship as a factor in buttermaking. This might have been due to the grade or quality of the raw material which was to be made into butter. Milk in its pure wholesome state will make butter of excellent quality even in the hands of the man, who employs good judgment only. Since this natural quality has been to a greater or less degree destroyed by lack of workmanship on the part of the producers, it falls to the manufacturer to do his work well in order that it may act as a counter balance.

Never in the history of buttermaking has there been such a demand for skilled and exact labor as today, and every year will emphasize this to a greater degree.

The average creamery buttermaker is a better trained and a more exact man than has ever been found. The various forces at work to hold the quality of butter to a long fixed standard have never put forth greater energy. Each year finds better equipped factories. In spite of all there never was such a demand from the markets for butter with the quality of ten years ago. It must be admitted that the creamery operator in those day needed as much knowledge of the factory controlling flavors as is demanded today, but the conditions of the raw material could not help but produce the grade of butter that gave general satisfaction. When a few lines of butter were off, the cause could partly be attributed to the untrained operator. Why is it that today, the students in buttermaking are often heard to remark, "Give us the whole milk and we will show what can be done ?"

The commission merchant or consumer does not demand butter of higher quality than formerly, the standard has remained the same; it is quality that has changed. Why ? The flavor of the finished product no matter what its treatment may be at the hands of the manufacturer will not lose its identity. The creamery that has been buying one, two or three different grades of cream will give to each the best treatment possible, and yet the finished product called butter will be grades one, two and three.

Let it not be understood that butter made from whole milk is never defective. When it is not perfect it is because the buttermaker did not do his part in guarding against those factors which destroyed flavor or produced taints.

The object of this article is to discuss those factors which tend to always produce the 55 points of the score card, aside from flavor. If it is possible to manufacture butter that is perfect aside from flavor, a great deal will have been accomplished to offset a portion of what has been lost in flavor.

As stated above, workmanship counts for 55 points out of a total of 100. When referred to technically, flavor, therefore, is 45, but when butter is handled on the market it seems as if the points should be reversed or over three-fourths of the scale of points should be credited to flavor.

It is a deplorable fact that greater efforts are being put forth to train men to become fine workmen in the art of buttermaking and let the main factor which governs quality receive so little attention.

During the past year paragraphs have been inserted in the scoring exhibition articles calling the attention to the great need of better raw material. This has not been done with a view of shielding the faults due to lack of workmanship on the part of the markets. The facts were stated that an interest might be awakened which would result in better cream.

Wisconsin, until a few years ago did not realize what effect the changing from whole milk to farm-skimmed cream would have upon the quality of butter. The reaction has come and unless we see in the near future a combined effort for better raw material Wisconsin will not rank first in quality of butter.

WORKMANSHIP MUST COUNT.

Since the quality of the raw material bears a direct relation to the flavor of the finished butter and is it so difficult to get the clean flavored cream, workmanship must be made to count. The man who is employed in a factory that receives nothing but whole milk has many things in his favor. It does not demand such skill to produce a product that has a rich, clean creamy flavor. The condition of the raw material in this case counts for nine points and workmanship one. When the flavor of the cream is off or tainted and at its best will not count for more than one point, the operator is often asked to make his skill cover the other nine.

The demand of the creamery operators is for men who can take the raw material and make a grade of butter that will pass as table goods. Formerly, if the butter was a trifle defective in flavor, body, or salt, there still was a margin, and it would pass as "extra". This is not true when flavor in itself will barely count for 38, then in order to pass as an "extra", it must be perfect in workmanship.

Several things could be brought out pertaining to the buttermaker's part with reference to flavor in butter but time will not permit.

BODY IN BUTTER NECESSARY.

At times there seems to be more or less butter produced with defective body. There has been a larger per cent of it of late years due to the general agitation of high overrun and moisture to be obtained by using abnormal methods. These methods have had their injurious effect upon the body of the butter, even if they have not produced the other desired results. These extreme methods have run their course in Wisconsin, consequently there should be a general improvement. At certain seasons of the year, it is trifle more difficult to control body. A creamery operator, who is observing, can tell when a change must be made in temperature, control the handling of the churn or the method of working the butter, to avoid this defect. Butter without a perfect body is not attractive ; in other words, it lacks life. A certain line of butter may have flavor, but in appearance it is dead and the grain is short. This is not due to the condition of the milk or cream, but rather the butter was handled at too high a temperature, worked at intervals when temperature was too low or else excessively worked even when ideal temperature had been maintained. The total number of revolutions the butter is worked or passed between the rollers of the churn is not just what it is worked after the salt is added, but the total of all working before and after salting. The working of butter before salting should not be encouraged for general use. If butter is worked 20 revolutions after the salt is added and it had been worked half that number before salting, the result would be the same as if it was worked 30 revolutions after salting.

The body must be firm and waxy. It can be maintained at all seasons and under all conditions if the sole object in view is body.

DEFECTIVE COLOR CAN BE PREVENTED

Butter with defective color is found too often and at times causes quite a loss to the faetory if paid for on its market value. This mottled or unevenly colored butter is one of the hardest to sell. Not every retail dealer is a critical judge of flavor, therefore, at times he can be persuaded to buy better not up to standard in this respect, while this same man when he sees a trier of butter pulled from a line that is mottled, be it fine in flavor, will at once pass it up.

Mottles or this uneven color in butter is under the control of the maker and if it is found in a day's make, the cause should be at once located.

The above statement is based upon facts derived partly from the result of dealing with the members of the scoring exhibitions. During the past season the number of packages defective in color has been reduced from forty per cent in May 1909 to five per cent in May, 1910. If the method blank is filled out in detail it is as easy to locate the cause for mottles as excessive water and salt content.

The other reason for stating that mottles are under control is based upon data which shows that they are produced at will. An exhibit of this kind was arranged in one corner of the butter refrigerator at the last Wisconsin State Fair and is also one of the exercises used in creamery buttermaking courses.

Butter with a uniform color can be made regardless of size of butter granules, temperature of churning or wash water, whether butter is washed or not washed. The make of the churn has no influence on mottles. Butter to which color has been added or which has been churned without the addition of color can be made so as to be either perfect or defective in color.

Mottles can be produced at will in any churning desired by a difference in the amount of working to which the butter has been subjected after the salt is added. Mottles bear a relation to the temperature at which butter is held or stored, but butter can be made to have a perfect color at churning room or even freezing temperature.

The secret of making butter having a uniform color is the sufficient working of the butter at an ideal temperature with reference to producing an ideal body. It has also been demonstrated that a small amount of free water in the churn at time of working favors a uniform color, with less amount of working. That butter in the granular state as compared to a large mass at the time of adding the salt is less apt to be defective in color.

REASONABLE AMOUNT OF SALT IS NOT SUCH A GREAT FACTOR.

The amount of salt with reference to market conditions and requirements is not as great a factor as is color, although there is a limit which must not be exceeded. The condition of the salt in the butter bears a relation to flavor, when the flavor is trifle off, judicious salting is beneficial while butter can be injured by oversalting.

The demand of the market is not that the salt content be either light or heavy, but that it be fully dissolved and entirely free from grittiness.

Most men interested in butter have noticed that when certain lines of butter are opened for examination, aside from flavor, one will get a desirable or undesirable impression of the butter. This is mainly dependent upon amount and condition of the salt.

It is an easy task to make butter perfect in salt, but it cannot be easily accomplished when the salt content is high or even exceeds four per cent. Perfect salting is produced when conditions are favorable for the uniform mixing of salt and it is all dissolved in the finished butter.

Dr. F. B. Hadley, of the veterinary department of the Wisconsin College of Agriculture, is warning stockmen against the possibility of poisoning animals by feeding frozen beets to them. It seems that last year a considerable loss was sustained in Wisconsin from this cause, the greatest trouble resulting from beets that had been thawed, after having been frozen, before being fed. Recent investigations show that the chemical changes that take place in the process of freezing and thawing produce a poisonous substance which may cause rather sudden death when eaten.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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THE DAWN OF 1912.

The twilight of the closing days of 1911 is past and gone. The old year has closed and the jovial new year 1912 has dawned. Are we all striving to live better and do better and thus live up to the resolutions that perchance we may have made during the closing days of the old year ? As we reap so shall we sow, is an adage that holds true in every walk of life. Let us so conduct ourselves during 1912 that when it draws to a close we can surely say, "We have done our best." No one can do more.

A TALE OF THREE.

Once upon a time there were three boys raised on a farm and they were all ambitious youths, anxious to get on and make things hum. Now ambition is another word for discontent, but there are several ways in which one can gratify one's discontent. The eldest, whose name was John, hated what he called the dull monotony of country life, the chores of the farm, and the lack of opportunities for advancement, and he worried his parents into sending him to a technical school in the nearest city, where some hard work soon qualified him for a post as bookkeeper in a large store. The second son followed his brother's example, and did not rest till he also found himself in town, safely lodged in a billet as clerk in an office. The two elder sons, thus, it will be seen, both got what they were after.

The third and youngest son was looked upon with a sort of humorous pity by the others, as the fool of the family. It was true he worked hard, but he had little to say for himself and seemed quite content to stay on the farm. Why trouble about him ? He would do all right where he was. But No. 3 was, as has been said, quite as ambitious as the rest. He liked country life, and could find many pleasures both in nature and in his work. More than once he attended short winter courses at the nearest agricultural college which taught him many ways of improving his farming. This led him on to subscribe to agricultural papers, which kept on teaching him more. When his father died he got the farm, encumbered with the mortgage that had been raised to help his brothers. But the ambition of which he had his full share was spurred on by the consciousness that he was working for himself, that every stroke of work and every bright idea put into practice meant dollars put in his pocket and not in someone else's This was a big asset not in the possession of either of his brothers, and it induced him to work early and late, and to employ his brain as well as his hands. Farmers who do this are not long troubled with mortgages as a rule, and so it proved in this case.

There is no need to follow him through all the steps of his career. He had his difficulties in plenty, and grappled with them all, while our friends in the town spent their evening in slippers sucking a pipe. He is an independent farmer and growing in wealth and influence, while of his brother's the one is a book-keeper, and the other a clerk.

DEVELOPING COMMUNITY SPIRIT

The proper development of the community spirit in a neighborhood can have but one logical conclusion—it will result in undoubted advantage. The world in general has long since realized the benefits of co-operation, and in some respects this is true in the farming world. Take some common concrete instances seen in the routine work of the farm. By trading work during the threshing season, each farmer has his grain threshed with much less trouble to himself than if he had to hire all the necessary help. The old-fashioned quilting bee is another homely illustration of the spirit of co-operation. Brown may exchange work with Neighbor Jones in haying. These simple instances are given little heed by the average person, yet they show that the spirit of co-operation exists in every neighborhood. Many times efficient leadership is all that is needed to make this fact of co-operation a power for good in developing a strong community spirit.

There is a part of a township in southern Iowa that shows the results of one man's leadership in establishing a community spirit. This man has always had as much work to do as any of his neighbors. He nevertheless found time to keep the half mile of road adjoining his farm dragged, no matter how busy he was. The weeds in and along this stretch of road were mowed regularly. The weeds along the fence rows were mowed and the corners cleared of rubbish. The fences were kept in good repair. The liberal use of paint made the house and barn attractive. A well-kept lawn and premises made the place doubly attractive, as compared with the other farms. The work this man did was pioneer work, but it was pioneer work that paid. The visitor in that neighborhood today can scarcely fail to be impressed by the air of neatness and prosperity that pervades the whole community. The community spirit of pride in the appearance of the farm was developed through the silent yet effective work of one man. The instance given should be duplicated in one way or another in many communities. The spirit may be shown in the development of a certain type of grain or of live stock. In a certain county in Wisconsin the Guernsey breeders are proud of the high-producing herds that have been developed. No man can live long in that neighborhood and be contented with a low producing herd. In this instance the community spirit has worked untold good for the dairy interests. The community spirit makes far better farming and far more profit. It is the outgrowth of the underlying spirit of co-operation that should prevail in farm life today. The farmers in the neighborhood can well afford to sink minor prejudices in race, religion or what not to the end that general good come to their community. Community pride in well-dragged roads, in well kept lawns, in real dairy herds, or in whatever makes for better country life or more efficient production is certainly worth cultivating.

PLEASURES IN HOME MAKING.

Those who own their own homes and take pride in beautifying and embellishing it are worthy examples of good citizenship to the young people of our country. The life and character of home builders are usually worthy of emulation and seldom fail to place high ideals of home living before the youth of the neighborhood.

The discontent and dissatisfaction of living in rented homes and of adapting one's self to the inconveniences and discomforts of other people's plans are responsible for much discord in the home and often result in worry and vexation that may lead to broken health. Renting may cause carelessness and untidiness and it certainly does not stimulate originality in home arrangement and pride in the appearance of the farmstead.

Those who must live in rented houses should make the best of their surroundings and strive to become home owners. This may require many years of toil and perhaps necessitate hardships, but it is worth all that it costs. When the home is finally owned, the cares and deprivations in acquiring it are soon forgotten, the enjoyment all the more apparent. Things easily achieved are not fully appreciated.

There is no more dishonor in renting a farm than in renting a store or place of business in the city and many business men find renting profitable. But the advantages of owning a farm and making a home on it are so many that every farmer should strive to become an owner. The children will take more interest in building up the farm and beautifying the home when it is owned and will be glad to help pay for it.

Call a council of your wife and children and make your plans to buy a farm and make a home on it.

Ways and Means of Facilitating the Distribution of Registered Seed in the Maritime Provinces.

This subject, in its many phases, is one of the greatest questions before both seed growers and farmers at the present time. Yet one must not infer that there is an over supply of registered seed, even in proportion to demand. Hence, the phase of this subject upon which I lay greatest stress is "How can we so influence the farmer that the present supply may be totally inadequate." Upon careful inquiry from the majority of the Maritime C. S. G. A. members regarding the registered seed trade, I find the following facts: 1st. Amongst about 60 per cent. of the selectors the demand far exceeds production; whilst less than 40 per cent. report an over supply. and these are largely young members, who also report increasing sales. 2nd. Average prices for the past year for registered seed were oats, 90c.; wheat; $1.50 to $2.00; barley and peas, 3c. per pound and potatoes $1.00 to $1.20 per bushel; all sufficiently profitableon large yields as in 1910, yet very reasonable for purchasers. However, some of the best grain was unsold at even lower quotations. 3. Local demand, i. e., purchasers amongst neighboring farmers, amongst 90 per cent. of selectors is reported light, but interest in and demand for this seed locally is increasing. 4. Even under present limited conditions, there is amongst progressive farmers a too large amount of purchasing from a distance, when a neighboring selector could give as good seed, with the added advantage of acclimatization. 5. We may always expect to find a large number of farmers purchasing cheaper seed in order to save a few cents, but it is our duty to correct this false economy. 6. Large quantities of seed grain are still imported from wholesale seed merchants of Ontario and purchased by farmers at figures higher than demanded by C. S. G. A. members. This seed is unacclimatized, may or may not be true to name, and generally is unselected. Present means of hastening distribution of selected seed are throughour energetic inspector, Mr. S. J. Moore, the limited circulation of the C. S. G. A. annual price list, and the Nova Scotia Agricultural College. This may be adequate to the distribution of 60 per cent. or more of registered seed, yet it is inadequate as an inspiration for a greater production or rapid education of the consumer. How we may increase the demand for such, I would suggest for your consideration and discussion the following means:

Through the Fall Fairs we, as an Association, might interest farmers by offering special prizes for registered seed or product from it. Special notices and placards regarding registered seed would draw attention to the same. During the year 1911, eleven county Fairs were held in Nova Scotia, where attendance surpassed all previous records. It is true that these were held at a too early date for the threshing of total grain crops, but a seed grower should make it his business to exhibit more freely at these, and the few cents for posters about this exhibit would be well repaid. However, the majority of our Fall Fairs have no Association members amongst exhibitors. A proposition which I think would be well worth entertaining would be that of a travelling exhibit of C. S. G. A. seed to attend County Fairs in each Province.

This exhibit should contain oats, barley, wheat, peas, turnip seed and if possible, potatoes and corn. Not only should there be one or more varieties, of elite stock seed in each class; but the same varieties unselected, and with one and two years selection to showcontrast. The influence of selection toward increasing yield and uniformity of seed could be shown relatively in glass tubing, labelled to donate variety, increasing yield, varying percent hull, weight per bushel and the like. Sheaves accompanying the same to further exhibit yield of straw and character of the straw would add greatly to its educational value. Aside from exhibits, photos taken in the field, showing difference in height of straw and character of same uniformity of stand, etc. of selected vs. unselected grain would be of great value. This properly exhibited and advertised with large signs, would draw attention and at the same time would act as a uniform standing for the seed judges. Using Nova Scotia as an example, the cost of such an exhibit for one season could be roughly figured at $200. Two bushel samples each of elite stock, general crop, and unselected seed, donated by each of the C. S. G. A. members, would be a good investment in advertising. It might be necessary to make two exhibits for Nova Scotia, as Fall Fair dates for east and west conflict. I have figured in the above costs one month's wages for two men, cost of printing, canvas bags, packing cases and glass tubing, which could be used from year to year, together with freight rates.

Such an exhibit might well be used at our Winter Fair, and would add largely to interest in agronomy. I would also propose another means of advancement in winter auction sales of registered seed in conjunction with a few of our larger Seed Fairs. As has already been pointed out, these at present to the growers are unnecessary, yet there is no surer way of gathering a crowd or creating and maintaining their interest as at an auction. Such sales, have, I believe, had a marked success in Quebec and Western Provinces, where some Maritime provincial seed met special favor and we might well copy this scheme. There is, of course, the objection that either the association or the growers risk a loss should bidding be low, but with the proper advertisement this should be worth a trial.

Local seedsmen might co-operate in advertising registered seed were its advantages fully detailed and a reasonable commission granted.

Growers having a surplus have resource to local papers and agricultural journals. It is, of course, a fact that a good article speaks for itself. Nevertheless, local prejudice against any forward movement usually has a great retarding influence. Any possible means of interesting neighbors during the growing and ripening season by local agricultural picnics to visit their plots, would largely increase local demand.

The joint work of the C. S. G. A. and our local Governments in Standing Field Crops Competitions has and will continue to advertise registered seed. It is worthy of note that nearly 75 p. c. of the highest scores during the past two years were made either by registered seed or its progeny. This has with us, during the past two years, nearly doubled inquiry for such stock. Agricultural Societies might organize to a greater extent on the seed question and thus hasten distribution. Institute speakers, under the auspices of these societies, have done much to encourage seed improvement. It is, however, a noticeable fact that for such workers we have but little accurate data to prove advanced yields through the use of selected seed and from such to prove financial gains accruing.

The Experimental Department of The Agricultural College, Truro, N. S., has endeavoured in various ways to acquire such data. One series of experiments was started three years ago to show the influence of acclimatization upon the ield of grain, per cent hull, weight per bushel, and straw, with the results to date that, under the same influence of selection, seed will produce superior crops when grown under accustomed soil and climatic conditions. Grains brought from unlike climates will increase in yield as they become acclimatized. The percent hull and date of maturing will also adapt themselves to locality. We hope to give definite results from the same in a few years and these results should help to destroy the old theories as to change of seed. Other experiments, such as Fanning Mill selections, rates of seeding and the like, will, we hope, have equally practical results.

All seed for plot work is selected according to C. S. G. A. methods. During the coming year we propose starting an experiment with elite stock seed, Banner variety, in comparison with No. 1. Banner seed, unregistered, to determine the influence of hand selection. Such work each year is widening in scope as our limited means permit. I am pleased to report an increased number of visitors to the Experimental Department and also correspondence regarding seed improvement. We endeavour to make the C. S. G. A., its members and their stock most prominent.—An address by Prof. E. S. Archibald, N. S. A. C., before the Maritime Section of the C. S. G. A. at Amherst.

The Selection of Seed Corn in the Maritime Provinces.

Fifteen years ago, I began growing corn and built a square silo. Three years later, I built a round one in addition. I was so well satisfied that I thought there was no better way of keeping up the fertility of the farm, for by growing that amount of corn I could keep one-third more stock which meant a great addition in fertilizing material.

I have heard people say that corn was an uncertain crop, but I have only once in that time failed in getting a good crop, and that year it was more than half a crop. I think one can count on corn as safely as on any other crop on the farm.

I think corn is the best crop for a dairyman to grow, for the dry and hot summer, when hay and other crops are apt to fail, is the banner year for corn.

The best way to prepare a field for corn is to take a sod field and give it about 20 tons of stable manure per acre in the winter, pasture it that summer, then the following spring when the grass gets nice and green, plough it down with a skimmer plough and follow with the harrow, also go over it at least once a week until time of planting, which will be about the first of June, in these provinces, or as soon as the ground becomes nice and warm for a seed bed. Then give it a good working up and roll down. Then mark it off with a marker so that the drills will be three feet apart, We then drop the kernels from four to six or seven inches apart, run a light harrow over the drills lengthwise and roll down. In ten or fifteen days it will be up two or three inches, and if the young plants are less than a foot apart in the rows, I would run a light harrow across the drills which will hasten the growth of the corn, and kill a great amount of weeds. As soon as the plants can be seen nicely in rows, a cultivator should be run through it, at least once a week until the corn is three or four feet high. It should also be hand-hoed in the drills until it is a foot high, then it will take care of itself.

Although I had good success in growing corn, I began to think that some improvement could be made towards getting an earlier variety. For some years we did not get as large percentage of ears in the best condition for ensilage as I would like to have. I have found no better variety to grow in our province than the Longfellow. In 1906 I began to select the earliest ears for seed. I could only get a few ears ripe enough to grow that year. I had to cut the stalks before frost and stand them up to ripen. That plan I had to follow for three years. After that I could pick the best ears from the stalks ripe enough to grow, and this year, although we had a heavy frost on the night of the 14th September, three-fourths of the ears were in good condition for seed. I may say that I had a small part of my crop sown with imported seed of the same variety sown at the same time with the same care right alongside of my own selected seed, and you could not get a single ear in a drill fit for the table.

Professors Newman and Moore were at my place about the 15th August and they both pronounced the crop from my own selected seed at least three weeks earlier than the crop from imported seed of the same variety. Now I will show you what my corn ripened like this year.

I think the best method for our farmers of the Eastern Provinces to follow is to select their own seed in this way, and thereby grow a better quality of corn for ensilage than can otherwise be grown.

An address by Frank Gordon Morgate, P. E. I., before the Maritime section of the Canadian Seed Growers' Association at Amherst.

Some Common Defects in Crop Raising Methods in the Maritime Provinces.

The subject on which I am requested to read a short paper is a very broad one but, for present purposes, we confine ourselves to one or two of the most common and most easily remedied of the common defects in crop raising methods in our district. Chief among these we will mention the use of inferior and low grade seed. In the case of Field Root and Garden Vegetable seeds the improvement is, to a certain extent, beyond our control, as very little, if any of it is grown in this country. About the only recourse we have at present, is buying from our most reliable seedsman their best grades of seeds at a comparatively high price. Fortunately these seeds are usually the cheapest in the end. In the past few years a few of our farmers have made a success of growing different varieties of turnip seed from selected plants and have been able to sell the product at satisfactory prices. It is quite possible more of our farmers could produce this and other Field Root seed at a proft.

In the case of our cereal crops, especially the principal one, the oat crop, we have the remedy in our own hands. It would surprise the few of our farmers, who for years have been doing their best along this line to learn of the large precentage who annually go either to the feed grain bin just as it come from the threshing mill, or to the local dealer when seed time comes around for their seed grain. The latter practice is perhaps to be most condemned. In addition to procuring grain that was not previously grown for seed, he is liable to get stuff that, at the best, would not grade higher than No. 2 considerably mixed with foreign grains, quantities of noxious weed seeds with which our farms are not now polluted and we hope never may be, beside very often not being true to variety name. When we consider that the essentials of good first-class seed grain are purity of variety named, freedom from foreign grains and seeds of noxious weeds, and full maturity, we are apt to ask where it can be obtained? The answer is on our own farms, or on the farms of some of our near neighbors. It is not difficult at the present time, for almost any farmer to obtain in the Maritime Provinces, a few bushels of our most popular varieties of oats pure; and by the next year he will have with proper care, all the good pure seed he requires. Untortunately owing to the too common practice of sowing two or more distinct varieties on one farm it is very difficult to maintain this grain in its pure state. and in a few years the farmer is looking for new seed. This might be all right if a sufficient number were engaged in the production of pure seed, but at the present time the supply is inadequate as only a few of our farmers are making a business of producing seed for sale. Any farmer who has a well cultivated farm adapted to the growing of a certain kind of grain can produce better seed for his locality than can be purchased anywhere. But he must have a special seed plot. The farmer who takes his seed grain, grown indiscriminately on his farm will not be more successful than the breeder of pure bred live stock who uses as the sires and dams of his future herd the animal which comes first to hand or was most convenient regardless of form, fit or quality. If the breeder of live stock finds it profitable to spend thousands of dollars in order to obtain the best results from his herd, will we not find it much more

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HORTICULTURE.

Experiments in the Pollination and Setting of Fruit.

The following is a brief summary of experiments which I have conducted during the present year on the pollination and setting of fruit. To test the effect of excluding bees from strawberry blossoms, the box portion of a handlight was placed around a plant and muslin tied over the top; on other plants, single bunches of unopened flowers of several different varieties were placed in muslin bags, but in each case very little difference between the fruit of the enclosed flowers and those in the open was to be noticed; apparently the wind carries the pollen over the flower, as the ordinary strawberries in cultivation set their fruit with pollen of the same flower.

In raspberries and loganberries, enclosed in muslin bags, the fruit set, but they were not quite as large or as perfectly formed as in the open.

In gooseberries and red and white currants, of which unopened blossoms were enclosed in muslin and paper bags, but few fruits set, and those apparently only were rubbed by the bags. In those bagged and hand-pollinated, the fruits of gooseberries set fairly well, but as the blossoms open gradually, the flowers should have been pollinated several times. In red currants, bagged and hand-pollinated, the fruits set quite as plentifully as in the open, and some of the berries were notably larger than the average.

The above mentioned fruits are self-fertile, and though all are benefited by the visits of bees, with gooseberries and red and black currants bees are absolutely necessary for the production of fruit.

The fruit trees, namely apples, pears, plums and cherries, may be divided into those varieties that are self-sterile, i.e., those that will set and mature their fruits when pollinated with pollen of the same variety and those that will not.

In pears, no fruits matured on fifteen varieties which were bagged but not pollinated; with those bagged and pollinated with their own pollen, Durondeau Berre Diel, General Todleben, Dr. Jules Guyot, Josephene de Malines, and Marie Louis set fruits, but they gradually fell, last of all General Todleben; the only two varieties which matured their fruit were Duchesse d'Angouleme and Colmar d'Ete.

Of pears cross-pollinated, I have good results with Vicar of Winkfield with Winter Crasanne pollen, Williams' Bon Chretien with Duchess d'Angouleme, Conference with General Todleben and vice versa.

In plums, trials were made with Victoria, Czar, Rivers' Early Prolific, Cox's Emperor, July Greengage, Greengage, Pond's Seedling, Bittern, Jefferson, Dennison's Superb, and Early Orleans; of those bagged and left untouched, only Victoria and Czar set and matured their fruit; of those bagged and pollinated with their own pollen, only Victoria, Czar, Dennison's Superb, Bittern, and Rivers' Early Prolific matured their fruit. These varieties would therefore seem to be self-fertile, but most of them appear to set fruit more plentifully and bear larger fruits when pollinated with pollen of another variety. I ought here to add that Mr. W. O. Backhouse, who has made trials with Rivers' Early Prolific on a large scale, finds it is the exception for this variety to set fruit when fertilised with its own pollen.

Of flowers that were cross-pollinated, I had good plums on Pond's Seedling with Czar Pollen, Rivers' Early Prolific with Victoria pollen, Victoria with Czar pollen, Dennison's superb with Rivers' Early Prolific pollen; the pollinations were made without emasculation.

With cherries, out of some nine different varieties no variety set fruit when bagged and left untouched; when bagged and pollinated with their own pollen, only one variety, Florence, besides Morello, set fruit, and it only bore one or two fruits; Morello set nearly as well as in the open when pollinated with its own pollen.

In the cross-pollinated cherries, fruit set in each case, showing the necessity of visits of bees and the advisability of mixing different varieties of cherries in a plantation.

Out of 63 varieties of apples tried, on which unopened blossoms were bagged and left untouched, only Irish peach matured its fruit, and that was very good; of those bagged and pollinated with their own pollen by brush or anthers, the following matured their fruit: Irish Peach, White Transparent, Newton Wonder, Ecklinville Seedling, Summer Golden Pippin, Baumann's Red Winter Reinette, Peasgood's Nonesuch, Christmas Pearmain, King of the Pippins (damaged by sawfly, eventually fell), and, I believe, American Mother and James Grieve, but am not certain of the two latter. Whereas in nearly all the crosses made good fruits have resulted, out of 64 crosses some 48 were successful; among the best may be mentioned: Brabant Bellefleur with Beauty of Bath pollen; Mr. Gladstone with Beauty of Bath, Alfriston with Beauty of Bath, Christmas Pearmain with Cox's Pomona, Mere de Menage with Sandringham and Hormead Pearmain, Allington Pippin with Summer Golden Pippin, Beauty of Bato, with Summer Golden Pippin, High Cannons with Grenadier, The Queen with Baumann's Red Winter Reinette, Lane's Prince Albert with The Queen, Cellini with Grahams' Royal Jubilee. These crosses were made without taking out the stamens from the flowers, pollination being effected by brush or anthers; if the brush was used, it was dipped in methylated spirits and allowed to dry before using again; but in the case of a tree of Cox's Orange Pippin, nine branches of unopened blossoms had their stamens taken out with forceps and were pollinated by comel's hair brush or anthers with the pollen of nine different varieties of apple, to try to see which would give the best result; eight of these set fruit, namely, with High Cannons, Bramley's Seedling, Grenadier, Lady Henniker, Golden Spire, Duchess's Favorite, The Queen, and with its own pollen. In these trials only with Peasgood's Nonesuch did fruit not set. However, they have gradually fallen till the only ones left are those pollinated with High Cannons and Bramley's Seedling, the latter being one of the best fruits on the tree. It would be of interest and probably of value to find out a good polliniser to plant among Cox Orange Pippin, which is a self-sterile variety, i. e., flowers self-pollinated will not mature fruit. One grower informed me that he found Worcester Pearmain a good variety to plant among Cox's Orange Pippin, and Mr. C. Martin, Manager of the Toddington Orchard Co., in Gloucestershire, told me his best fruits of Cox's Orange Pippin came from a plantation interplanted with Duchess's Favorite.

We want more light on this subject in England. Messrs F. J. Chittenden, W. O. Backhouse, Little and Avery have added valuable information but we still need much investigation and observation of fruit-growers and economic botanists before we reach the knowledge already gained by American and Australian horticulturists as to which varieties to plant together.—Cecil H. Hooper, in The Fruit Magazine.

High vs Low Heading.

The advocates of the low-heading system base their claims of superiority on the following grounds: A low-headed tree can be more easily sprayed, and the fruit can be more easily gathered from it. There is no question that both these claims are well founded, and the low-headed tree has the advantage in both of these respects. That they can be more easily pruned is also true but is offset by the fact that as the tree increases in size it will require much more pruning. A low-headed tree presents a more attractive appearance. This is purely a matter of personal preference and cannot be discussed. It may be brought into bearing in a less number of years. This is admitted. It will produce more fruit. This is questioned and is worthy of an extended discussion.

A low-headed tree certainly will produce more fruit during the first few years, perhaps twenty or twenty-five, but as it increases in size, either the lower limbs will drag upon the ground and become unproductive, or by pruning the trees will have developed into the vase form. In either case the head will be much smaller. There will be much less apple producing surface, and in consequence a low-headed tree must eventually yield in point of production. This is thought to be offset by the fact that low-headed trees may be grown much closer together and thus increase the yield per acre. And the foremost horticulturist of the world has lately planted an orchard which shall consist of several thousand trees planted but 16 feet apart each way and headed to within one foot of the ground.

The opponents of this system admit that while during its infancy a low-headed, close-planted orchard may yield a greater profit per acre, yet as the trees increase in size this close planting will so seriously interfere with the health, vigor and vitality of the trees and the development of the fruit that eventually such trees will fall far behind in productiveness and profit. They believe that when the broad spreading dome of a well shaped, high-headed tree attains such a size that it occupies all the space allotted to it, that tree will produce all the fruit that the soil can yield, and no tree can produce more. They believe that a high-headed orchard can be cultivated and fertilized more easily than a low-headed one. And this is true, no matter what system of cultivation may be practiced. They believe that when a high-headed orchard is pastured, or when live stock breaks into the enclosure, less damage will result from the browsing of the limbs and twigs. This is granted. They also make the assertion that forcing the trees into early bearing causes premature decay and death. This is vehemently denied, and here the matter rests.—Country Gentleman.

THIS BOOK READ IN JANUARY, MEANS PROFITS IN SEPTEMBER.

Vanco Spray Chemicals and Fertilizers.

Vanco Lead Arsenate will destroy all leaf-eating insects—never burns—sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Co., was for "Vanco" Lead Arsenate.

Vanco Lime Sulphur Solution is strong, uniform, clear, efficient — the strongest perfect solution that can be made. Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

Fertilizers Muriate of Potash — Sulphate of Potash — Acid Phosphate — Nitrate of Soda. We are the only house in Canada selling only straight chemical fertilizers —analysis guaranteed.

BUY WHERE YOU CAN BUY EVERYTHING AND SAVE FREIGHT.

SEND FOR THE "VANCO" BOOK NOW—study it at your leisure, and spray for future profits.

CHEMICAL LABORATORIES, LIMITED, Van Horne Street, TORONTO. 32

The Apple Industry of N. S.

The valley between the North and South Mountains is one of the most beautiful and fertile districts in the province of Nova Scotia. It is divided into an easterly slope, drained by the Cornwallis River, and a westerly, drained by the Annapolis River. Here in this valley lies the chief apple producing district of Nova Scotia. Even back as far as 1606, when Lescarbot tilled the soil this land has been noted for its fertility.

It is difficult to say just when apples were first grown in this valley but we know from history that apples were grown in the French gardens at the time the Acadians were deported from that locality in 17—. Thus we find the English settlers coming in a few years later and finding orchards already on their lands, and even to-day we have varieties which have descended from the old French stock.

Grafting was started in Kings County by Colonel John Burbridge in 1764. He imported scions from England, and thus we have obtained some of our standard varieties; as the Nonpariel and Golden Russet. His example was followed by other men, until to-day we have about eight hundred varieties to make a choice from.

A few years ago few men felt competent to undertake to care for more than ten to fifteen acres of orchard, but to-day with their up-to-date machinery and better knowledge of how to care for an orchard we find orchards of one hundred to one hundred and fifty acres which are better cared for than the ten acre orchards of years ago, and yet interest in the fruit-raising industry is just awakening. This with our preferential trade with our Mother Country, and better means of transportation which we are sure to obtain will give our industry a future that was little dreamed of.

The crop of 1911 has surpassed all estimates, and has proved the banner year in the history of the province. We have given that if the increase from 1910-15 was in the same ratio as years before that the export of these years would be an average of 723,447 barrels. This is the export alone. It is estimated that 150,000 barrels are consumed locally every year. The estimate for the crop of 1911 is 1,000,000 barrels; and over 600,000 of these have gone forward already. Thus we see that the export for 1911 will greatly exceed the above estimate.

The quality of the fruit this year was unexcelled. Not a trace of our common enemy—the black spot—could be found, and the other defects were very slight. This is largely due to the incessant work of the farmers with their spraying outfits and their new spraying solution, i. e. Lime Sulphur. The favorable climatic conditions that prevailed while the fruit was developing also had a great deal to do with the high class quality of our fruit.

As the season drew near, the great labor problem again confronted the farmers, but the farmers, ever ready for an emergency, combined, held meetings and appointed representatives who went into the adjoining counties of Digby, Lunenburg, Colchester and Cumberland and secured help; thus this problem was worked.

But a little later a still greater problem confronted our farmers, and one that looked almost impregnable. This was the barrel problem. As the season advanced, and altho barrels were imported from other counties and even from Ontario, barrels became still more scarce. Prices jumped from 25 to 30 cents, from 30 to 35, and from 35 to 40 and higher and still could not be obtained at that fabulous figure. As the crop matured two weeks earlier this season people could not wait for barrels, therefore they were compelled to pick the fruit and put it under cover without barrels and then wait until barrels could be obtained.

All the windfalls, culls, etc., were hurried away to the evaporators as fast as possible, but these factories, altho they had their full force working, were soon overburdened and had to stop taking apples. Thus hundreds of barrels that should have been manufactured were wasted. This shows us that a few more evaporators in the Valley would prove a good investment.

A few years ago people thought that with Ontario and the United States both producing large quantities of fruit that there would be no market for ours; but with the opening up of our Canadian West our farmers will not have to compete with these countries but will have the English market more to themselves than ever before, and in spite of our increased production there are possibilities of an apple famine in the future.—Maritime Student's Agriculturist.

No Flour Made From One Wheat Only Is Good For BOTH Pastry And Bread.

Western Wheat makes a strong bread flour which, however, lacks flavor.

Ontario wheat makes the best full flavored pastry Flour. This is because of the peculiarities of the wheat itself. Ontario wheat is rich in nutriment and flavor but lacks strength or strong baking qualities. Western Wheat has the strength without the flavor or pastry making qualities.

"Beaver" Flour is a scientific blend of both, giving you all the flavor and nutriment and pastry making qualities of Ontario wheat with the added strength of the Western Spring Wheat.

"Beaver" Flour makes Cakes and Pastry with the lightness and delicacy of flavor of the choicest "Ontario Pastry Flour", and bread that is truly home-made in flavor with the large loaf derived from the strength of the Western Spring Wheat. It is the one flour that is equally good for bread and pastry—*and best for both.*

"Beaver" Flour is the original blended flour—the first and foremost in quality, strength and reliability. Be sure to specify "Beaver" Flour whenever you order.

Dealers—write us for prices on Feed, Coarse Grains and Cereals.

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LIMITED.
CHATHAM, Ont.

Beaver Flour 134

Disposing of Surplus Crops.

A campaign of education is demanded to make certain the benefits of organized efforts in disposal of farm products. The farmer is both buyer and seller, and to touch directly the base of supplies and lowest cost prices necessitates the same organized movement as in selling. I care not how complex the problems facing the worker; if he but thinks as he works, the solution is certain. You may curb oppression in big corporations, but you cannot legislate them out of business. A fruit grower's association in Maine composed of but nine members has, by placing its fruit in the hands of one of its number, this year realized from 75 cents to $1.25 more per barrel net than was paid in the open market.

Justice will never be approached until in every village, town and city, public market places are established at convenient centers where the grower may display his goods and meet the consumer face to face. The immediate effect would be:

1. To insure the grower a better price.

2. To insure a closer grade and pack, and choicer quality.

3. To educate consumers to the superior value of fresh grown farm products, and right selection of same.

4. To bring consumer and producer face to face and establish friendly relations.

5. To increase consumption of the healthiest food known.

6. To inspire determination to improve in quality and increase in quantity the crops sold.

7. To lead to a specialization in production best adapted to the farm and local demand.

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DAIRYING.

To Insure Clean Milk.

There are many reasons why milk is not always first-class when it is delivered at the creamery and cheese factory. One reason is, that the cans, strainers and hand separtorsa are not properly cleaned and cared for on the farm.

There are many different methods employed by different people in caring for their dairy utensils; some of these methods are good, while others can not be too strongly condemned.

Some people have a habit of washing their cans, separators and other tinware with a dishrag. This is a very poor method, and no tinware can be properly cleaned in that manner. When cleaning dairy utensils it is best to make use of a good brush, as a brush will reach the crevices and the corners where the bacteria lurk, while a dishrag will not. The washing of dairy utensils is not a hard task, if the right methods are employed. Here are a few things that should be observed in order to get the best results:

First wash the pails, strainers, cans, and separators every time they are used, also wash them as soon as possible after they are used.

Never allow milk or cream to stand around or sour in any of the cans or other utensils used. If skim milk is returned in the cans from the creamery it is best to empty them as soon as they reach the farm, and they should immediately be rinsed with cold water; next, they should be thoroughly washed, using warm water with some good washing powder, and don't use that rag, but a good brush. After washing, the cans should again be rinsed to remove the soap, then a good scalding will finish the job.

But don't make the mistake of placing the cans upside down over a post and leaving them there all day, but simply let them drain for about one minute, and then place them in such a position that the sun can shine into them.

The method of washing cans will apply to other utensils used, including the hand separator, and don't forget to give them all a sun bath whenever the sun shines. There is nothing like sunlight for purifying and disinfecting everything used in the dairy. The writer has seen Danish buttermakers move their churns out on the sunny side of creamery, in order to give old Sol a chance at them. If all dairymen knew the value of sunlight, and would make good use of it, a better and purer milk and cream supply would be the result.

Debit and Credit With the Dairy Cow.

This is the title of a very practical as well as a most interesting address made by Roland T. Patten of Skowhegan, Maine at the Norway Dairy Conference. Mr. Patten's Dairy and his method of conducting it has attracted the attention of the good dairymen of the state. His address was, therefore, given most careful attention. In connection with the address he showed the records to which he referred and these were examined with a great deal of interest. Mr. Patten said:

I have three little girls at my home, aged 6, 8 and 13 years. They are all in my employ and receive very modest salaries for the performance of simple household tasks. The eldest is the bookkeeper, and I hold in my hand the record which she keeps. Each Saturday evening the little folks meet in my study. They bring this book and their purses with them. The entries are made for the week, the money is counted and each account is made to show what has been received, what has been paid out, and the balance on hand. This is bookkeeping in its simplest form, and many a New England housewife keeps a similar account of the family income and expenditure. Many farmers keep a similar record, and some carry it so far as to be able to tell what each particular piece of ground costs and the value of the yield. We dairymen, perhaps more than any other class of agriculturists, have come to keep careful records of our herds, so that we know for the most part what each cow consumes for food and what she yields us in milk and butter-fat.

What I have to say that is new to any of you will be chiefly in relation to items of cost and income pertaining to the dairy cow, that are not often taken care of. Among them are risk, depreciation, insurance, interest, taxes, upkeep of farmhouse, cost of stabling, bedding, keep of bull, grooming, stable work, care of product and ice; also as to income, manure and progeny. Every one of these items has its effect upon our problem. It does not matter that we own the house we live in and the stable in which we keep the cows; the business must provide a profit that will pay all the charges on them and renew them when they wear out. It does not matter if we do the work for the whole herd; the business must pay us at least 20 cents an hour for our time or we could do better at some other occupation. An accurate knowledge of these items may be had by very simple account and will, I am sure, pay any of us for the little trouble involved.

I am accustomed to consider risk and depreciation together. A cow is liable to die or become valueless as a dairy animal any time. In any event, her usefulness, on the average, will not extend beyond ten years. It is proper, then, to charge off 10 percent of her value every year under risk and depreciation.

Our cows, as well as the buildings they are in, are liable to destruction by fire. We can run this risk or pay some company for assuming it for us. In the latter case it will cost us about $2.50 per year on each $1000 of value. This fire risk, whether we assume it ourselves, or pay for it, is always present, and the cow must pay it. I usually put the taxes in the same column. This charge may be reckoned in most Maine towns at 2 percent per year on the assessed value. When you compute insurance or risk it should be upon what you could sell the cow for; when you compute taxes, it should be on what the assessor values her at.

Now as to the cow's share of the farmhouse. We don't give her shelter there, though some of our ancestors were doubtless so quartered, but it is plain that we could not keep the cow if we did not also provide a shelter for man who cares for her. There is no dodging it, the cow must share in what it costs to keep the farmhouse going. I do not refer to the food, fuel, furniture, etc.; these come in when we charge the cow for the labor of taking care of her. I mean the home, the house itself, the interest on it and what it costs to keep it in repair. Ten percent is a handy number to figure with and, in this instance, again it is just about the thing to charge to the farmhouse to keep it going. Suppose the house is worth $1500, 10 percent thereon would be $150 per year. We would charge mulley with all of this, as the house is just as necessary to the orchard, the cornfield and the potato crop as it is to the dairy. The proportion to be assigned to the cow will varry, but perhaps one-third of it would be a general average for an average farm.

The cow must pay for her stable, say 10 percent on $100, for each member of the herd. It will take about a ton of straw to bed her with for year, and she must pay for that. We have to keep a herd bull or pay our neighbor for doing so and that is a legimate charge to the cows. The cows should be groomed, taking about five minutes a day for each animal. The tie-up must be kept clean and in order, and the labor paid for, as well as the labor of milking, separating, caring for the separator, milk cans, etc. Ice must be provided for the care of the product, and its cost charged to the dairy account.

Now our cow under discussion has been patient while we have charged her with a lot of things, everyone of which creates expense, and some of which she very seldom hears mentioned, it's about time we took up the matter of income. The cow always gets credited with the milk and butter-fat, and sometimes with the value of her calf. There is one other valuable product, the manure. The calf is worth from one-half to one cent a day, if from a grade cow, and from five to 10 cents a day if from a registered cow by a registered sire. The manure is worth eight cents a day for a one thousand pound cow.

In every herd there will be also a slight charge for the service of a veterinarian and for medicines. I am inclined to think that I have made some of the other items broad enough to include whatever that would be, but that is not the way to handle it. It would be far better to know what the veterinary charge was, all by itself. I propose to so consider it when I have a data enough before me to make such consideration fairly accurate.

There is another matter that I have made note of which ought to come into the calculation. It is the gain or loss in weight. If we find that a cow is 100 pounds lighter at the end of a year than at the first, we should reckon a portion of the beef price of this 100 pounds as a loss. If we were to sell her for beef, we should get about $5 less for her. If we continue her in milk, we must so feed her as to stop the decline in weight and perhaps to put part or all of it back on her body. In either case she is worth less after the 100 pounds are gone. I wish someone would give me their opinion as to the handling of this item—gain or loss in weight. I have not made up my mind as yet just how it should be charged or credited.

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Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

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Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

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Sussex, - - - New Brunswick.

Farm Agents Wanted in Unrepresented Districts.

Dairy Briefs.

Feed the cows a little light just before freshening to give best results.

Equal parts of crushed corn, ground oats and wheat makes an excellent butterfat ration, if supplemented with forage.

Wash all milk vessels in luke warm water then scald and air well.

Do not forget to salt the cows once a day to keep the milk odorless.

Give the churn and churning jars a sun bath after scalding them to make tasteless butter and delicious milk.

Never pour a quantity of warm milk in the churning unless soft butter is wanted.

Butter that tastes old may be freshened by rechurning in fresh buttermilk and adding a pinch of soda to the milk.

Cellars or dug-outs used for milk should be whitewashed frequently and all odorous vegetables, etc., kept out. The entrance should be supplied with a screen door to be used at night, and the wooden shutter left open.—Mrs. D. B. P.

Dolly Dimple's Calf Sold.

The Langwater Farms have bargained the coming calf of the great Guernsey cow Dolly Dimple if it should be a bull for $6000 to Mr. M. H. Tichenor of Oconomowoc, Wis. It is also reported that he had refused $4000 for his option. A record price surely and showing conclusively that it pays to breed good ones.

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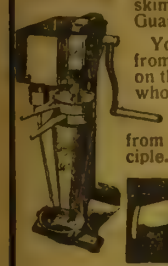

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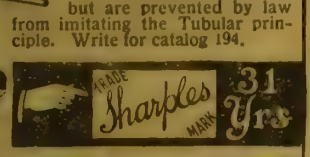

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Preventing and Handling Diseases of the Dairy Cow.

Dr. J. A. Ness of Auburn gave a practical talk to the dairymen at the meeting in Norway on the subject of "The Prevention and Handling of the Common Diseases of the Dairy Cow." Dr. Ness, who is a veterinarian by profession, is also a practical and successful farmer and dairyman, and as he is now devoting himself to the farm and dairy business in a practical way for the purpose of profit, like any other farmer, his talk was greatly appreciated. Among other things, Dr. Ness said:

"Why is it when an epidemic breaks out in our own families, so many escape? It is because those who are not taken have in their systems the elements of perfect health that prevent from taking disease. In preventing diseases in the dairy cow, the first thing is to get her in perfect health. In too many dairy barns we find imperfect ventilation and light, too much filth, dust and dirt. The cow to be healthy has got to be kept in a clean place. We can't determine to what degree sunlight will prevent disease, but it will greatly help. I am talking about the common tie-up, such as I have myself. Every year the dairyman should give his tie-up a thorough cleaning. whitewash, lime, is a great sweetener and cleaner. You don't want to think that because some millionaire has a good King system of ventilation that you cannot have a well ventilated tie-up in the ordinary barn with a simple ventilating system.

"Don't overfeed your cows in any way. Starvation will bring a cow to her feed if she is off feed quicker than anything else.

"In treating a dairy cow, the main thing is a good dose of salts. For the first dose a cow of a thousand pounds ought to have two pounds. Epsom salts are safest.

"A farmer can well spend a little time in grooming. The skin of the cow is a most important excretory medium. If you have a good clean tie-up, you are not liable to get any diseases, but if you do get them, they are half treated in such a tie-up. If the cow is off her feed, don't keep putting feed in front of her. Take it away if she has any. Get in the habit of so looking after your cows every day that you will know as soon as there is anything the matter.

"In parturition there is more likelihood of trouble, for the cow is then in a tender condition. Use your common sense. In swellings of the udder, don't be too severe. In this season of the year, bathings of hot water are apt to have a bad after-effect. The best things we can give are iodide of potash and aconite. See that her bowels move off; clean her out well.

"For garget, iodide of potash, with vegetables for feed, is probably the best thing that can be done. Probably the greatest nuisance is cow pox. This is traded around by the milkers' hands. The best thing is a good disinfectant and cleanliness for both cows and milkers. The milkers should wash their hands after milking each cow.

"In milk fever the most important thing is to make the cow's bowels move. Give her some vegetable feeds. The heavier feeds should not be given at this time. The modern treatment is inflating the udder with sterilized air. The dairyman with thirty cows cannot afford to be without his own apparatus. A chill will bring on milk fever quicker than anything else.

"There are two kinds of milk fever. One of the first things you will notice is a little staggering in the gait. In the other case, there is first a little drowsiness. This is the more common. Apply the air before the cow is down.

"Tuberculosis is something that we buy and sell like the cows. You can reasonably keep clear of the disease with the tuberculin test. But with a properly ventilated and properly kept stable, you can keep down this disease as well as every other disease. Many doubt the efficacy of the tuberculin test, but I have used it enough to be certain that it is the best thing to use.

"I was called upon to test a herd of about fifty cows which showed absolute freedom from the disease. Later a cow from Massachusetts was brought into the herd, and in a little over a year eighteen were in bad condition and condemned. The Massachusetts cow was the worst one in the bunch. This shows the readiness with which the disease is spread.

"Abortion is the worst disease of all. The tie-up well kept and well ventilated is half the prevention. Disinfectant is most important. Abortion is the greatest source of loss we have. Carbolic acid is probably the best thing to feed the cow —a teaspoonful a few times. I have known a case of a cow where the disease was actually prevented by the use of carbolic acid in that way.

"Scours in calves as well as lice can be kept down by disinfectants and whitewash. Clean the calf pen frequently. It is well to whitewash several times a year.

"A good system of ventilation is the use of the muslin curtain over the window which is hinged at the bottom."—Maine Farmer.

Here is a remedy that will cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all Dealers.

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LIVE STOCK.

Foot-Rot in Sheep.

With the exception of sheep scab, there is no disease to which sheep are subject which causes more annoyance and trouble than contagious foot-rot. Sheep frequently suffer in the foot from a form of rot, but it is the contagious character of the disease to which I propose to refer. It was shown by the late Professor Brown, quite contrary to general belief, that foot-rot cannot be produced in sheep by keeping them upon damp soils or fields which are undrained, or in which abundant wet herbage exists, nor upon damp, rotten litter or manure. Indeed, they may be kept in this way for months, assuming that they were healthy when they were introduced, without contracting the disease. If, on the other hand, they are introduced into a flock in which there are diseased sheep, they will contract it in from two to three weeks owing to its contagious character. Foot-rot, as is now understood by veterinarians, may be introduced into a flock of sheep possibly in one of three ways—by contact with the infected matter on the feet of diseased animals; by the consumption of infected herbage, the infection having been introduced by the presence of sheep suffering from the disease; or by actual inoculation. As sheep-owners or flock masters are not likely to inoculate the members of their flocks, the sources of infection are probably reduced to two. We may therefore assume that where healthy sheep are placed in a field to graze, if it has been occupied by an infected flock, they are liable to acquire the disease by contact with the organisms which are present on the grass, or possibly by the consumption of infected herbage.

INFECTION.

According to Professor Brown, the organisms responsible for the disease may remain in the system of a sheep from ten days or more without any indication being shown of the disease upon the feet, for which reason a sheep may be infected and present an apparently healthy appearance, and yet may, in consequence of having been infected, introduce the disease into a clean flock by contact with infected matter, or, on the assumption that infection is conveyed into the system of the sheep through the consumption of infected grass, by feeding on infected pastures. I am unable, however, to trace any instance within my own knowledge in which infection has been so conveyed. In any case, it is evident that a flock must be seriously diseased in order to communicate sufficient diseased matter to the grass to make it really dangerous. There is, in the first place, the probability that it will be washed into the soil by rain; and next, there is the still greater probability that the life of the organisms exposed on the grass will be destroyed by the sun.

Most experienced men will have noticed that sheep which are slightly affected with soreness on the feet when driven any distance on the road become worse. The few which were affected at the start are worse at the end of their journey, while others follow suit, the proportion of the flock which is affected being increased by travelling. If greater care were exercised in examining a flock from time to time, foot-rot would be destroyed in the bud. Where there is the slightest sign of scabbiness or soreness, or of that exudation of matter from the skin covering the arch of the space between the claws, the sheep should be at once isolated and the part affected dressed. Some flock-masters use glycerine at this stage, others chloride of zinc; others, again, prefer dilute carbolic acid—one part to thirty parts of water.

SYMPTOMS.

Foot-rot may usually be recognised by the lameness of a sheep, if it has not been recognised before. On examination of the foot it will be noticed that there is an abnormal condition of the skin between the claws, together with a discharge of offensive matter, in some cases the whole of the foot being affected and swollen. In all cases it becomes necessary to remove loose or jagged horn, not only to permit of the more complete discharge of the offensive matter to which we have referred, but that the diseased flesh may be cut away, as is necessary in extreme cases, and that the foot may be thoroughly dressed for the destruction of the organisms which are the source of the disease. Some flock-masters cauterize the foot in these cases with carbolic acid, but every effort should be made to avoid causing suffering. Some shepherds are far too ready with the knife, although it is evident that where the organisms are beneath the horn they cannot be reached unless it is pared away.

PREVENTION.

There is no doubt that if great care were taken to prevent attacks of foot-rot by occasionally passing the whole flock through a trough as slowly as possible that the foot may be covered with the material it contains for the destruction of the organisms, foot-rot would be much less frequent than it is. This material may be made of potash and arsenic—two pounds of each, mixed in one gallon of water, and boiled for half an hour; but it should not be allowed to boil over. After it has cooled six gallons of cold water may be added. It should be poured into a trough to a depth of about one and a half inches, sufficient indeed, to cover the claws. Great care must be exercised in the employment of this mixture, owing to its highly poisonous character, for which reason I should advise all concerned to hesitate before using it, and rather to depend upon their own observation, which should be systematic and frequent.

In all cases of foot-rot, however severe, the destruction of the organism which occasions it is followed by the healing of the foot. If this fact be borne in mind the sheep may escape great suffering and loss of condition, which is costly to the farmer, if there is a frequent examination. There are many cases recorded in which healthy sheep have been infected by infected sheep recently introduced among them, clearly showing that if care were taken to prevent the mixture of fresh purchases with the members of a clean flock, outbreaks of foot-rot would practically be avoided altogether. One of the most successful remedies for the treatment of diseased feet is chloride of antimony, which should be used after the horn has been removed and the discharge cleaned away, the dressing being kept close to the wound by binding the foot with tow. The lotion, which has frequently been employed with advantage, may be used for daily dressing. It consists of 2oz. of nitrous acid, in which 1oz. of red nitrate of mercury is dissolved. Two tablespoonfuls of water are then added to the solution, and it is ready for use, but these dressings are both of a poisonous nature, and should be kept under lock and key.

What Constitutes the Finished Bullock.

Before demand equalled the supply, the quality and kind of animal put upon the markets of the world was entirely in the grower's hands. The latter part of the nineteenth century heralded a revolution in this respect. Demand has grown so rapidly that it has equalled, and oftimes over-run the supply, and conditions are now vice versa. The buyers want a certain kind of carcass, and there is no choice but Hobson's for the beef man. He must meet the market requirements or quit the business. What does he want? He calls for meat and not appearance, and he wants that meat on the valuable places. He wants what the early animal and a good deal of our stock to-day did not and does not possess; less offal and more round and rib and loin meat. Does the consumer care how much it costs you to produce that cheaper meat? Not one iota. If your animal was nothing but a bone factory and it cost you as much to put the meat on the shank, plate and flank as it did to put the valuable meat on the ribs, that's your look-out. The consumer isn't Christian enough to pay for your mistakes.

WHAT THE MARKET CALLS FOR.

Fancy stock never yet made the live stock industry of any country. If you get the consumer's idea you will come to the conclusion that it doesn't matter one straw whether the finished beeve looks like a small elephant or an upholstered drawing-room suite, so long as he can deliver the goods that the market asks for. What the consumer wants is meat, and he will take nothing else.

A few years ago a large, heavy, thick, bullock, weighing about 2,000 lbs., suited all markets, but that kind of animal is a memory to-day. Why? Because the feeder couldn't afford to use his feed so wastefully. It took him almost twice as long to fit his animal for market. His feed was, in a great many cases, lessened in value by marketing it through the medium of the steer. The great, heavy, hulking brute looked good but possessed too much fat; the fleshing wasn't juicy enough, and because of his size, he was a problem to handle.

THE ANIMAL OF TO-DAY.

Cruickshank got wise and pulled the beef animal off his stilts, did away with his scrawny neck and heavy head, and produced for us the beautiful, economic feed consumer that is the most beautiful animal in the live stock world, and a tribute to the genius of the men who developed it.

To-day the animal that pulls top prices is a well finished, near the ground, compact bullock, not weighing more than 1,000 on his feet, and 1,200 lbs. is better, and at the latter weight he will command the highest price provided all other things are equal regarding form, flesh, quality, and finish.

IN FAVOR OF PRODUCER.

The producers profit by this change, because the younger the animal goes to the block, the less the length of the feeding period, and so the greater the profit to the feeder. British markets call for a beast of moderate weight, medium fat, and first-class quality. There must be sufficient fat on the carcass to insure that delicious flavor and tastiness which is the selling virtue of meats on the British market. The trouble with our Canadian beef growers is that they endeavor to grow the meat in a few weeks instead of utilizing a season's growing process. What is the consequence? Thick fat and a coarse, tough meat. Fat deposited on the outside of carcass and good for nothing but tallow. This is false economy in its worst degree, and beef growers will do well to get next to the economic method of beef fattening.

The real secret of producing first-class meat is to induce the fat to grow with the lean during the whole process of flesh production. This results in an even distribution of fat throughout the lean and the production of that splendid quality of meat which alone can demand a fancy price on our best markets. This carcass, when dressed out, should show specks of fat generously distributed throughout the lean. You can only secure such meat in one way, and that way is by consistent nutritious feeding and care from birth until maturity This shortens the fattening period and facilitates the putting on of the finishing flesh in good quality and quickly.

As mentioned before in a previous article on the steer, the requirements of both feeder and butcher must be studied and appreciated in the selection or breeding of the most profitable animal. The feeder calls for good bone, large capacity of barrel, and a chest deep and broad. On the other hand the butcher doesn't care two pins about these requisites in a feeding animal, because it is in these parts that the greatest waste occurs, and once the animal is dead and his digestive apparatus out of commission, these parts are of comparatively little value, although absolutely indispensable in life.

You will understand from this that you have the opportunity of the century to use your wits and good judgment. Strike a happy medium and stick to it! You are in the business for profit, and the ultimate criticism

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of your products can only be made after you consult your bank book. Your animal of 1,400 lbs. should dress out a carcass of 800 lbs., and the carcass is divided into the following parts at the affixed prices:—Loin, 144 lbs. at from 15 to 20 cents; ribs, 80 lbs., 18 cents; round and rump, 200 lbs., 12 to 16 cents; chuck and shoulder, 218 lbs., 12 cents; flank and suet, 48 lbs., 7 to 8 cents; plate and brisket, 80 lbs., 8 cents; shank, 30 lbs., 8 cents.

You understand now where the good meat is to be found and where you can lay your finger on the best prices. The article of a week or so ago dealt with the kind of animal to grow. We have endeavored in this article to show you where to put the meat and why to put it there. Where are you going to put it, on the table of the epicurean or in the soup of the people who can't afford to buy good meat? Canadian meats must stand against other meats on the British markets. In most things the Dominion takes no dust from any country. Shall our live stock industry be a credit or a discredit to our country? Ask the breeder and feeder.—Canadian Farm.

Breeding From Old vs Young Sows.

The vitality of our breeding swine has been surely undermined by the pernicious practice of using immature sows for breeding purposes.

Experiments and close observation in many different herds of swine have proven plainly that immature sows have much smaller litters of pigs than adult sows; that the pigs of the young sows are apt to be smaller and weaker than those of the older sows; that the young sows have a less quantity of milk for the pigs than is the case with the older ones, and that at each breeding period the younger sows tend to have a larger litter than the one previous until they have the average number of pigs usually brought forth at a farrowing of adult sows.

A great mistake made by a large number of breeders is in disposing of their young sows as soon as they have raised one or two litters of pigs. What reason they have for doing so I have never been able to learn. What sense there is in the practice is equally perplexing to discover. It is a poor plan and detrimental to the best interests of any herd of hogs.

The sow grows in size and capacity each year until she has reached maturity, and when that time has arrived she may have a large litter, such as was common in the old days when hogs were permitted to run out doors most of the time and lived a natural life.

In selling a young sow that has given birth to but few pigs in her first and second litters, there is no proof that such is going to be her persistent performance. She is just as likely to change and give birth to many pigs when she has gained full maturity, and the aptitude to do so is true of all sows.

In fact, there are many positive statistics to show that the litters of mature sows are not only larger than those of the average young sow, but they are better in point of strength and quality. Many a sow has made her reputation as a breeder after she has had two or three litters, and many of the great prize-winning hogs have come from old, rather than young breeding sows. It may be truly argued that the long-continued use of young sows has given us early maturity in our swine. That early maturity has been gained in this way seems certain, taking with the use of young sows that of young boars. But the early maturity has likewise come from changes in the environment of pigs and in the constant use of highly nourishing and forcing foods.

It should be borne in mind that the early maturity gained in this way has not been altogether advantageous to the hog. He has thereby been weakened in constitution, as everybody knows. He has been reduced in size also, and the market now takes and likes a small, neat hog, and pays an appreciative price for such, just because such hogs can now be had, and are quite common in fact, whereas in the old days the big hog was the rule and he was the product of slower development and age rather than of forcing methods. He came from the adult sow as well as the young one, for, as the young sows were in those days larger in size and more naturally handled, they had larger litters and stronger ones.

We cannot altogether return to the old methods of management, but we are foolish in the extreme if we sell off the brood sows just when they are coming to their prime and the continued following of a practice so absurd and detrimental as this must further undermine the vitality of our hogs. Give us less beauty of form as regards rotundity and lard plumpness, and more capacity of pig production and pig nourishing. Sows of the latter pattern will produce large, healthy litters up to at least six years old and I feel sure that the large litters with the added vitality and good health of the pigs will more than make up for any slight loss of quality as regards show points that may come from a return to more natural methods of hog breeding.—Dakota Farmer.

Sheep Industry Scapegoat.

Since time immemorial the sheep industry has been the scapegoat of all nations, and while they have been driven to remote places, they have not escaped being persecuted and assailed on every hand, and have seldom, if ever, been of a revengeful nature. The present situation is no exception to this well defined rule. While a great majority of the producers of sheep and wool work like Trojans, endure innumerable hardships, battle with drouths and blizzards and risk their lives, which are devoid of the pleasures, comforts and conveniences of the civilized world, they seem to lose all interest in their product after it is loaded onto the cars; they evidently do not care to know why their sheep and wool are selling at ruinous prices, while kindred commodities have increased in value.

The average consumption of wool per capita is less than six pounds, and if this was given free of charge the consumer would not be able to note the reduction. While the people are clamoring about the high cost of meats, mutton is selling 100 per cent cheaper than beef or pork. What is the cause of this ruinous depreciation?

It is needless for a few flockmasters to assemble and endeavor to devise ways and means for the protection and welfare of the industry but the hundreds who are engaged in the business and the thousands who depend upon it for support should not only attend our conventions, but should affiliate with us and assist us in obtaining justice.—J. A. Delfelder.

Do you salt your stock the same in winter as in summer? Not one farmer in five hundred does; and yet the cattle and horses relish it and need it just as much in winter as at any other season of the whole year.

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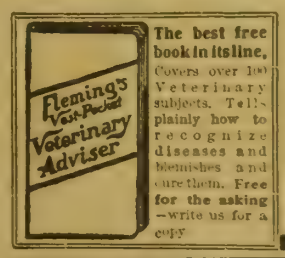

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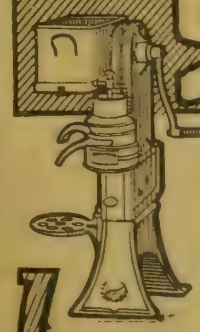

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THE HORSE.

Training the Colt.

In training a colt to drive I have found the most successful method to be, to accustom him to the harness and the bit before hitching him up. I harness him in the barn, check his head up, not too high, and fasten hitch straps to his bit, running them back to the backband on either side. I am careful not to make these straps too tight. Leave him room enough to move his head easily from one side to another, but make them tight enough so he will feel the bit. Then I turn him into the horse lot for two or three hours and let him become accustomed to the harness and bit. I give him this experience three or four times. Then I add a couple of check reins, one on each side, and drive him around the horse lot, stopping him occasionally until he is trained to the lines and will drive freely where I want him to. Then I hitch him up with an old horse and drive them both for two or three hours before hitching to the wagon. In this way the colt becomes accustomed to the harness and learns that nothing is going to hurt him. If care is used in this preliminary training there will be no trouble at all when hitched to the wagon. I have trained a great many colts in the last seventy-five years and have never yet had one refuse to go, or give me any serious trouble. —S. B. S. in Wallace's Farmer.

Winter Care of Pregnant Mares.

Those who have had experience and observation in horse-breeding have noticed that a considerable percentage of the spring colts, especially those born before the mares have had a greater or less time on pasture, are weakly, often not able to stand, and sometimes without sufficient life and ambition to nurse when held up and teat introduced into the mouth. It will also be observed that colts of this description are usually those of dams that have been pampered during the winter months—those that have been well fed, and kept in the stable most of the time without exercise. Of course, there are exceptions, and it is not uncommon for a mare so used to produce a strong foal. Therefore, while in all cases it is not necessary that breeding mares should have regular exercise during pregnancy it is at least advisable, and has a tendency to have a beneficial action upon the progeny. In countries where the climate is such that horses can run out in the fields with comfort, at least during the daytime, mares will take sufficient voluntary exercise; but often conditions, for weeks at a time, are such that they cannot run in the fields at all, and if turned out in the barnyard (which, of course, is better than standing in the stable), they will take little exercise, but stand in the most shaded place most of the time to keep as well as possible out of the cold until they are again allowed to go into the stable. The pregnant mare should be well fed aod given regular exercise or light work.

The idea that a pregnant mare should not be well fed is not uncommon. A little consideration will teach us differently. The foetus is daily gaining in size. This growth does not take place without nutriment. The nutriment must be supplied by the blood of the dam, and as nutriment is not a natural product of the blood, it is supplied by the food the animal eats, and we can readily see that the pregnant mare has not only her own tissues to nourish, but also those of the growing foetus, which, in the latter months of gestation, is no small matter. Hence, we see that the pregnant mare requires more food than her sister of the same size who is doing the same work. While she requires more food, greater care should be exercised in the selection of food of first-class quality, and it should be of an easily-digested character and fed at regular intervals. All possible care to avoid digestive derangement should be observed. Good hay and oats are the foods to be relied on to produce nourishment, and these should be fed in quantities proportionate to the size of the animal. In addition, she should be given a few raw roots daily, and a feed of bran, with a cupful of linseed meal, at least twice weekly. She should also be given all the good water she will take at least three times daily; still better if it can be arranged so that she can have water at any time. She should have exercise every day. If there be regular light work at which she is kept busy a few hours every day, it is better, but if not, she should be driven a few miles daily. The work or exercise should be light. Work that requires excessive muscular or respiratory effort should be avoided; so also should plunging through deep snow, etc., be avoided if possible. Excessive muscular exercise, plunging, etc., cause violent contractions of abdominal and other muscles which tend to produce abortion. Greater care than usual should be taken to not subject the mare to even moderate exercise shortly after a meal. Saddle work, especially in the latter months of pregnancy, should be avoided, as the mare has sufficient to carry without a man on her back; but where saddle work is given the use of spurs should not be permitted, as pricking an animal in the sides or flanks with spurs causes more or less violent contraction ol the abdominal muscles, which is unfavorable. All nervous excitement should be avoided, as also should sights which frighten her; also offensive odors. The odor of blood tends to produce abortion, hence she should not be allowed near a slaughter-house, etc., unless she be well accustomed to such. All operations, should if possible, be avoided, and so should the administration of medicines which tend to abortion, as drastic purgatives. When necessary to give a purgative to a pregnant mare, it is well to give raw linseed oil in preference to aloes, as, while it does not act so promptly, its action is milder, and does not cause the griping and contraction of both voluntary and involuntary muscles. Towards the end of pregnancy still greater care should be taken, and, while exercise up to the very last is advisable, it should be given more carefully and less of it when she becomes somewhat clumsy and inactive on account of size and weight but many of the most successful cases we have known have been when the mare has been unhitched from the plow or buggy when showing labor pains. We, of course, consider that after the birth of the foal the mare should not be worked for at least two weeks, and if we can allow her to run idle until weaning time, all the better. Many farmers who are breeding one or two mares have sufficient horses to do the work and driving without using the pregnant mares, and, as a consequence, they live in perfect idleness. We repeat that this is a mistake, and that while all horses are the better of a certain amount of exercise, it is better to allow the geldings and nonpregnant mares to live in idleness than the breeding mares.—Whip.

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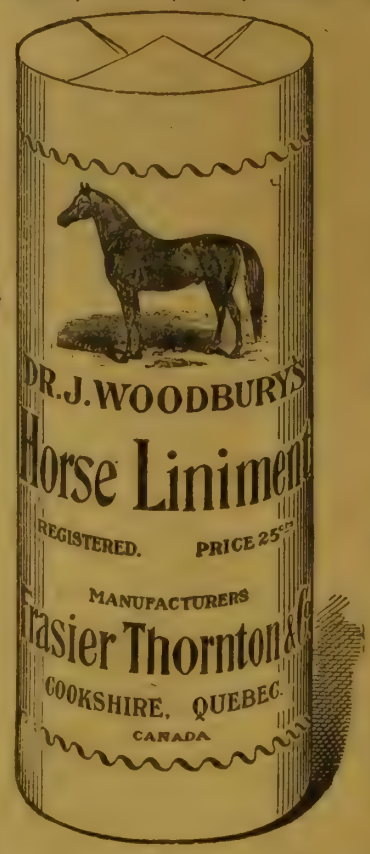

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POULTRY.

The Best Time To Treat Poultry Diseases.

Of course none will deny that once disease of any kind has appeared among a flock of poultry, drastic measures should be adopted and treatment begun at once, but going back of this the only way to make a flock of birds profitable is by preventing important diseases; and prevention is, therefore, the only sure and adequate remedy for diseased conditions, for once disease obtains a foothold, the usefulness of the flock is either over or at least seriously hampered. But properly bred, housed and fed poultry are little subject to disease. In the first place, the parent stock must be strong and healthy, not impaired in either health, vigor and mental capacity by continued inbreeding, so that there will be no inherited disease or lack of vitality in the foundation stock. Then, this condition existing at the start, great care should be used that it is maintained. If a hen is injured in any way, or suffers from any disease, even a cold, or even shows disease symptoms, her eggs should never be used for hatching purposes, no matter how fully she has recovered, or how strong she may apparently be. To do, is taking chances which are more than likely to prove detrimental to the young stock. This having been guarded against by the selection of the strongest and best hens, equal care should be taken in the selection of equally strong and healthy males, for whatever the size of the breeding pen, the male is half the pen and his characteristics will develop fully as strongly in the chicks as will those of the mothers. Great care should be exercised that none of the females are closely related to the male, and that all birds are well colored and properly shaped for their breed. It is not best to mate too many females to one male, and though one male will often fertilize the eggs of 20 or even 25 females, the best results will be obtained if not more than seven or eight females are mated with one cockerel of strong vigor. It is best not to mate cocks with hens, but a vigorous cock mated to a small pen of vigorous pullets, though results are surer where the mating is the other way.

Hereditary diseases having been provided for, white diarrhoea, the most fatal of all diseases to which young chicks are likely to be subjected, may be prevented, at least in a very large degree, by dipping the eggs in 90 per cent pure alcohol before setting, and thoroughly disinfecting everything with which either eggs or chickens are to come in contact, and keeping everything clean and sweet. Chilling and overfeeding also cause this disease, but these are things that can easily be avoided with proper care and attention, though they are easily brought on by neglect, even for a very short time. As the chickens develop, they must have plenty of fresh air and fresh water, but draughts and dampness under foot must be avoided, and these are both very dangerous disease breeders. Chickens can stand a good deal of cold if there are no strong draughts, but when chilled by cold air directly upon them, they are seldom of much value afterwards if they recover, as they sometimes do. In any event, they will make very poor breeders, though they sometimes do make fairly good layers.

Birds of any kind, when living in their natural environment, are very little subject to disease of any kind, and the unnatural surroundings and the foul air they are often obliged to breathe through over crowding are responsible for the major portion of the illness of poultry. They must have plenty of fresh air, but must be protected from cold winds, and must also be kept free from parasites, or they cannot keep free from disease. Give them a good dust bath where they can bathe in the sunlight and they will do much to keep themselves in good health, but they cannot do it in a house infested with lice and mites, and no poultryman should expect it, and healthful and clean quarters must be provided or the poultry business cannot be made profitable.

There are some diseases that can be cured, but the infected birds should at once be isolated or they will contaminate the entire flock, and the expenditure of much time or expense on sick birds is unprofitable, and the axe is usually the best and cheapest remedy in cases of serious illness. Prevention is the only sure and profitable remedy for disease.

But some of the minor diseases may be profitably and successfully treated, and of some of these I propose to speak in a future letter, for experience has taught me that drastic measures and sometimes simple remedies will save valuable birds, which may for a season or two make a good profit for their owners as layers, and then go to the markets as first-class poultry, without danger to the purchaser or loss to the owner, though I do not consider birds that have recovered from any disease as suitable for use as breeders.—H. L. Goodwin in Maine Farmer.

Orchard Poultry Run.

There is no more ideal place for raising poultry than in the orchard of apple, pear, peach, cherry and plum trees. The poultry must have some grounds over which they can run for feed and exercise, and in the orchard they will do less damage than any other part of the place. They will not only not injure the trees and fruit crop, but they will eventually do them good by eating fallen and decayed fruit and keeping down the number of troublesome insects.

The good orchard is cultivated annually or kept in sod, and is clean and free from weeds and other tall growth during almost all of the year. This condition permits the poultry of wide range without becoming lost in rank vegetable growth or wet with heavy dews. Where the orchard is cultivated during the early part of summer and sown to some catch crop later in the season, the birds are enabled to pick up an immense amount of animal feed in the form of worms and insects, and to scratch and wallow in the loose soil. In late summer and fall, while the catch crop is growing, they have ideal feeding grounds among the plants of the growing catch crop, and if the catch crop bears seed, none of it is wasted, but it is turned to good account in the form of meat or eggs. where the orchard remains in sod and is mown several times during the summer, the new, tender grass coming up after each mowing makes the best of green feed for both old and young poultry of all kinds—chickens, ducks, geese or turkeys. Insects breed in sod, and the poultry will aid in keeping down the number to a normal limit, which is a great benefit to the orchard. A sod also makes an ideal winter range for poultry.

An orchard is a most ideal place for poultry in summer, and especially during the very hot weather. Where the colony system of poultry culture is practiced, the small house and coops may be distributed all over the orchard and keep in the shade during the hot weather and removed to a sunny position in cooler weather. Under the shade of a fruit tree is an ideal place for a coop of chicks or for the brooder.—Western Poultry Journal.

The Balanced Ration.

So very much is continually being written about the balanced ration for fowls that one is at a loss to tell just where science will land us. Many can not even tell the true meaning of the balanced ration described as protein, nitrogen and other elements or component parts, but when we say that the balanced ration is that assortment of grain food or other foods best adapted to sustain life, supply all the demands of Nature, and furnish a full egg supply, we have an understanding of what is meant by the balanced ration. It has been fully demonstrated that what is a balanced ration for one cow will not meet the demands of another, and it is quite likely that as we progress we shall find that the same is true of hens. For this reason we can only have what might be called average ration for a lot of fowls. Wheat, oats, corn, and animal food are, in fact, all that would be absolutely needed in winter, with the addition of green food; at the same time additional grains are a benefit, because they furnish more of a variety of foods, and in this there is the advantage of a larger assortment, which may make the ration more fully meet the demand of a greater number of hens. We say variety is the spice of life; to the hen a variety of grains is a pleasing change as well as beneficial to the egg yield.

Feeding Platforms.

A hen will pick her food from the mud and litter of the poultry yard, or she will eat it "off a plate." Both methods represent extremes; but since cleanliness is a most important thing in solving the "winter egg problem" the chickens should be fed in such manner as to prevent unhealthy conditions.

I have found the board platform best for serving soft and cooked food, scraps, etc. It is better than a trough or a gravel bed, for the reason that it can be kept clean. Twice a week the board platform which is large enough to accommodate all the chickens of the yard without crowding, is washed and sprinkled with lime water. In fact, I attempt to keep it so clean that a person could almost eat off of it. Why not?

Water is given in shallow pans twice a day, and these have a place on similar, but smaller platforms. In this way, the hens do not wade in mud, or form puddles close to their drinking place, thus getting clean, pure water at all times.

Since adapting this plan of feeding from board platforms, and using the same precaution in the matter of keeping the hen houses clean, the "winter laying problem" has ceased to be a problem. Give the hen clean food, pure water, and clean quarters, and she will take care of the laying end of the proposition without further trouble.—Dennis H. Stovall.

The New Standard of Perfection.

We say much about the stgndard of perfection for fowls. Why is it, I wonder, that nobody has thought it advisable to form a standard of perfection for fowl fanciers? It would be something like the following:

Head—Level and broad, but not flat, with tuft of brilliant feathers.

Beak—Tranquil and silent.

Eyes—Fearless and determined.

Comb, face, ears and neck—Clean and well trimmed.

£ Wings—Buoyant; ready to fly over any emergency. Wing-fronts strong and muscular, which is plainly shown; primaries always ready to clutch the hammer or saw and never in anybody else's pie, secondaries, willing to feed and water on time.

Back—Stiff, and not easily bent. saddling impossible; under color true clear to the skin.

Tail—Strictly true to color; no haggled spots and is never thin.

Breast—Warm, ready to meet a friend or a chick in distress more than half way.

Body and fluff—True blue; no white feathers.

Feet Firm on ground! no fancy flights in air.

DISQUALIFICATIONS.

White feathers, cold feet, flat head, irregular feeding or care, lazy bones. Sometimes the forgetter is so prominent that the judges have to throw the critter out of the show room.

Are you a poultry raiser? Do you come up to the standard? If not, why not?—Marie Burritt Topping.

Poultry Notes.

Regularity is the key-note of success. Comfort brings health and productiveness. The art of egg production needs more study than that of egg preservation.

The business hen is one bred for the production of a good supply of eggs and meat and not for fuss and feathers.

The best breed is one that suits one's purpose best.

Old fowls require less feed than young ones and it is a mistake to overfatten them.

The profits in poultry culture are measured by the care given.

A poultryman is judged by his surroundings and the condition of his fowls.

The enemies of the fresh egg market are the preserved and the tested out incubator eggs. Be above such trickery.

Split carrots, turnips and cabbage in half, instead of chopping fine.

A box of crushed oyster shell should always be within reach.

Be certain the eggs intended for the wooden hen are perfectly fresh. It is best for the eggs not to be over five days old. Fresh eggs bring stronger chickens. Turning the egg once a day previous to putting them in a machine will prevent the yolk from sticking to one side. It is important to change the position of the trays after turning the eggs, so that the eggs that were on the left side of the machine will be on the right and those which were in the back will be in front. In cooling the eggs or stirring them, do not cool the incubator; keep it closed while the eggs are out.

The scratching shed is the workshop for the busy hen. Don't keep a lazy hen, for she is not worth her keep.

Old Hens.

Quite a common cause of a small egg supply is that the laying stock is too old. The ordinary class of hen does not pay for her keep after she is two years old, and birds older than this should be disposed of. Exhaustive experiments have proved that a hen is in her prime during her first and second seasons, after which time she ceases to be profitable. Young birds that are two years, or under, only should be relied upon for the winter egg supply.—E. T. Brown.

HAVE YOU a Lump in the Breast, or a Growth on any part of the body, or a Sore that will not heal?

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Send Them to Bed With a Kiss.

O mother, so weary, discouraged,
Worn out with the cares of the day
You often grow cross and impatient,
Complain of the noise and the play;
For the day brings so many vexations,
So many things going amiss;
But, mothers, whatever may vex you,
Send the children to bed with a kiss.

The dear little feet wander often,
Perhaps, from the pattern of right,
The dear little hands find new mischief
To try you from morning till night;
But think of the desolate mothers
Who'd give all the world for your bliss,
And, as thanks for your infinite blessings.
Send the children to bed with a kiss.

For some day their noise will not vex you,
The silence will hurt you far more;
You will long for the sweet children's voices,
For a sweet, childish face at your door;
And to press a child's face to your bosom,
You'd give all the world for just this
For the comfort 'twill bring you in sorrow,
Send the children to bed with a kiss.

Love's Barrier.

(Continued from last issue).

CHAPTER XV.

UNDER THE STARS.

Jimmy Bates having taken coffee into the study, and settled his master and mistress for the evening, retired beaming to supper in the kitchen beside Hannah. Secretan threw himself into his own chair and watched Helen while at the side table she made the coffee to his liking. She was mistress of all those delicate arts which make a man prize his home; she never forgot the cigarette, the match-case, the last new book, or the paper he most wished to see, the page turned at the choicest bit. Her figure, while she stood with the heavy folds of the velvet falling straightly about her feet, was all grace. Where the lace fell from the sleeve, he caught the beautiful white contour of her shapely arm. Secretan was very much in love, and his heart ached intolerably. But his spirit was heavier still, because of the burden that had not been lightened by his visit to Bradfield and his conference with his Bishop. The Bishop was an austere man, married, it is true, and possessing an exemplary family, but he put church and creed before the ties of the flesh, and had left Secretan in no doubt as to the course he must pursue. He had been kindly sympathetic and deeply interested, but absolutely decided.

"I hope you are feeling better now, dear," said Helen, as she handed him his cup. "You shall not have any sugar to-night. I recommend black coffee, unsweetened, as the first of stimulants. Try it. Did I tell you Tom Courtney had had a tussle with Sir Anthony Brede?"

"No; tell me about it," said Secretan, eager to gain time.

Helen related the incident, and laughed over it a little, and passed on Jane's comment.

"Jane and you seem to have had a long confab this afternoon," he said, when he had drunk his coffee; but he did not offer to touch the cigarette.

"We had; she was quite delightful. I can't think how you lived so long beside your sister, Claude, without discovering her."

Secretan smiled.

"It is all right, if you are the discoverer."

"Well, but your blindness does not do you any credit."

She set down her cup, and took her own chair, which had come from Colchester with one or two treasures which Cynthia had been obliged to give up. It was a prie-dieu, very straight in the back, with a strip of faded needlework which Helen prized because it was the only piece of her mother's handiwork she possessed. She liked the chair with the straight back because she did not belong to the lounging order of women.

"Claude," she said, looking straightly at him. "Why didn't you tell me you went to see Jane, yesterday?"

His face reddened a little, at which she laughed.

"Did you think I would mind? I should never be alarmed at your discussing me with Jane, so please don't forget to tell me next time you do it."

"Did Jane tell you what passed?" he asked awkwardly. "You will believe I did not set out with that deliberate intention, Helen? As I took my walk I seemed to turn naturally to the Court, and, of course, when I was so near I went in."

"Precisely what Jane said; but, dear, I do assure you there is not the smallest need to be apologetic about it. I am quite pleased, really."

Secretan sat up suddenly, and his face seemed to harden, or at least to set itself into a line of purpose.

"I am rather glad that you mentioned this, Helen; it gives me an opening. I suppose Jane told you that—well, that I am very much concerned about the way we are going on."

"She did not say that exactly. She said you did not like my not going to church, and all I said was that you and she must have a little patience. I promised nothing. I believe that I have even been a little better than my promise, and I am very sorry you are so dissatisfied."

Her voice took a colder note, and Secretan visibly winced.

"But, Helen, will you let me say something without taking instant and dire offence? When you promised nothing, as you say, I did not quite realise what it meant. I took it relatively to myself, and I have no complaint to make of your treatment of me. I hope you can say the same?"

"I? Oh, I am perfectly satisfied," she said, dropping her eyes on her lap, where her fingers played. "I—I appreciate your kindness and forbearance and consideration more than I can say, and I have tried to show it. I sometimes thought I had succeeded."

"I appreciate all you do for my comfort. As for the more personal side of things, I was prepared to wait—seven years, I think I said—and think them short if I could win you. But that is not what I wish to speak about to-night."

"I know you think I'm a heathen, and you're tired of having a heathen wife," she said hardly.

"You express yourself rather strongly," he said, trying to speak gently, though every word stung like a two-edged sword. The Bishop however, had been insistent on patience and forbearance, even while he made clear the pathway of his duty as a man, a husband and a Christian priest.

"It is not for myself I plead, Helen; I have known many church-goers far more remiss in their duty than you. But it is the example. My people are a simple people, and they do not understand. I want you to reconsider the whole question. Let us talk it over, and see whether we can't come to a fresh arrangement, whether you will not concede something for the sake of others."

She made no reply.

"Your continued refusal to recognise the ordinances of the Church, your complete abstention from Holy Communion, have filled everybody with astonishment, distrust and a little pain. They talk of it to me everywhere, asking me why. I am dumb before them, and I feel that my influence in the parish is being slowly undermined."

"It cannot be built on a very solid foundation, if that can undermine it," she said in a low voice, which, however, had no softness in it.

"If you would only try to look at it for a moment from my, from their point of view, you might be able to grasp the situation. Meanwhile, you see only one side of it," he said slowly. "There is so much in the parish only a woman can do; the mother's meeting, the Bible class, the sewing guild, are all suffering. I mean they are missed, because they do not exist."

"Then you should have taken my advice and kept Jane in the parish. Remember, I wished it, and if you had insisted there is no doubt that she would have stayed on in the Rectory."

"But I did not wish it, nor would it have been advisable from any point of view—yours, or hers, or mine. Besides, it would not have altered the situation in the smallest degree. The duties I have mentioned are yours, and not hers."

Again she gave him no answer.

"Helen," he said, leaning forward, his face flushed in his extreme earnestness, "won't you concede something even for appearance' sake? I don't know what foolish and stubborn objection you have to attending the church services, what you are waiting for. If, as you say, you are grateful for any small personal consideration I may have shown you—though, Heaven knows, that is the last point I wish to press—think it over, and for the sake of that meet me at least half-way."

She sat looking down, her fingers working nervously. He did not know what headway he had made, but his next words were fatal, and undid any good he might have done.

"The Bishop says that there cannot be two opinions as ——"

He did not finish the sentence, for Helen sprang to her feet, her eyes blazing.

"The Bishop! Then that was your business at Bradfield, your diocesan business, to discuss me with the Bishop!"

"I went for that purpose," said Secretan quietly, though his face began to flush ominously. "I could not bear my own thoughts any longer. I felt I needed the counsel and opinion of someone in authority on what the Bishop very rightly calls a public scandal."

Helen smiled an exceeding bitter smile.

"So that is what I am—'a public scandal,'" she said slowly. "Thank you, very much. Now I know where I am, and now I know, too, the hideous bondage in which you so-called religious people live. I was not mistaken in them after all."

Secretan clenched his hands. He loved her, but above his love for the woman, loyalty to his faith stood high as the stars above the earth.

"I forgive what you say, Helen, though it is not to me you are showing such disrespect. I see that I have been too weak all along, that I ought to have insisted more on such poor authority as the law gives me. I ought to have required your obedience in matters which affected—affected my work, and the paying of outward reverence, at least, to the Church ordinances."

"Obedience!" she said. "Obedience! Are we living in the twentieth century? Was it bread and water or the scourge the Bishop recommended for the refractory wife?" she asked mockingly. "I have been trying slowly to walk along the pathway of duty, to learn things, and I have learned from Jane, never from you. You are a hypocrite! What you would have me do, to go and kneel there in the church with a lie on my lips and in my heart, is hypocrisy! But that apparently is of no account, so long as a good appearance is made before the world! And I thought you were different! Oh, what a mistake it was, what a mistake!"

She wrung her hands passionately like one distraught, and ran out of the room. Secretan, with great beads of perspiration standing on his forehead, sank into his chair and covered his face with his hands. Even in the anguish of the moment, when he had come for the first time in actual conflict with her strong, passionate nature, he felt a strange peace. For he had not wavered. Indiscreet, unwise in his choice of words, in his method, he might have been, but he had risk-

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Poughkeepsie, N.Y.—I run a sewing machine in a large factory and got all run down. I had to give up work for I could not stand the pains in my back. The doctor said I needed an operation for womb trouble but Lydia E. Pinkham's Vegetable Compound did more for me than the doctors did. I have gained five pounds. I hope that everyone who is suffering from female trouble, nervousness and backache will take the Compound. I owe my thanks to Mrs. Pinkham. She is the working girl's friend for health, and all women who suffer should write to her and take her advice.—MISS TILLIE PLENZIG, 3 Jay St., Poughkeepsie, N.Y.

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Gentlemen,—This is to inform you that I have been a sufferer for the last fourteen years from kidney and stomach trouble, brought on by severe colds. Having been laid up every winter during that time. Last year I was laid up for seven months, so that I could not go out of the house. Dropsy set in, and my stomach swelled so that I was six inches larger than my usual size, had two doctors in attendance, but I grew worse and they were going to tap me—my friends despaired of my life. At this time I was recommended to use Gates' Life of Man Bitters and Invigorating Syrup No. 1. and in one week after commencing their use, my size was reduced two inches, and in four weeks was reduced to my usual size, so that I went to work in my mills, and have been able to continue it ever since. By continuing the use of your BITTERS and SYRUP, I hope to get a cure of the kidney and stomach trouble so far as it is possible, as it always helps me when I take it. You may make these truths known for the benefit of sufferers.

Yours very gratefully,
John W. Margeson.

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If you suffer from bleeding, itching blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

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ed something for conscience' sake. It was an agony to be at war with the wife he loved, but he must be true to his vow of consecration. "Whosoever loveth father, or mother, or husband, or wife, more than Me, is not worthy." He fell upon his knees. Helen sped upstairs to the small, quaint sitting-room she had arranged for herself, and where he dared not follow her. With one of the little flashes of mystery and reserve which served only to bind him to her, she had told him that there he must not come without invitation, that it must be her sanctuary. She had played upon his heart like a harp of ten strings, and now that growing and dear intimacy had been sharply cut by his own hand, and the seven years of waiting seemed to lose themselves in illimitable space.

Helen did not long remain in sanctuary. It had no message for her soul that night. She drew a pair of overshoes over her house slippers, put a hooded cloak about her head and shoulders, and slipped downstairs. She must have the big sky in this crisis, space, wideness, and the protection of the kindly night. So light was her footfall that Secretan did not hear it, nor the slipping of the bolt back in its well-oiled groove.

It was bright moonlight overhead. Although March was now well forward, the world in these high latitudes was still in the icy grasp of winter. The moor was not far off. A short walk across the churchyard, a step through the wicket, and it lay before her in its immensity, its loneliness, its great awe.

She had no fear, nor need she have had; there were no evil beasts in Midcar to molest simple people in their walks. The moor had no tales of blood or woe to terrify the imagination. It was a kindly place where flowers were wooed to blossom, and wild things were safe. The night-wind was cold, but Helen let her hood fall back, so that it played unhindered on her hot face and stinging eyes. She was very proud, and her pride was outraged by the vision of two cold churchmen discussing her and dissecting her motives, deciding how she could be brough to a better frame of mind. That Claude, the man who had behaved with such forbearance and chivalry throughout, should have lent himself to this, placed him in her estimation on a level with all the other selfish male creatures she had known. They were all alike, she told herself passionately, they must dominate whatever defenceless creature they had in their power. But she would not be dominated; only that morning she had been so full of kindly feelings to the little place, full of appreciation of her husband's character and standing in it. She had paid a visit to a poor home, where a little child lay ill, and there heard of his tenderness, his true and practical kindness of heart. They had thanked her for it with tears in their eyes. Even against Jane her anger burned. She was no longer a house of defence. For though she had not said very much that afternoon, yet her few words brought her in line with her brother's argument. Helen went back to the intrigue, the suspicion, the unbelief, which she thought she had put from her as a garment for which she had no further need. She told herself that brother and sister were in league against her, and that Jane had known of the visit to the Bishop and its object. She wandered up the beaten road which the feet of many moorland folks had made hard and efficient, and, losing touch with the lights of the scattered village, felt herself alone with the stars.

Something seemed to lay a caressing, healing touch upon her panting heart, and even a small, quiet smile stole to her lips. She felt a sudden shame of the passion that had rent her. The occasion was hardly worthy of it; a cold invincible front would have been at once more dignified and more convincing. But certainly she would not be driven like a sheep to the sanctuary. They would find she could be as determined as any Bishop. If only he would have the courage to come to Midcar Rectory and give her a chance to assert herself! She sat down presently on a heap of boulders that rose grotesquely by the wayside, and then became conscious that someone was approaching from the opposite direction—a woman's figure of ample proportions, carrying what appeared to be a market basket. Helen sat still to await her approach, conscious of that swift weariness which so often follows upon an ebullition of unusual force. The figure looked like Ann Coyne's in the elusive distance, though why Ann should be on the middle of the moor after nine o'clock on a winter night passed her comprehension. It did not occur to Helen to think that whoever the pedestrian might be, she was bound to feel surprised at the sight of the Rector's wife in that lonely place.

It was Ann. The full moon shone upon her comely face and ger startled eyes.

"Mercy me, Mrs. Secretan, it's nivver yo!" she said, with a great, deep breath drawn up from her ample bosom. At the same time she set down her basket and incontinently stared.

"Yes, it is I, Ann. I fancied a mouthful of fresh air, and I'm not at all afraid. Lovely out, isn't it?"

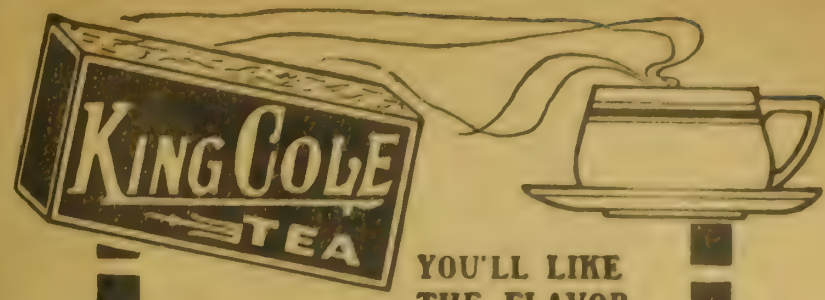
"Yus, it be. Well, a breath ov the fresh air be Goad's own gift, sure, but it's a tidy bit to coom for it. What does th' Rector say to them neet wanderin's?"

"Same as Coyne says to you, I suppose," replied Helen, with a short laugh. "Won't you sit down for a moment and tell me where you've been? Then we can walk back together."

Nothing loth, though not yet recovered from the shock of surprise at her meeting with the Rector's wife, Ann seated herself on one of the opposite boulders, where she could obtain a good and clear view of Mrs. Secretan's face.

"A'a been a'a the day at Isaac Brettle's, t'other side ov th' moor near by Lips-Ghyl. His wife, 'Lisbeth. shoo died at three this arternoon."

"How did we not know about it, Ann? Mr. Secretan went to Bradfield this morning, and if he had known that anyone was so seriously ill he would, I am sure, have stayed at



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DOCTOR SAID HE WOULD NOT LIVE.

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Secretary-Treas.

home to visit her."

"Shoo beaint in Midcar parish. Shoo's wan ov Iffley folk. Nobbut it wad ha' made anny difference. 'Lisbeth needed no parson. Shoo wur a varry good parson hersen. Manny's th' lesson A've larnt fra her."

"Tell me about her. How did she manage to be so good? I suppose she had everything her own way over there. Was she a farmer's wife?"

"Noan; her man is bailiff to Lord Durham. An' she nivver 'ad 'er own way to ma knowledge fra the day she was born to the day ov her death."

"Dear me, was the bailiff such a tyrant?"

"I doan't wish to speak ov him, Mrs. Secretan. A'a promised 'Lisbeth not. Men, they canna help theirsens. Some's good, some's reet bad, but th' great peck ov them's middlin'. Says I to 'Lisbeth one day when Coyne he war verry tryin', 'If theer's to be anny men fowlk in Heavin, A'am not goan theer.' And she smiled at me an' gave her bit quiet laugh. A'a was yaung then, an' my temper wur often oop. Says shoo verry gentle loike, 'Think av the lonesomeness, Ann, if thou and I had nobbut to mother.' "

There was an undercurrent of tenderness in Ann Coyne's voice which went home in some strange way to Helen Secretan's heart. Ann had a wonderful gift: she had read the expression on Helen's face, and guessed that all was not well.

"Theer's noan manner ov doot, ma dear," she said, as she folded her arms across her broad bosom, "that Goad has a verry special worrk fur us wimmin to do here in this world. It begins with patience, and middles with patience and ends with patience. Theer beant annything else. 'Lisbeth she onderstood the Lord's will reet alang; she nivver medd noan foight like—like the maist ov us dew, and now she's left it aa, and a man thet would gie his reet hand, aye and his left, to git 'er back. No, he wur noan guid till her in life, but thet's theer wey, puir creturs, they dinna understand."

"Ann," said Helen, with a startling suddenness, "you have been very kind to me since I came to the parish, and to-night somehow I feel that you are my friend. What do they say about me here? Have I—have I sinned and come so very far short?"

Ann drew a small, quick breath, and sat forward eagerly.

"Ma dear, yo've getten many friends in th' pairish, becos ov they sweet ways and thet winnin' look, which soometimes mekks tha luik so loike a babby aboot th' eyes. But there's manny a sore heart in th' parish becos tha nivver darkens th' kirk door. It confuses them loike. They dinna understand, an' we looves oor Rector. He be an owd friend, an' he's gettin' to look as if somethink has gaan ooten his life. Ma dear, A'am an owd woman, and yo're a young one, A'am a poor common body, and yo're a real leddy, but this A'a can tell tha an A'a will—tha's on th' wrong tack aathegither."

"But why? Do you think it is not possible to do one's duty without all this church-going? I don't care for it. I have never been used to it. It doesn't mean anything to me. I should be making a hypocrite of myself, Ann, if I were to go to church, feeling as I do."

"A'a nivver heerd as how th' church wur to be kep speshul loike for guid folks. If it wur, it wad be empty enow. We go theer to learn to be better an' because it's oor Feyther's haas. Thet's how A'a luk at it, and how it be, ma dear."

"But what I can't understand is why people should trouble about me," said Helen insistently. "I am only one small insignificant creature."

"Nay," said Ann, with a touch of loving pride, "tha's oor dear Rector's wife, an' we luves him. In tha pew

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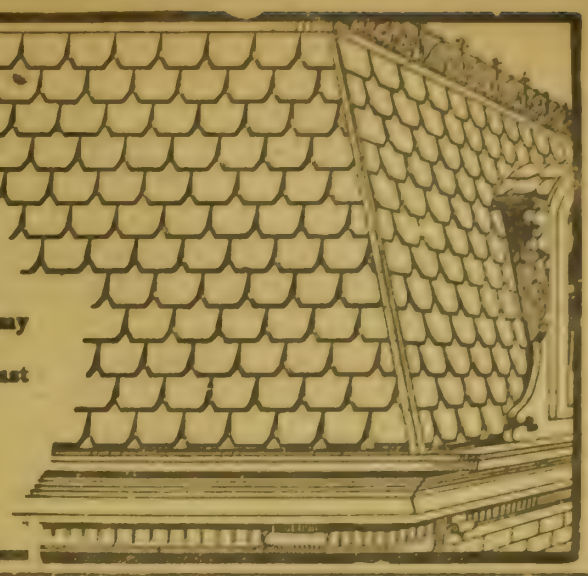

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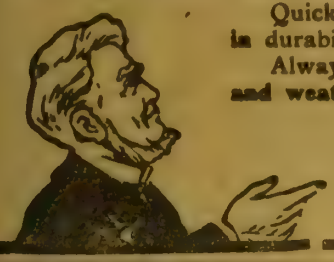

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Read the Advertisements in the Maritime Farmer.

ov a Soonday, wi' the Soonday light upon tha face, you'd be a loight to manny a heavy 'eart. Take it loike thet, and leave the rest with Him that's yander."

Ann rose, took up her basket, and pointed upward to the stars. Helen rose, too, and turned to walk by her side. They had further converse as they walked, and somehow the whole inwardness of Helen Secretan's heart passed into the keeping of the plain moorland woman, who, by reason of her communion with the Unseen, had a compelling power.

They parted under the shadow of the Rectory yews, and Ann Coyne went home to pray.

Helen let herself in very quietly with the latch-key, which never left the pocket of her cloak, and without waiting a moment—nay, bracing herself to what was a mighty effort—she marched to the study door. At the moment that her hand was on the door the clock struck ten.

Secretan was sitting at his desk writing busily to the Bishop, no doubt, Helen thought, but she pushed back the hardness which would have arisen.

She came forward swiftly and laid a very light touch on her husband's shoulder. He lifted his face, a little haggard and worn, to hers, and she was struck by the sharpness of his outline, its purely ascetic look.

"I have been wrong Claude," she said in a low voice but very clearly. "I am sorry for it. I see now that one cannot live altogether to oneself. You may write and tell the Bishop," she added with a faintly wandering smile, "that no discipline will be necessary. I will come."

(Continued in next issue.)

Elinor Newbold's Housekeeping.

Elinor Newbold, tired and flushed, was nervously setting the table in her tiny dining-room. John had telephoned that he would bring home to dinner that evening two of his college friends, but Elinor's maid-of-all-work had gone away for the day, and what was she to do?

She had been married to John only three months, and although they had had many little misunderstandings, ledge of housekeeping. Had she not kept house for her parents before her no great trial of their affection had occurred, and their life together had been very happy. One thing that Elinor prided herself on was her know-marriage? But all she had to do then was to give her orders, which were generally carried out, as her mother's servants were always experienced.

'Do not hesitate to invite any of your friends to dinner,' she frequently said to her husband. 'Only let me know in time so that I may have something nice prepared for them,' and now the opportunity had come to show her ability.

John was proud of his handsome wife, and equally so of their cozy home, and so when on his way to business he ran across two of his college chums, what more natural than that he should invite them to dine with him that evening? To be sure, Elinor had said something that morning about Maggie's being off for the day, but that did not matter. Elinor always knew what to do, and he had telephoned as he said he would.

Proud and happy, the young bridegroom ushered his two guests into the pretty parlor. Taking two steps at a time, he rushed upstairs and into the dressing room, expecting, manlike, to find Elinor daintily gowned, waiting for him with a smile and kiss that meant so much to him. No Elinor was to be seen. He tramped through the adjoining rooms calling her name. Hearing nothing he at last thought of the kitchen.

'My dear girl!' he exclaimed, 'what has happened? and what have you done to yourself?' he added.

Elinor was indeed a pitiable looking object, for, in her anxiety to have the dinner ready on time, she had piled the fire box so full of coal that it could scarcely burn, and her face and hands were black, while her dress was covered with flour.

'Oh, John!' she cried, putting her grimy, tear-stained face against his shoulder, and sobbing aloud, 'how could you?'

'How could I what?' asked the astonished man, thinking Elinor had taken leave of her senses.

'Why did you bring those me-men?' she sobbed, 'wh-when you knew Maggie had go-gone. I am so tired trytrying to cook the dinner,' she added, bitterly.

'Now I remember you did say something about Maggie this morning,' replied John, kissing the flushed cheeks of the tired little woman. 'But you know, dear, you have always said that my friends would be welcomed at any time, and you have kept house so beautifully since our marriage I wanted them to see what a treasure I had won. I am very sorry,' he added, ruefully. 'Shall I tell them you are not able to see them, and take them over to the club?'

'Oh, no, no!' exclaimed Elinor. 'But, John, it is so different when I have to do it alone. Before I was married, all of mother's servants were well trained, and I simply gave my orders, and since Maggie's coming she has done most of the planning. But I did not realize how little I knew until I was left to myself ——' and she sobbed afresh.

'Never mind, dear,' said John, soothingly, taking her in his arms. 'Give us what you have ready, and we will have a good time over it. You remember I know something about cooking, so go and make yourself pretty, and let me see what I can do.'

A loving hug followed his cheering words, and the little bride stole crestfallen up the backstairs, feeling that the only thing she was capable of doing well, was to make herself presentable to her husband's guests.

Not long after a dainty figure appeared in the kitchen. All traces of soot and tears had been removed. A fire was burning brightly in the stove, while the aroma of freshly-made coffee filled the air.

'See, dear!' said the delighted John, 'Won't you hire me for your chef?'

A can of soup had been opened, and was heating on the stove, while the peas Elinor had shelled with trembling fingers that morning were simmering in a granite pot nearby. The chops already on the broiler were browning beautifully.

What should I do without such a dear, good husband!' cried Elinor. 'You have saved my reputation, if not my pride. I can at least make the dressing for the salad, and the ices and cakes are in the pantry. So while I do the fancy fixings just run and put on a clean collar', and Elinor pushed her perspiring spouse from the kitchen, feeling she was once more master of the situation.

A merry party sat in the little dining-room that evening. The men were charmed with Elinor's beauty and vivacity, and the daintily-spread table with its shining cut glass and silver came in for a share of admiration. John had laughingly said that as their maid was off for the day, the 'entrees' were not as numerous as they might have been.

No one noted the absence of an elaborate dinner, for the men envied John his good fortune, and did not wonder at Elinor's ability to make him happy.

That evening after their guests had gone, Elinor Newbold put her arms about her husband's neck and rested her tired head against his breast. 'Dear,' she said, very softly, 'I pity all young married women if they understand as little about the real practical part of housekeeping as I do, for I am sure not one of them,' she added, 'has as good and patient a man as you are. But don't be discouraged; I am resolved to take lessons at some good cooking school this year, and,' she continued, 'you may invite your whole college and not be ashamed.'

Mrs. A. R. Talor, of Crider, Mo., had been troubled with sick headache for about five years, when she began taking Chamberlain's Tablets. She has taken two bottles of them and they have cured her. Sick headache caused by a disordered stomach for which these tablets are especially intended. Try them, get well and stay well. Sold by all Dealers.

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"One of the boys, who works with me, gave me half a box of Milburn's Heart and Nerve Pills. I took them and I got such satisfaction that I got another box, and before I finished it I could enjoy sleep from 10 p.m. until 6 a.m., and now feel good."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, or 3 boxes for $1.25. They are for sale at all dealers, or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

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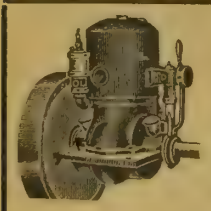

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Furnishing a Farm House.

In furnishing a home, we farm women too often seek to imitate a style quite unsuited to our conditions and surroundings. For instance. the large, heavy carpets, that in the city would be sent away to be cleaned, would prove a formidable tax on a woman's strength; and it would indeed be a brave housewife whose courage would admit of asking assistance from the men during the stress of spring work. Hardwood and painted floors, with rugs of a size easily handled, are more in keeping with farm conditions. Deeply tufted, upholstered sofas and chairs will require a vast amount of time and patience to keep in a pleasing state of freshness, while easy chairs with movable cushions are more inviting and require far less attention. Good books and pictures will be the first consideration in a cultured home, and the occasional purchase of a thoughtfully selected volume is a wise and profitable investment. A well-ventilated sleeping-room, provided with the customary toilet necessities, with a simple iron bed-stead and roomy wash-stand, is more desirable than a stuffy apartment containing a massive set and a shortage of towels and toilet soap. If comfort and convenience be considered paramount to significance, we will make fewer mistakes in selecting our furnishings.

ADVICE TO THE WOMEN.

When one possesses a husband and a home, she should bear in mind that it matters not how warm and glowing a fire one may have kindled, that, if it would be kept burning, fuel must be added from time to time. And so it is with the fires of love. If treated with indifference and neglect they will soon smoulder to ashes of regret.

Therefore, if you are a wise woman, you will from the start plan a practical course by recognizing the fact that no man is an angel, consequently do not expect too much. And if you would make his home more attractive than any other place look well to his physical comfort. See that his meals are carefully prepared and served on time. You know you deceived him when you made him think you the dearest, sweetest girl on earth. Now, keep up the delusion. Never let him suspect that you are not. I have seen just an ordinary little woman, who didn't know much—you don't have to know much, men, as a rule, are content to know it all—fool her husband for thirty years, and even longer, and he'd never found out that she wasn't the sweetest, smartest and most lovable woman in the world.

I have actually known a woman of this kind to give her husband so good an impression of the sex that if he lost one wife he wouldn't hesitate to marry again. You can do this if you only try. Why, you can wind a man around your little finger, and he'll never be the wiser. Men are dependent creatures. Did you ever see one with a missing button or something gone wrong with his suspenders? He'll go calling through the house, "Mother, Mary, come quick I've lost a button." Now's the opportunity to show him you're the most wonderful woman on earth, for whenever a man sees another do something he can't do, he thinks it marvellous. Put on your thimble and sew that button on good and firm, while you casually remark that you don't know how he managed to get along without you. And he will wonder that he ever did. Oh, you can fool them in a hundred loving little ways. Men like petting, and many of them have been used to it for, if there is anything dearer to a mother's heart than her girls, it's her boys.

If you are a wise woman you will never let him miss his mother's sympathetic encouragement and approval. Remember that what is for his interest is for yours, and that he can work better and harder when he hears your cheery words of approbation ringing in his ears, and knows he will be welcomed by your happy smile. Make yourself a necessity to him, and take advantage of his every weakness. Men are conspicuously vain. Why, a woman's vanity is nothing compared to that of a man. Praise his every commendable effort. It will spur him on to greater achievements. Go out to the barn, and show an interest in the cattle. Commend his manner of feeding pigs. Jolly him up a bit by drawing flattering comparisons between his and his neighbor's methods. Yes, take a loving interest in everything on the farm. The barns will be sweeter and cleaner by your presence; the cows will be more tenderly cared for, and you will be so rich in joy that a more sordid ambition will be forgotten.

But there are three things you must not do if you would keep your husband's love and respect. You must not complain, you must not find fault, and you must not nag him. If you have a trifling headache never say, just as he is starting to his work, "John, I don't feel well." It will put a damper on his best efforts. Women were born to make believe, and you can smile, even if you're not feeling quite right, until he has left the house. Then, if it is any benefit to yourself, do yourself up in camphor, and groan to your heart's content. If you are really ill, go to bed and call a doctor, and you will then know the sweetness of a tender sympathy. John will exclaim; "Bless me, the dear little woman must be sick, for she never complains," and he will undoubtedly do all in his power to restore you to health.

Do not find fault when he's making every effort to succeed. Do not paralyze his ambition by saying: "John, I was over at neighbor Smith's and they have a new carpet and a rocking chair and a picture, and are going to have their parlor newly papered, and—I don't see why we can't have such things. We are just as good, and I work just as hard as Mrs. Smith. There must be something wrong with your management. I don't think you're very ambitious." Oh, if you value your happiness, don't do it. Can't you see you are pushing him away from you? Never for a moment let your husband see you have lost faith in his ability. Though he fail in many schemes, encourage him to try again. Though all the world loses confidence in him, if he is an honorable man, never let him know you are disappointed or that your trust has wavered.

I will tell you what to do: Put your arms around his neck and say cheerily, "John, dear, do you know what those foolish Smith's have done? They've bought a carpet and a patent rocker, and a lot of truck, and now they will have it to care for. I'm so thankful we have more sense. When we get enough money to pay for such trash we will use it to buy a cow." You may punctuate this with kisses if you like, and John will think, "Was there ever on earth such another sensible little body." Oh, you can fool them to the end, if you only understand your business.

And, above all, don't nag. A constant nagging would break the spirit of any man. You may have a temper (some women acquire one by inheritance), but you never allowed him to see the ugly side of it before you were married, and don't do it now. If you feel you must give vent to it, wait until he has gone; then grit your teeth, take a good solid chair, and shake it furiously. You can make believe it is John, and no harm will come to the delusion your husband is laboring under. John, all unconscious, will very likely be heard bragging about the even disposition of his wife. Still, if you are unable to control your temper, and if you must give John a piece of your mind, have it out, in a hand to hand conflict, if need be. It may clear the atmosphere, like a thunder storm. Still, I would not advise it, but it is better than nagging. Whatever you do, don't nag.

COMPANY AT THE FARM.

The usual monotonous round of indoor work is broken all to smithereens by the occasional appearance of one or more guests, for while some town-bred people shrink from the responsibilities incident to rural life, they are not unmindful of its summertime attractions. And when spring buds and bloom are beckoning in tantalizing fascination, the temptation to make a raid on some nearby farm house becomes so irresistible that a cheery voice will be heard calling to a neighbor: "It's a lovely day. Don't you want to take a drive in the country? I know a farmer who lives a few miles out. They're farmers, but they're nice people," is hastily added by way of apology for so obscure an acquaintance. "They own a big farm, and have lots of cows, sheep and chickens. Don't you want to go? Pshaw, they won't mind if you are a stranger; they'll be tickled to death to see us. Bring your children, and we'll have a fine time." Did you ever, right in the midst of house cleaning, when you were struggling to gain time by having a picked-up dinner, look out and see a load of jolly, daintily-dressed city people drive up to your door? Did you? And did you wring your hands in despair as the meagreness of the family larder flashed through your startled brain? No pie, no cake, no seasonable delicacy on hand, and then go forth to meet them and say, "I'm glad to see you," and at the same time feeling yourself the old hypocrite that you so heartily despise?

Now I beg of you, do not put those people in a stuffy parlor, and offer them amusement in the shape of a family album. They do not care a rap for the pictured faces of your "Sisters, your cousins, or your aunts." They may take a passing interest in the veil-decked bride or the chubby charme of an unknown infant, but it will not add to their good opinion of the restful side of farm life to have you rush to the kitchen and begin baking and stewing until your strength is exhausted and your nerves all aquiver. Do not let them carry back to their city homes the impression that you are an ignorant drudge whose sole conception of hospitality is an over-loaded table and an apologizing hostess.

There are refined, thoughtful people, who live in cities who do not come to you for a meal. They can buy that. But they do come longingly to the farm for what is priceless. They come for the peace and rest, and comfort that country life affords. They come to fill their weakened lungs with that rare oxygen of which we have so much to spare. They come to be in close touch with Mother Nature, and to lay their weary heads upon her soothing bosom; to learn something of her wondrous secrets, and for a time to break loose from the galling chains of formality.

Now, do not give them the idea that farm life dwarfs the intellect. Greet them with a cordial welcome. Let them see that while you may know nought of the latest social fads, you are quite familiar with every phase of your calling. Give them a part of yourself and a share of your wisdom. Take them to your clean barns, show them your gentle cattle, and call their attention to the individual merits of your stock. You may be able to quite astonish them with the glibness by which you can tabulate the pedigree of a favorite cow. Have a dignity and pride that will serve to the uplifting character

and attractive features of your profession, rather than assume a bearing that will tend to accent its defects. If you are the good housewife you should be, your bread and butter will be wholesome and palatable. If you have tea and coffee, well and good, if not, perhaps you have milk, in case of shortage in this liquid, there is water. Your table should at all times be clean, and it will require but a moment to lay the extra plates. Now, ring the bell or blow the dinner horn; call in the men. It will not be necessary to offer an explanation for having your help eat at the same table; your guests will readily understand that it is your usual custom, and one best suited to your conditions. Have a dignity and manner of your own, and it will be respected. Do not try to imitate ways unsuited to your means or mode of life.

"HONOR THY FATHER AND THY MOTHER."

Yet I have known of cases where fathers and mothers had toiled and saved and planned all the best years of their lives in order to give their children advantages of which they themselves had been denied. They had sent them to academy or college to obtain the education that should prove a potent passport to the esteem of all men, and these young people had returned vainglorious enough to feel the knowledge acquired had raised them superior to those who through long years of self-denial had made this educational training possible.

I have known these young men and women when entertaining some college friends to say: "Let's get father to wait." Perhaps father likes to eat in his shirt sleeves or with his knife. Well, what of that? Isn't it father's home? And such breaches of etiquette are mere trifles compared to the sneaking ingratitude of a nature that would postpone father's meal in order to cater to the good-will of a stranger.

Now is the time to show father the true value of a creditable education. Let him see that the money obtained by many sacrifices on his part was not misapplied; that it had helped him to make a man of you, and not a contemptible snob. Place him at the head of the table with the unmistakable air, "You are honored to-day by being permitted to eat with my father."

The man or woman, young or old, who is too good to sit at his father's table and eat father's bread in father's company, is not the person for you to cultivate. Cut the acquaintance at once, and let your aim in life be to move in a better grade of society. It may be that your father's clothes are not the latest cut; possibly they are sunbleached and shiny at the seams. Still, if you will stop to think, he may have been so occupied in his efforts to pay the bills for your improvement that there was little time for thought of his own apparel. Remember this, and that your filial obligation is a lasting debt of gratitude. See that it is paid in full, and with usury; for it his son does not show him deference you cannot expect others to do so.

NEED OF LITERATURE.

The progressive farmer of to-day needs no urging to supply his family with abundant and suitable reading matter, therefore, the country woman may be as well informed on both foreign and domestic subjects as one who resides in a city, and with the helpful influence of natural surroundings there is no reason why the home on the farm may not become a veritable paradise.

TO THE MEN.

While the task of home-making is more generally supposed to devolve on the woman of a family, each member, great or small, should bear a responsibility, and take both interest and action in preserving the dignity of home life, be it lowly or grand. Some men are utterly unconscious of the fact that they have formed an entirely erroneous idea of woman and her claims upon them. They are unable to comprehend the real nature and characteristics of the true type of an intelligent, refined woman. They do not know how to draw out and develop her finest qualities any better than some farmers understand managing a dairy cow to obtain best results.

They are laboring under the impression that all women are vain, frivolous, irresponsible creatures, who should be firmly held in subjection; that if a man is unable to provide one with fine clothes, jewelry, and social amusement she will soon become discontented and wretched. A greater mistake was never made. The real woman does not care for fine clothes, jewelry or social position. If she favors them, it is only because she believes such adornment pleasing in the eyes of the man she loves. Women were born to make believe, and I have known them to serenely smile while their hearts were breaking. No, she does not hinge her happiness on luxurious raiment. If she cannot command something better, she will take it, just as a starving cow will eat straw when she cannot get hay; but she will not thrive and develop all the tender possibilities that lie within the fertile soil of a glorious nature.

What she desires above all things is appreciation, love, and petting. It does not cost anything. She will never tell you, for the woman I have in mind is too proud to beg for what rightfully belongs to her. When you have taken this girl to share your fortune of either weal or woe, when you, by your protestations of love and fidelity, have severed the ties that bound her to the home of her girlhood, when she has willingly forsaken father and mother to cling only to you, make it your lifelong study and duty to see that she never has cause to regret the step that you are responsible for her having taken.

Be patient. Remember that heretofore she has leaned upon the counsel and encouragement of her mother, and now she is called upon to exercise her own judgment and skill. She will make mistakes; she wouldn't be human if she didn't. Commend her every effort, even if the result fall short. Let her see that you have faith in her ability to accomplish all things, and she will not disappoint you. Tell her she is the neatest, most orderly little housekeeper in the country, and you are proud to have the neighbors go through her kitchen. She will not fail you. Tell her if she keeps on improving she will beat her mother cooking. Why, man alive, she will do it every time. You do not know the qualities to be brought out and emphasized with a little judicious praise. Save her strength, because an ambitious little woman will place no limit on her endurance when she is bidding for the approval of the man she loves. Keep a watchful eye on her, that she may not overtax her energy; and if you cannot afford help, there are numerous ways in which you may render valuable assistance about the house.

See to it that she has an income or allowance that is quite her own, and for which she need render no accounting. Let her feel that you would gladly provide her with every luxury if it were within your power. Give her the chickens—you'll have a better flock of fowls—and see that she has the proper place and the needed assistance to enable her to show her skill and ability in their management. Say to her: "The money you get from this source shall be yours without question." You will find it will pay you well, for when taxes are due or you want to cancel a note, you will not have to go to the bank, you can borrow of your wife—she will have it saved.

No, women are not the extravagant creatures some men think them. Give her your confidence, and let her feel the blessing of your unbounded trust. Say to her: "Here is the pocket-book. There are such and such payments to meet, you know what we can afford as well as I; use the money as you think best." This liberty and confidence will be its safest guard she will never touch it without first consulting you. You will find it all there, and she will cheerfully make over her old dresses and trim her bonnets, year after year, until you begin to admire the more up-to-date clothes of some other woman.

Do not say "my farm;" This is a partnership affair, and the proper term is "our farm." Ask her advice on all business matters. If you do not see fit to follow her suggestions, explain your objections, and she will be satisfied. Let her be thoroughly conversant with your business methods; then, she will be less liable to fall a victim in the toils of unscrupulous estate adjusters.

Do not go about with your lips shut and your mind occupied on matters too weighty for her comprehension. If she timidly calls your attention to the merits of some new dish or improvement, don't carelessly say, "Oh, it's all right; if it wasn't you'd hear from me." Such comments will crush the spirit and ambition in any woman.

Do not take it for granted that she knows you love her, tell her so. I will give you a ration. Tell her three times a day that you love her—no roughage in this, if you please. Do not tell her in an indifferent way. You know how you said it the first time; now repeat it with renewed tenderness. Three times a day is not too often and many women can assimilate to advantage a much heavier ration. Do not be afraid to use endearing terms. Have a pet name for her, and call her girl, even if she be sixty or older. Youth and age are the times when love is best appreciated.

Do not complain that women fade, and that the stylish, lively girl is too often apt to change into a morose commonplace matron, for it lies within your power to prevent this transformation. A woman's heart is a strange creation. It is a sensitive plant, that sends out tiny, clinging tendrils, and if they come in contact with a cold unresponsive barrier, they will turn and seek sustenance elsewhere.

Sometimes she will transfer to her children the love and devotion that would have been gladly given to her husband had she met encouragement. Again the better part of her affectionate nature is bestowed upon clubs, charity work, educational aims, or ambitious schemes. Sometimes Satan, in the guise of one who understands her nature offers a glittering imitation of the more sdbstantial love she craves, and if she has been taught to regard indolence and luxury above honor and industry, her situation is indeed a perilous one. But, if from childhood she has been trained in a belief that humble duty conscientiously performed may bring greater reward and joy than a realized ambition, she stands serene and safe.

So long as she has assurance of her husband's love and confidence, she will never grow old or discontented. Tall sons and daughters, yes, and tiny grandchildren may mark the progress of years; but she, living in an atmosphere of love and appreciation, will remain forever young and attractive.

If we will but cultivate these little tender courtesies as painstakingly as we do our grains and grasses—if we will by daily effort and example sow the fertile seeds of a spirit of industry, sincerity, and appreciation in the minds and hearts of our little ones—we shall have dowered them with a higher education and a far more valuable legacy than lands and gold, for we will then surely find that all of earth and the greater part of Heaven is centred right in that little spot called Home.

Sunny Brae Sheep Ranch,
Markhamville, Kings Co., N. B., Dec. 20, 1911.

The Maritime Farmer,
St. John, N. B.

Gentlemen:

You may change my ad in the Farmer. Talk about an advertising medium! I have never tried anything like it before. Sold over one hundred and twenty head that I attribute to the Maritime Farmer. Yes, it's all right.

Jas. A. Telfer, Prop.

One of the Greatest of All Inventions.

Fortunately two things happened in comparatively recent years which when applied with good judgment furnish us with a fairly accurate standard of measurement of performance. The first of these things made the second possible, and is the invention of the Babcock Test. Of all the inventions that have marked the progress of agriculture, this is one of the greatest, and the unselfishness of Dr. Babcock in not having his invention patented, but instead giving it up for the people of the world to use, stands almost without parallel in the history of the nation, and stamps him as among our greatest men.—William L. Erbach.

The man who makes his business a pleasure is likely to live a good deal longer and get a good deal further than the man who makes his pleasure a business.

System in Housework.

The duties of the housekeeper, like those of the journalist, demand a knowledge of many subjects, even at the risk of this knowledge being superficial rather than profound. A slight knowledge of the chemistry of foods will enable her to select those best suited to the individual needs of her family; a slight knowledge of hygiene will enable her to observe its most essential laws, while some knowledge of the elemental principles of art will keep her safe from many glaring artistic blunders in both household and personal adornment.

But among all others, one of the most essential qualifications of a good housekeeper is an appreciation of the value of system in her work. The week's work should be thoroughly planned out, and each day receive its allotment of tasks.

There is a popular prejudice in favor of Monday as washday, but it is often far more convenient to set apart Tuesday for this purpose. This leaves Monday free to put the house in order after the Sunday disorder, to pick up and sort the week's accumulation of linen, replacing stray buttons, and taking the few stitches needful to prevent further enlargement of rents in the wash, and at night putting the white clothes to soak in warm suds. Some extra cooking can be done, in the preparation of such dishes as can be used in the next day or two.

On Tuesday the routine work should be made as light as possible, the mistress herself clearing away breakfast and washing the dishes and the same with luncheon, thus leaving the maid free to give her uninterrupted attention to the washing. Dinner should be of such dishes as do not require much time in their preparation. After dinner the clothes can be sprinkled and folded, ready for the next day.

On Wednesday almost the same routine should be observed, and such pieces of clothing as require further mending should receive due attention. During these two days little sweeping should be required—a thorough dusting will serve.

On Thursday morning keep to the usual routine work, with any necessary "extras" which may develop, this afternoon being the maid's day out.

Friday the general weekly cleaning should be done, sweeping, dusting, and washing of windows.

Saturday the silver should be brightened, and extra cooking done for Sunday.

Each one should be expected to take entire care of his own bedroom with the exception of the weekly sweeping and dusting.

It will be found of the greatest assistance if the mistress will make out a week's menu covering the three meals for each day. This would necessarily have to be modified slightly from day to day, but will be suggestive and will prevent that feeling of utter dismay and blankness which seizes the housekeeper who leaves her day's menus to plan until the butcher or grocer arrives for orders, or until she finds herself in the market. It will also be found more economical for on the impulse of the moment one will order things for which on second thought she would prefer to substitute for something else, or which could be omitted altogether.

Air in the Home.

Air, water and food are the great essentials of life. A man may go for days without food and hours without water, but deprive him of air for a few minutes and he ceases to live.

The air is "free" to all, and it is left to each one to regulate the quantity and quality of the supply to her home. Unfortunately air laden with the foulest and most poisonous substances can be inhaled without immediate knowledge of the conditions, but the effects are seen later in headache, drowsiness and other warning symptoms which in the case of habitually unventilated dwellings results in deficient nutrition, loss of vigor of body and mind and of the power to resist disease.

We reject dirty food for our stomach while using dirty air for our lungs, organs far more delicately constructed than the digestive apparatus, and needing careful consideration if we would have the best health and strength.

Go into the large majority of living and sleeping rooms in city or country, especially in winter, and you will find a reason for the spread of the "white plague," which is slaying thousands of our young people all over the land.

Fresh air, then, is a law of our well being. The average adult contaminates about five thousand cubic inches of air with every breath, and in ordinary respiration an adult abstracts sixteen cubic feet of oxygen from the atmosphere every twenty-four hours, and adds to it fourteen cubic feet of carbonic acid gas in the same time. Nearly one-third of the excretions of the body are eliminated from the lungs and another large proportion through the skin.

In the brief time I have at my command I can only suggest methods of meeting this demand of our nature for fresh air by means of ventilation and outdoor life, methods with which you are probably familiar.

At once we are confronted with the obstacle to perfectly ventilating a house. Economic considerations frequently lead householders to save fuel at the expense of health; again drafts from open windows are objectionable; also many persons accustom themselves to an overheated room and catch cold if fresh air is admitted while sitting at work. Science and invention are coming to our aid to overcome the first two objections, and the last can and will be overcome by the exercise of will power and the desire to be well. Public opinion is coming to favor open windows in sleeping apartments and the sleeping porch or tent has ceased to be a fad; the arrangements for absolute comfort of body while enjoying fresh, pure air for the lungs has been reduced to a science along these lines.

In this very important matter of fresh air as a necessity for physical health it has seemed that familiarity with the subject has bred indifference.

It is of vital importance to realize that we cannot consume too much pure air, the larger quantity the greater the amount of life giving oxygen conveyed to all parts of the body, and the larger the lung capacity, the better health and strength.—Dr. Ella S. Webb.

Important to Handicraft Workers.

The Canadian Handicrafts Guild, Montreal, is again offering prizes to the extent of several hundred dollars, for the best specimens of workmanship. To those skilled in weaving, dyeing, carving, book binding, metal work, sewing, leather work, basketry, knitting, rug making, pottery, there is an excellent opportunity afforded, not only to obtain a prize, but to find a sale for their work.

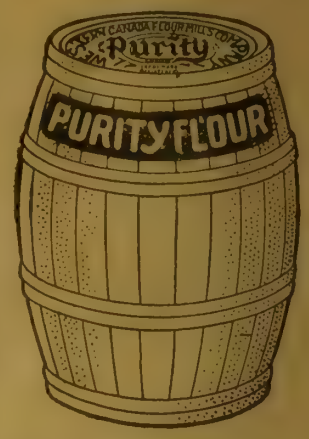
There is no entrance fee of any kind payable. Full detailed list may be obtained by sending a stamped self addressed envelope to the Secretary of the Guild, 586 St. Catherine Street, W. Montreal.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all Dealers.

Try the flour that holds the confidence of thousands of home-cooks

THE present huge demand for PURITY FLOUR shows the confidence in which it is held by thousands of home-cooks.

Those who have used PURITY FLOUR have come to believe in it. They look on PURITY as a friend. They feel they can trust it implicitly, because each and every lot of PURITY FLOUR has always been uniform—always up to the high standard of quality that has made it famous.



Wouldn't you, too, like to use a flour you could always rely on? Wouldn't you like to feel certain that your bread, cakes, and pies were going to turn out exactly right? That's just how you'll feel when you become a user of PURITY FLOUR — the confidence-creating flour.

PURITY FLOUR gives high-class results, because it *consists exclusively* of the *high-grade portions* of the best Western hard wheat.

On account of the *extra* strength of PURITY FLOUR please remember, when making pastry, to add *more* shortening than an ordinary flour requires.

PURITY FLOUR

"More bread and better bread"

And when making bread add *more* water, and PURITY FLOUR will expand into more loaves than the same weight of ordinary flour can produce, thus making *"more bread and better bread."*

Make your next flour order spell P-U-R-I-T-Y F-L-O-U-R.
It costs slightly more, but it's worth the difference.
Add PURITY FLOUR to grocery list right now.

104

SHERWIN-WILLIAMS PAINTS & VARNISHES

Why is more SWP—Sherwin-Williams Paint, Prepared—used every year than any other brand of paint? Because for forty years satisfied customers have known that they get better value in protection, appearance and durability from SWP than from any other paint, hand-mixed or machine made. Covers most, looks best, wears longest. For SWP go to the local Sherwin-Williams Agent. 80

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

Use and Value of Grains, Animal and Green Foods in Feeding Poultry.

A fowl requires grain food, vegetable food, meat food, and grit. These foods should be clean and wholesome, and furthermore a portion of them should be given in some form so as to induce the birds to take exercise, so that the fowls will be healthy. Fowls should be well supplied with water or milk to drink. Many make the serious mistake of not giving sufficient drink or not giving it regularly. The supply should be clean and constant. Dirty water, dirty or slimy drinking dishes, etc., will do more toward making a flock unhealthy and diseased than any thing else. Most attendants are inclined to forget to clean the drinking vessels, and to keep them well filled at all times.

Grains.—Wheat with the Ontario people is the most popular feed and is one of the best. It is relished by all classes of poultry. The price of wheat, as compared with that of other grains during the past few years, makes it necessary to mix other grains with it. I doubt very much if it is advisable at any time to feed only one kind of grain constantly, as a variety is better; some birds like one grain while others relish another.

Wheat bran is fed dry in hoppers, also in mashes. It has considerable feeding value. It helps materially in adding bulk to the ration, and prevents impaction in the stomach. In other words, it aids the digestive fluids in acting upon the food.

Middlings or shorts is of value in mashes, to all classes, and is one of the good foods to check looseness of the bowels, where an excess of vegetables is given.

Low-grade flour is often a cheap and economical food in mashes for stock birds or for fattening chickens. It also has a tendency to check looseness of the bowels.

Corn is not used so much in Ontario as in the New England States. There it appears to be used quite freely in both Summer and Winter feeding of fowls. It is used whole, ground and cracked, the meal being used principally in the mash foods. Cracked corn is used largely for young chicks, and fowls when scattered in the litter. The whole corn rather large and conspicuous; and when in the litter, does not usually give sufficient exercise. I am of the opinion that corn can be used in portions of Ontario, where it is grown extensively, much more freely than it has been heretofore. Corn is a heating and fattening food, and is, therefore, best adapted for Winter use. It is considered by many, when fed in large quantities, to make the hens over fat; yet it is used extensively by many progressive poultrymen with little or no evil effects.

Oats should be a first-class poultry food, but owing to the large percentage of hull, they are not relished by chickens when fed whole, and for this reason are somewhat indigestible. When rolled hull and all they are an ideal food as a dry mash, and are relished by fowls better than any other dry mash we have yet used. Ground oats without the hull are used extensively for fattening chickens.

Barley, either whole or ground, is very good. It has rather too much hull, but otherwise is a satisfactory food. It is considered by many to be next to wheat in point of value.

Buckwheat is very popular as an egg producer in districts where it is extensively grown. Some difficulty is at times experienced when first feeding it to fowls in getting them to eat it, but this is usually overcome in a day or so, if other feeds are withheld. Boiling the buckwheat will sometimes start the birds to eat it. After they once get accustomed to its appearance, it is much relished by them. Ground buckwheat is an excellent food to use in a fattening ration. It is somewhat like corn in its fattening properties and, therefore, it is better for Winter than for Summer use.

Method of Feeding the Winter Laying Stock at the O.A.C.—We try to simplify our methods and use only the common foods, and at the present time are using as whole grains, wheat, corn and buckwheat. These grains are fed in equal parts both morning and evening. The morning feed is fed the previous evening after the hens have gone to roost, by sowing it on the litter, and then turning the litter over; the straw is now on top and the grain below, and when the hens get up in the morning, they start to dig out the grain, and are kept busy all forenoon. At noon we feed mangels, cabbage or clover hay. The night feed consists of the whole grain fed in troughs, and what the birds do not eat is taken up. Rolled oats are kept constantly before the hens in hoppers. Buttermilk only is given as drink.

Method of Feeding the Summer Laying Stock at the O.A.C.—At the present time our plan of feeding is to scatter whole grain in the litter both morning and evening. The grains used are wheat, barley, oats,

FARMING

has become a specialized business

It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're ***living*** as well as ***working.***

The farmer has learned that it ***pays*** to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book:

"What the Farmer Can Do With Concrete."

It isn't a catalogue, nor an argument for you to buy something. It is clearly written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the ***actual experience*** of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the purpose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once, we'll be glad to

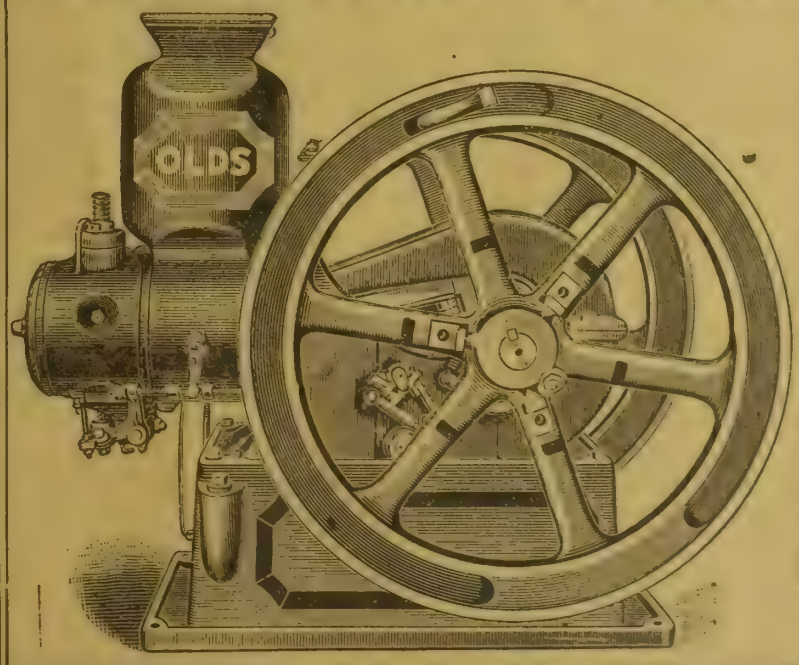
Send It To You Absolutely Free.

Send a post card for it—do it to-day. The book will be sent by return mail.

CANADA CEMENT COMPANY, Limited

National Bank Building, MONTREAL.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

and occasionally buckwheat and corn. Green food is supplied in the form of grass, etc., in the runs. Sour milk is given as drink.

Dry Feeding.—The tendency at the present time is to feed dry grain, and to use no wet mash foods. It has been claimed by some writers that mash foods, while tending to force growth, and possibly egg production, do not tend to produce good eggs for hatching purposes; that is to say, the mash is more or less of a forcing food. In the production of eggs, the number produced is probably as large if not larger where mashes are used, but the hatching power of eggs in some instances is not as high. During the past two or three years we nave not fed any wet mashes 'to our breeding birds, and have fed in place some sprouted grain, but mostly rolled oats in hoppers. As far as we can see at the present time the sprouting does not improve the feeding qualities of grain very much, with the one exception of oats. The palatability of oats is increased considerably. We have made the oats equally palatable by having them rolled or flattened, that is the hull and all.

Feeding When Wet Mashes Are Used.—The general method of feeding is to give a mash of mixed ground grains moistened with water or milk, in the morning; a little whole grain scattered in the straw covering the floor, at noon; and all the whole grain they will eat at night. This latter meal is usually fed in the straw. Some poultry men adopt the plan of not feeding the mash until evening, we have been practising this plan for some time, and we like it very well. The objection to the former plan is that the hen is likely to become gorged with food early in the morning, and thus take to the roost for the rest of the day, which is usually followed by hens becoming too fat, and the egg record becoming small; but, notwithstanding, many successful poultrymen use this method to advantage. The objection to feeding the mash at night is that it becomes quickly digested, and the bird has not sufficient food to last it during the long Winter night; but this objection can be overcome by giving a little whole grain after the mash at night.

Some poultrymen feed their fowls but twice a day, morning and evening, and get very good results; but I favor feeding three times a day. Our plan is somewhat as follows:—

Early in the morning the fowls are given half a handful each of whole grain. This is buried in the litter on the floor. Thus the fowls get exercise (a very necessary thing) in searching for it and at the same time keep themselves warm. At noon about two handsful of grain are given to a dozen hens in the litter; they are also given all the roots they will eat, either pulped or whole, as fowl relish mangels, sugar beets and turnips. Cabbage also—a very good green food—is sometimes given. About four o'clock in the afternoon they are fed a mash composed of equal parts of bran, shorts, oat-chop and corn meal (during cold weather); and to this added about 10 per cent. of animal meal, if we have not cut green bone or cooked meat. These foods are thoroughly mixed together in the dry state, after which is added steeped clover, which has been prepared by getting a bucket of clover leaves, or cut clover hay, and scalding it with boiling water. This is done early in the morning, and the bucket is kept covered with a thick sack throughout the day. This will be quite warm at night, if it has been kept in a warm place. There is usually sufficient liquid to moisten the meal that has been mixed. Our aim is to have about one.third of the ration, in bulk, of clover. After the mash a small amount of whole grain is fed in the straw. There is—and should be—a plentiful supply of good, pure water within easy reach at all times.

To those who keep but a dozen or so fowls, or to those who wish to economize in the feed bills, by using table refuse such as bread, meat. vegetables, etc., the wet mash system is commendable in that these cheap by-products, if clean, and cooked, make excellent mashes, when dried off with shorts and bran or other chop. This kind of mash usually gives excellent egg yields, and the labor entailed is not a serious consideration, under the above conditions, but it is, at times, where birds are kept in large numbers.

Animal Foods for Fowls. — The most expensive foods given to fowls are the animal foods. These are used as a substitute for the worms and insects that form a portion of the natural Summer food of fowls upon free range. Flocks confined to small runs require to be fed more or less animal foods during the Winter, and during very long dry spells in the Summer; even where the range is unlimited it frequently pays to feed a little animal food.

Animal foods usually assist very materially in the production of eggs in Winter. By some people these foods are considered as a forcing food, that is to say, they will induce heavy laying, which in some instances may be followed by serious sickness, or possibly the injury may be only very slight; in fact, unnoticeable, except that the eggs from birds so fed may be of very low hatching power.

It is generally believed, and I think rightly so, that good egg yields cannot annually be secured without the use of such foods as green cut bone, beef scraps, or cooked refuse meat, etc. Many believe that the larger the amount of these foods fed the greater will be the egg production. There is good ground for doubting this statement, in that these foods are expensive, and the extra eggs may cost more than they are worth, moreover, herein is where serious injury may be done to the hen's digestive and reproductive organs.

Milk is available on many farms, and it is claimed that as an egg producer, this food is equal in value to any of the meat foods. Our experience has been that sour milk for fowls has a slightly greater value than sweet milk, and is certainly much more easily obtained.

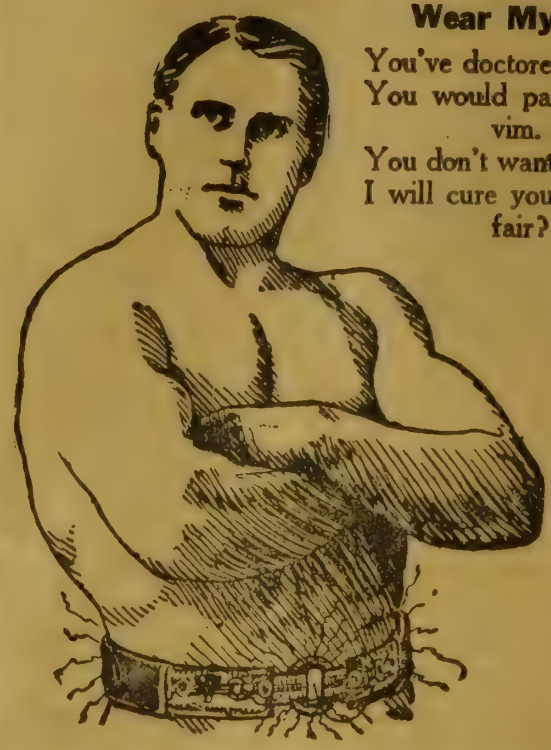
Green Foods.—When fowls have free range, they eat a considerable amount of grass, or other green foods. It would appear, therefore, to be desirable that where birds are confined either in small runs during the Summer, or in houses when the ground is covered with snow in Winter, that some effort should be made to supply this food.

Many foods are available, such as waste cabbage, mangels, turnips, rape clover hay, or clover leaves, and green food grown especially for the purpose.

Early in the fall we use cabbage or rape; or at times where the runs have been sown to Fall rye or wheat, the fowls are allowed to feed upon these. Where rape is extensively fed it frequently will cause the whites of the eggs to have greenish cast, which renders them unmarketable. This food is relished by the fowls, but must be fed carefully. Cabbage

MEN, HERE'S AN OFFER

Wear My Electric Belt Free Until I Cure You



You've doctored and doped till you are sick of it all.
You would pay for anything that would give you back your old vim.
You don't want to pay out any more money till you are sure.
I will cure you first, and you can pay me afterwards. Is that fair? Then get in line.

I know what I can do, because I've done it and am doing it every day. I'm sure that Electricity is the life and that I can restore it where it's lost. So if you need what I offer, and don't want to risk my price, wear my Belt free until you are cured, then you can pay me.

And when you do pay me the cost is less than a short session of drugging, and how much more pleasant! You put my Belt on when you go to bed; you feel the soothing, exhilarating vigor flowing into your weak body, and while you sleep peacefully it fills you full of the fire of life. You wake up in the morning feeling like a giant.

Now, I can't cure everything. I don't claim to, and I won't take a case that I don't feel sure of, but all these troubles which come from an early waste of vitality, from dissipation of any kind from decay of nerve power, or from any organic stomach, liver or kidney weakness, I can cure, and those are the cases I am willing to tackle and take the chances on. I am curing them every day.

All I ask is reasonable security for my Belt while you are wearing it.

Dear Sir,—I wish to say that your Belt has given me good satisfaction. I might say further that I think mine was a hard case to help, being troubled with sick headache and very bad pains in my head and not able to sleep more than half the night. I am pleased to say that after wearing your Belt for awhile I slept better and my sick spells grew longer between. The current generated by the battery was fine and soothing and gave me good satisfaction in a great many ways. I remain, as ever,

A. S. MACE, J.P., Newton, Kings Co., N.B.

Dear Sir,—I write to let you know that I am highly pleased with the work your Belt has done for me. It has done what no medicine would do. For years I have had to take medicine every night for constipation, and now your Belt has completely cured that trouble; also dyspepsia. I cannot thank you too highly for what you have done for me. I am recommending your Belt to all troubled with similar ailments, and no doubt you will hear from some of them soon.

J. ALLAN,
North Nation Mills, Que.

Tell me where you are and I'll give you the name of a man in your own town that I've cured. I've got cures in every town.

That's enough. You need the cure. I've got it. You want it. I'll give it to you or you need not pay me a cent. Come and get it now. The pleasureable moments of this life are too few. So don't throw any away. While there is a chance to be husky and strong, to throw out your chest and look at yourself in the glass and say, "I'm a man," do it and don't waste time thinking about it.

I've got a beautiful book, full of good honest talk about how men are made big and noble, and I'll send it to you free, sealed, if you send this coupon.

CALL TO-DAY

If you can't call, send Coupon for Free Book.

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Dear Sir,—Please forward me one of your booklets as advertised.
Name .....
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Office hours—9 a.m. to 6 p.m.; Wednesday and Saturday until 8.30 p.m.

at times will flavor the eggs slightly, and if frozen may cause serious digestive troubles. Both rape and cabbage make good green foods, but good judgment must be exercised in their use.

Mangels are a very succulent food and are relished by the birds during the Winter. They can be fed either pulped or whole. When they are fed whole, we usually stick them on a projecting nail, at a convenient height, upon the wall of the pen. When these are fed freely they frequently scour the fowls. For this reason during some seasons we are obliged to feed them not more than twice a week.

Turnips may flavor the eggs. They are not as palatable as mangels, in fact some birds will not eat them at all, but at the same time they have considerable food value.

Clover leaves, either, steamed or dry, are relished very much, and upon the whole are the most reliable Winter green food. One hundred hens will eat from a peck to a bushel of clover leaves daily. This food upon the farms is cheap and easily procured, and should be fed more than it is.

The growing of green food is becoming quite popular with many, but we have never received sufficient results to warrant our growing it extensively, except for little chicks.

The ordinary plan is to soak the grain—most people use oats—twenty-four hours previous to sowing. The ordinary greenhouse flat is useful for this purpose. Any box from 3 to 4 inches deep will answer. It is necessary that the bottom of the box should have sufficient holes to give good drainage. Place a little damp earth over the bottom of the box, and then put in about 1-2 inch of soaked grain, and cover this with about 1 inch of sand. Keep the box in a warm place, and keep the earth moist. In a few days the grain will begin to germinate. Most feeders allow the grain to grow two or three inches before feeding—Extracts from a bulletin issued by the Ontario Agricultural College.

Repairing Bee Hives.

With the long nights on hand the enthusiastic bee-keeper at all handy with tools may profitably occupy some of his spare time in the useful work of doing needed repairs to any faulty, disused hives, or portions of the same that may chance to be on hand. Bees should never be wintered in a faulty hive, or there is grave risk of entirely losing the stock. Such hives should be stored under cover when put out of commission, and will be then quite dry by this, or if not taken in some time ago should be now sheltered and well dried before taken in hand for repairs. Wood swells when damp, and if repaired when so distended there may be subsequently cracks between joins, that are not at all desirable, to say the least.

Similarly, too, wood intended to be used in the repairing of hives should be dry, and well seasoned. For the repairing of hives any sound wood may be pressed into service, so long as it is of even grain and free from knots. A good wood is red deal and it is one generally obtainable without difficulty; but the best plan, when feasible, is to ascertain of what wood the hives are constructed, and then use wood of similar variety. Good hive wood is often to be met with in packing cases, procurable for a trifling sum. The wood should be a little thicker than actual requirement, to allow for working down, and should not be too thick, or too much planing becomes necessary. Most handy men have the necessary tools on hand, the chief required being a tenon saw, a smooth plane, a rule, a square, hammer, suitable nails, a bradawl, and a chisel or two. The sharper the edged tools the better, for neat work cannot be done with blunt tools. The first step towards the repairing of a hive is to examine it and note exactly what is required to make it sound again. Then if any dirt be upon the hive it should be thoroughly removed by scrubbing with soap and hot water if necessary, after which the repairing may begin. An unsound piece of wood should be removed bodily, if possible, and then used as a pattern from which to fashion a new piece of sound wood to take its place. If such removal cannot well be done, the faulty portion should be removed by means of saw and chisel, and a new patch be prepared from measurement alone. In this case particular care should be taken that the measurements are exact, for with some portions of a hive faulty measurement will handicap the subsequent handling of the bees.

When dressing up the wood for a particular portion of the hive all exposed surface should be made smooth. First the plane should be used, dressing to the desired thickness; then should come fairly coarse emery paper, finishing off with a fine grade. If an outer surface, it may be rubbed over with a little raw linseed oil, but not until fixed in place. Before finally securing a "mend" see that it needs no further shaping. It is usual to nail in position, either with nails or brads, but thin screws make still better work in amateur hands. Secure firmly, for if lightly attached dry weather may cause the wood to spring. When repairing lifts, see that when finished they will fit, not only the hive, but also over one another, whichever may be uppermost. With roofs, let the eaves well overhang, and be sure that they are watertight. If any doubt exists, cover with flat galvanised sheeting. When all the repairs needed to the hive have been done the new portions of the woodwork should be given a priming coat of thin oil paint. When this coating has dried thoroughly the whole hive should be carefully painted with oil paint of medium thickness, and when this has dried another coat should be given as a finish, which should make the hive look like a new one. As to the best colour of paint to use, it is to a great extent a matter of opinion, though for the resisting of the summer's sun a light, rather than a dark, shade should be chosen. If artistic effect is desired the hives may be picked out with some lively colour. The painting of each hive a different colour, so that the bees can readily find their homes, is beneficial in theory only.—J. T. Bird.

Editor Maritime Farmer:

We believe it would be of general interest to your readers if you would kindly point out that the notice—"Send coupon for calendar," which has appeared in many of our advertisements latterly has unfortunately led to a misunderstanding and consequent disappointment to many of the readers of these advertisements. The Sales Dept. of this Company is in receipt of a large number of letters containing the advertisement in question cut out of the paper in which it appeared; together with the request that we forward a calendar. The advertisement itself is not the coupon referred to. This is found only in the globe of the Banner Lantern and the calendars are forwarded on receipt of this coupon. This is in the form of a post card addressed to the Company with a space for the name and address of the sender and the dealer from whom the Lantern was purchased.

We would be glad if you will kindly find space for these remarks in your next issue, and oblige Ontario Lantern & Lamp Co., Ltd., Hamilton, Ont.

When a Cold Begins

get after it quickly. Don't let it drag along. Start at once to take Na-Dru-Co Syrup of Linseed, Licorice and Chlorodyne, and prevent the cough from getting hold of you.

NA-DRU-CO Syrup of Linseed, Licorice and Chlorodyne

breaks up the cold, soothes the irritation in the lining of the air passages, and loosens the phlegm so that the cough never gets to the dry, hacking stage.

NA-DRU-CO N D & C Co TRADE MARK

FOR EVERY AILMENT THERE'S A NA-DRU-CO SPECIFIC BEARING THIS TRADE MARK. SEE THAT YOU GET IT.

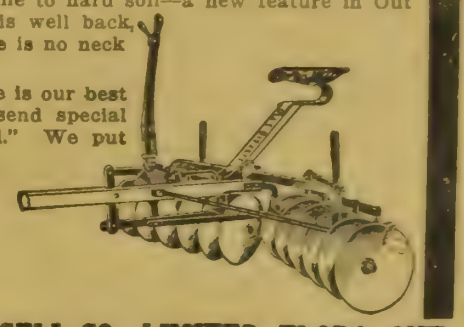
Na-Dru-Co Syrup of Linseed, Licorice and Chlorodyne is an absolutely safe household cough-and-cold remedy, compounded by expert chemists. Your Druggist will confirm our statement that you can give it to the little tots without any risk. It is put up in 25c. and 50c. bottles. 113

National Drug and Chemical Co. of Canada, Limited

The "BISSELL" out-throw DISK HARROW

To settle all doubt about which is the BEST OUT-THROW DISK HARROW, we ask you to test the "Bissell" Out Throw in a field competition with other Out Throw Harrows.

The "Bissell" Out Throw has many features that have made the name "Bissell" famous in connection with Disk Harrows. It has plates of the correct shape. One gang is set slightly ahead of the other. The gangs cannot crowd or bump together and cause the Harrow to rock when you come to hard soil—a new feature in Out Throw Harrows. The hitch is well back, the draught is light and there is no neck weight.



The machine in actual use is our best advertisement. No need to send special travellers to sell the "Bissell." We put our name on every Harrow. If you would like to learn more about Disc Harrows, send to Dept M for free booklet of both out-throw and in-throw styles. 58

T. E. BISSELL CO., LIMITED, ELORA, ONT.

FREE TO YOU—MY SISTER FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell all women about this cure — you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhoea or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a **complete 10 days' treatment** entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treament for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost** my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To **Mothers of Daughters**, I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness and Painful or Irregular Menstruation in young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really cures all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days treatment is yours, also the book. Write to-day as you may not see this offer again. Address:

MRS. M. SUMMERS, BOX H 309 - - WINDSOR, ONT.

Be sure to address your Correspondence to the Maritime Farmer's new home, Clarence St. St. John.

Some Common Defects in Crop Raising Methods in the Maritime Provinces.

(Continued from page 219).

profitable to use a little care to obtain the best results from our field crops. The seed plot may be of any size, from one to five acres, according to requirements, but preferably not too large as with the best of care it will require a certain amount of rogueing or picking in order to keep it free from other kinds and other varieties of grain that are bound to crop in.

The plot should be well drained, well cultivated and if possible the earliest to be sown on the farm in order to have it perfectly matured and harvested while the harvest season is at its best. Any person who has seen grain cut at different stages of maturity tested, side by side, would easily recognise the well matured seed by its strong, vigorous growth. The meat or kernel of the grain is simply the food stored up by the mother plant until it is able to take care of itself, and the young plant produced from an immature seed has about the same chance as a young animal dropped by a dam which is not capable of producing enough milk for its nourishment. It is scarcely possible for the farmer with even a moderate acreage of grain, to allow it all to ripen perfectly owing to loss from storms, shelling, etc., yet the special seed plot should be thus handled with little or no loss. It has been proven by many experiments that sowing of imperfectly matured grain year by year causes it to deteriorate and lose its good producing qualities. One of the greatest evils we have to contend with in the producing of pure seed grain is the multiplication of varieties, and unnecessarily so. By a little experimenting on the part of the farmer one variety will be found to be a better producer on his farm than any other, then why not all of the best? In it will be found that one certain variety is best adapted to whole districts—then why use any other. I have in mind one section in P. E. I. that is producing almost exclusively Banner Oats, and it would not be difficult at the present time to procure in that district several thousand bushels of comparatively pure seed. Neither is it so difficult for the farmers in that section to maintain their seed in its purity.

Another defect in production of our Field Crops is lack of treatment for Smut, especially for oats. We have not in the past perhaps suffered from this disease so much as other parts of Canada. But we find it increasing rapidly and in some instances taking a heavy toll from our fields. Ten percent which is not unusual means just about 10 percent shortage in our yields. The plant producing smut started to produce grain and occupied about as much space as though it did. The man who uses his own threshing mill will not need to treat for smut annually; but the man who uses the public mill will safeguard his crop by treating his grain every year.—An address by S. J. Moore, Maritime Representative, Seed Division, Ottawa, before the Maritime section of the Canadian Seed Growers' Association, at Amherst.

Care of the Horse in Winter.

Sharp shoes are the urgent need of the day. It seems incredible that a man should expect a smooth-shod horse to haul a load over slippery roads, but there are any number to be seen daily. In winter every horse in service needs special attention. He who owns or drives horses should put into use every bit of his practical and theoretical knowledge of horses, especially in this slippery weather. After a horse has made several frantic efforts to start, and has satisfied himself that it is useless to try, it is often hard to get him to make another attempt, even after applying something to aid him to get a foothold. No amount of yelling or lashing will do any good, and such a scene is a sad spectacle. Let him rest a moment, talking quietly to him, and then go to his bridle and shift this as if readjusting it. Then hold up his front foot a short time, and the horse will have forgotten his fear in wondering what you are doing to him. Then take hold of his bridle, and, with a few calm, reassuring words from you, he will start off.

It is often impossible for a team unassisted to start a wagon on a sharp grade. When the horses exert all their strength to start the load the driver should use all his common sense to help them. It may be necessary, after arranging for a foothold, for the driver to put his shoulder to the wheel. Passers-by may help him, and with one man at the horses' heads and two more at the wheels the thing is done quickly and happily.

The horse's feet should be watched for signs of cracked heel or scratches during cold, muddy weather. If he stands in mud and water that freezes on his feet it is liable to cause grave trouble. A good preventive is to rub the hollow above the hoof thoroughly with vaseline before starting out on such days. Never wash the mud off the legs and feet upon coming in at night, simply wipe off thoroughly with a dry cloth, and then, if possible, bandage. The next day brush out dried mud and apply vaseline.

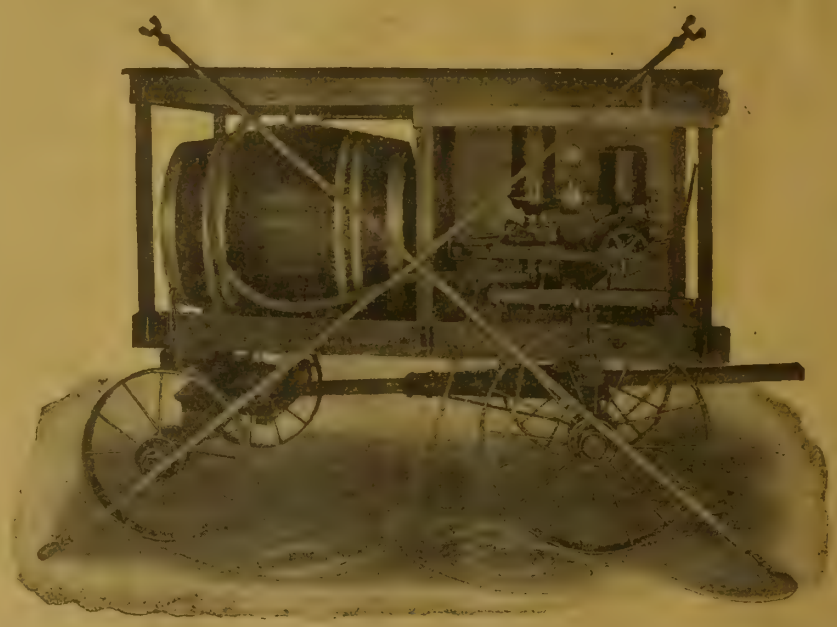
See that the rug is securely fastened when you leave your charge standing in the cold. A rug that only touches the horse where it is fastened around the neck and leaves the rest to the caprice of the wind, is enough to frighten any horse. No teamster with feeling or self-respect will leave his charge uncovered. The few seconds gained in throwing harness on in a careless, slip-shod manner often means many hours lost in the detrimental effects upon the horse. How would you like to do a hard day's work with the armholes of your coat so tight that they cut into the flesh with every move? Think of this when harnessing your horse, and adjust your harness accordingly. It is almost unbelievable that a man could put a harness on a horse day after day without readjusting, when the evidence against that harness was gradually working itself into a sore. Think of how this galling lessens the working capacity of the horse. During slippery weather, especially, see that your wagon is in good condition and pulling as lightly as possible. Look to it that the wheels are on tight and axles well greased. Don't wait to have the wagon tell you at some critical moment that it needs attention.

Bone in Horses.

What is the peculiar attribute to which the horse-buyer attaches importance when he speaks of an animal having good bone? It is to be feared that in many cases what is in his mind is size or quantity of bone. But far more important than size and quantity is quality, and it is well that those who are interested in horses should make a note of this. If the bones of two animals, such as the thoroughbred and the cart-horse, be examined, a great difference will be noted as regards their density, the bones of the racer or thoroughbred being very much less bulky, but far more compact and less loose and spongy than those of the slow-moving draught-horse, such as the Shire or Shire cross. Other things being equal, says a well-known veterinary surgeon and writer, the more porous the bones the more liable they are to bony deposits, such as splint, spavin, and ringbone. The truth of this will be apparent to all who have to do with the treatment of any of these diseases. It is quality of texture, not bulk of texture, that is required.

The difficulty which arises is how to judge quality of bone. Like most things, it must depend to a great extent on the teaching of experience, but a useful hint is given by the veterinary surgeon referred to when he says that when judging an animal, the history of which is unknown to us, or whose work has not been sufficient to test the soundness of his legs, if he is found to have weak, flat hoofs, it would probably in the majority of cases be accurate to conclude that the bone is of inferior

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

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Illsley & Harvey Co.,
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Farmers' Sons Wanted

With a common education to take a short course at the

G. T. P. School of Telegraphy and Railroading

During 1911 we have placed all our Graduates in good paying positions and among the number was a young man from Kent County who got **A Good Position**

Mr. Oswald R. McAuley, of Main River, Kent County, attended this School five (5) months when he was selected and recommended, by THIS SCHOOL'S Employment Department, to fill the position as Assistant Agent and Operator, at Wynyard Station, Sask., on the Canadian Pacific Railway. The Grand Trunk Pacific will need a large number of Telegraph Operators, early next summer. Prepare this winter and remember, what we have done for him, WE can do for YOU. Our Winter Term begins Tuesday, Jan. 23rd, 1912. Up-to-date equipment. Residential School. Positions secured for Graduates. Write for Free Catalog, Rates and full particulars to

W. T. LITTLE, Principal, - - - - - Fredericton, N. B.

quality. Let it be remembered that the nature of the soil, of the food, and of the climate generally very considerably affects the feet and bones of an animal. Horses in low-lying, moist districts are found to have weak and flat feet, whereas in firm ground and hilly districts their feet are more upright and blocky. The main thing, however, which should form the basis of the purchaser's judgment is that it is quality and not quantity of bone that counts, and that the animal with large, round, bulky bone may be but a poor specimen after all.

Hygiene of the Horse's Hoof.

The colt in the yard or at pasture should have its feet cared for as closely as the matured animal, in order that he may grow to maturity with feet in a healthy condition. The foot of the colt grows so rapidly that the wall will often project far below the sole and cause it to split and form quarter and toe cracks It is better to use a pair of hoof cutters and rasp, and have the feet pared evenly and avoid unbalancing the animal.

Any horse used on the road should be shod, but the shoes ought to be changed every five or six weeks and the feet trimmed in order that the natural growth of the wall may be removed. If the shoes are improperly allowed to remain on the feet for two, three or four months, without changing them, the wall becomes excessively long and grows over the shoe. Pressure becomes too great on the sole and bars, resulting in corns, bruised soles and lameness.

A hoof hook should be included among the equipment of a well-regulated stable. The feet of the horse should be cleaned every morning before he leaves the stable. The hoof hook will remove all litter, pebbles, or anything that may have become lodged in the foot. This precaution may prevent injury to the sole or sensitive structures of the foot. If the feet become very dry, pack them daily for a week with some form of clay. Then apply lard to the wall, to which may be added pine tar and rosin. This ointment holds the moisture in the feet and prevents further evaporation.

Use and Abuse of Horse Blankets.

There are horse blankets and horse blankets, all classes of horses and every kind of weather and condition in which to use them, but so often are horses forced to suffer through their use, or rather misuse, in many cases, they would be better without them. Yet, the blanket used along with good horse sense, is invaluable in keeping the working horse in good condition during the winter.

The common practice of blanketing horses along in the fall, when their winter coat begins to come in, to keep the animal looking "fine," is a source of, to say the least, discomfort to the animal; to keep a horse in a warm stable, heavily blanketed, and then work him throughout the day, without this "wrap," shows lack of judgment. No doubt a sleek coat can be maintained in this way, but it is rather hard on the horse. The use of heavy blankets under normal conditions cannot be condemned too much. Their place is for use in severe weather, where horses have to stand outside or in open sheds during the winter. For stable use, a light sheet only should be used. Even during fall months, the horse, unless very hot, should receive only a light covering.

The heavy blanket, while it is invaluable to protect the horse in certain conditions, and should always be in a handy place on the farm ready for use, can be greatly abused, and indiscriminate use can cause the horse as much or more discomfort than if it were taken away entirely. Blanket the horse for protection, and not for show.—Farmers' Advocate and Home Journal, Winnipeg.

Methods for Pickling Pork.

Pork may be pickled by using for each 80 pounds of meat one pound salt, four pounds sugar, one quart molasses, and three ounces saltpeter. The meat is well rubbed with salt and left in a pickle barrel for 15 days draining off the fluid from time to time.

A second method is to use one bushel of fine salt, two pounds brown sugar and one pound saltpeter, which would be enough for 800 pounds of meat. The sugar improves the flavor of the meat, and the saltpeter makes the pork firmer. After a few days a little more of the salt mixture may be applied, rubbing it in if absorption is going slowly. All cut ends of bone must be thoroughly salted in, as decomposition is most likely to occur in such places. This method may be used where hams, shoulders and bacon sides are packed together in the same barrel, the hams being packed at the top of the barrel to prevent them from becoming too salty.

Resalting should take place within 10 days or two weeks, according to the weather. After four to six weeks the meat may be unpacked, washed and smoked, or the salt may be left on the meat during the process of smoking. Before hanging in the smokehouse the meat may be sprinkled with black pepper or a mixture of black and red pepper. A molasses barrel is better than a whisky barrel, but if a whisky barrel is used, the interior should be charred first. This will remove the flavor of the whisky.

Infertile Eggs Keep Best.

A large part of the heavy loss from bad eggs can be obviated by the production of infertile eggs. This has been demonstrated beyond a doubt by the investigations concerning the improvement of the farm egg which during the past two years have been conducted in the Middle West by the bureau of animal industry of the Department of Agriculture.

Secretary Wilson of the U. S. Department of Agriculture estimates that between the producer and the consumer there is an annual loss of $45,000,000 in the egg crop of the United States, the greater portion of which falls on the farmer, who is by far the largest producer. Of this enormous loss, about one-third, or $15,000,000,is caused by heat which develops the embryo of the fertile eggs, causing what is known to the trade as a "blood ring." As it is impossible to produce a "blood ring" in an infertile egg, such an egg will stand a higher degree of temperature without serious deterioration than will a fertile egg.

The secretary says that if farmers and others engaged in the production of eggs would market their male birds as soon as the hatching season is over, a large saving would be made,as practically every infertile egg would grade a first or second if clean and promptly marketed.

No more simple or efficient method for the improvement of the egg supply of the country could be adopted than the production of infertile eggs.

Wood Ashes as a Fertilizer.

Ever acre of the 20,000 square miles of cultivated land in Japan annually rceives 38.6lb. of potash and 12.8lb. of phosphoric acid, derived from ashes, eight-tenths of which is from wood ashes, contributed, according to the investigations of the late Professor F. H. King, by the non-arable hills and mountains of that country. More than 1,693,000 sons of wood ashes are annually spread upon the arable soils of Japan, a fertility tribute exacted by these pains-taking Oriental farmers from lands that are otherwise unsuitable for the production of crops.

Ashes owe their principal agricultural value to the lime carbonate and potash that they contain. Twenty-four samples of wood ashes analysed by the Connecticut Station in 1908 showed the following average composition :—Total potash, 4.62 per cent.; water-soluble potash, 3.77; lime, 26.47; magnesia, 2.46; phosphoric acid, 1.48; inert material, sand, 13.54; coal, 2.94. The prospective purchaser af ashes should assnre himself that the proportion of inert matter is as low as possible. Admixture with coal ashes raises the amount of inert material and lowers by exactly that proportion the value of the wood ashes.

The source of ash affects its composition. Hardwood ashes are more highly prized than those from soft wood. The latter are probably as valuable, pound for pound, as are the former, but yield a very much smaller amount of ash a cord. Deciduous trees generally yield more ash and one higher in potash than do the conifers. Because of their potash content, wood ashes may be expected to produce good results on peat and muck soils, which are normally deficient in that element. In 1907 the Wisconsin Station found that wood ashes produced a note-worthy increase —amounting to 1½ tons an acre—in the yield of potatoes on a peat soil in the northern part of the State.—Country Gentleman.

Carry a warm blanket with you every time you drive away from the farm. You may intend to come right home without hitching, but one can never foresee the delay that may compel you to hitch your horse in the open.

Many a horse is made to wrench and lame himself by sudden reining Every driver needs to think how rapidly changing direction may affect a driving horse, and aim to make no quick turns.

In order that a good horse may result the colt should not only be given a good start in life, but should be kept in healthful and thrifty condition through the growing stage.

Touch your tongue to a piece of iron on a frosty morning. Thereafter you'll remember not to put into a horse's mouth a frosty bit until you have warmed it.

PEERLESS-PERFECTION

MEANS FENCE PROTECTION

Peerless Wire Fence does not serve only as a mere boundary line for your farm and pastures but gives real fence service as a permanent barrier to trespassing and wandering of stock.

You Should Fence Your Land With PEERLESS

We use high grade fence wire well galvanized. The joints are united by the non-slippable Peerless Lock, making a fence that will stand up against the most severe and sudden shocks without damage. The horizontal wires are all crimped, making ample protection for contraction and expansion, keeping the fence always tight even under extreme variations of temperature.

Write for our Illustrated Booklet at Once

We also manufacture a wonderful line of poultry fencing and farm gates. Agencies almost everywhere. Agents wanted in all unassigned territory.

The Banwell Hoxie Wire Fence Co., Ltd.
Winnipeg, Man., , Hamilton, Ont.

HAND SPRAMOTORS.

No. 1 and 2, with horse-drawn cart, can be used on orchards. vines, row crops or weeds. As shown here it is arranged for row crops and weeds, but separate attachments adapt it to other uses.

Adjustable width of track and rows, all-brass Spramotor, brass ball valves, automatic agitator and compensating plunger. High grade throughout. For one horse only.

Price $47 to $54

Awarded Two Gold Medals at National Horticultural Congress
W. C. HEARD, 1381 King St., LONDON, CAN.

ARNOTT INSTITUTE

The work of the ARNOTT INSTITUTE in treating Stammerers and Stutterers is becoming more and more widely recognized as perhaps the most successful on this continent.

Following our own scientific methods, the Institute treats the CAUSE of stammering —not the habit itself. It teaches the patient why he stammers and in the majority of cases that, it is comparatively easy for him to learn to speak fluently and naturally without any of the [illegible] commonly taught. As he knows why he is speaking correctly, the cure is permanent.

If you know anyone who stammers or stutters [illegible] them advise them to consult the ARNOTT INSTITUTE.

BERLIN, ONTARIO, CAN.

Proud He's a Farmer.

There used to be a time when to say of a man that he "looked like a farmer" was not taken with good grace by a lot of "smart" city people. But that was mostly when the farmers were doing not much but making slaves of themselves for city folk.

Now when we meet people in automobiles in the country, or at the great live stock shows and fairs, you can't be sure at all as to which are the bankers or merchants and which the stock farmers.

Agricultural education is so widespread, and knowledge of better ways of doing things so common in all parts of the country, that the farmers are rapidly coming to be "the people."

One day this week, A. G. Bridgeford, a banker, of Aledo, Ill., was at the Chicago yards and was introduced as being, as he is, a man of affairs in the financial world. He promptly said that he would rather be introduced as a farmer, and that he was prepared to prove his right to that dignified and desirable title. He showed an account sale of a good lot of cattle of his own feeding that had averaged 1270 lbs. and sold at $7.70. Inasmuch as these cattle cost him $4.75 a little more than three months ago, when he put them on feed, it was easy to see why he was proud to be recognized as a farmer.

Of course there are plenty of slipshod farmers, just as there are plenty of slipshod city people—only there are ten times as many of the latter as the former—but it is getting increasingly harder to tell by dress or culture or taste, or any other test, the best farmers from the best captains of industry in any other good calling.—Chicago Live Stock World.

Cleanliness in Milk Production and Treatment.

At every dairy farm, for whatever purpose the milk is produced, it is essential that cleanliness should be adopted in the cowhouse, as well as in the dairy itself. Dirty cowhouses are, in many cases, the source of milk becoming contaminated with obnoxious organisms and objectionable taints.

On the milk-selling farm, unless the milk has been produced in a cleanly manner, it will have bad keeping properties, and, perhaps, the flavour also will be noticeably tainted. Where tainted milk is converted into butter or cheese a taint in the milk is generally noticeable in the products. Taints in milk are of two kinds, one of which is due to the action of bacteria in the milk; the other due to the milk absorbing some odour. Milk especially when warm, readily absorbs any odour prevalent in the air; hence the absolute necessity for keeping the air of the shippon and dairy as pure as possible. In order to ascertain whether a taint in milk is due to bacteria or not, a sample of the contaminated milk should be placed in a clean vessel gnd kept warm for two or three hours. At the end of that period a bacteria taint in the milk would have increased, while a taint due solely to the milk absorbing some odour would not increase when kept warm, if the air of the room was pure. Taints in milk may be overcome to some extent by pasteurising the milk. At most creameries the milk or cream is all pasteurised before being made into butter, and the cream ripened with some pure culture starter previous to being churned. Where milk is produced expressly for the manufacture of cheese, every care should be exercised to obtain clean milk. The only way to overcome a slight taint in milk intended to be made into cheese is to add a fairly large percentage of starter, and then there is always the risk of too much acid developing, which would detract from the quality of the finished article. Any attempt to heat milk to a sufficiently high temperature to destroy the obnoxious organisms therein would totally unfit it for cheese-making. It is quite impossible under ordinary conditions to obtain milk free from bacteria, because the air is full of them; but in a pure atmosphere the beneficial species of organisms predominate. While it is not possible, in the ordinary course of milking to obtain germ-free or sterile milk, it is always feasible to produce milk absolutely free from non-bacterial taints. This is effected by keeping the byre and dairy free from odours and the utensils used in connection with the milk scrupulously clean.

Many faults and defects in butter and cheese are due to some slight error in the process of manufacture, but a great many defects in dairy produce are the result of the milk in the first instance being badly contaminated with the obnoxious species of organisms. Butter having a stale, musty taste or smell can be traced to the cow byre, and the contamination of milk from the surroundings. Butter of this description generally contains very large numbers of bacteria of various species, the chief of which is the gas-producing organism, which germs always exist in the dung of all animals. There is also a mould characteristic of dung which causes butter to have a stale, musty flavour. It will thus be observed that a great deal of trouble with milk and its products is caused by milking which is conducted in an uncleanly manner, or by careless treatment of the milk causing it to become contaminated.

Handling Rock Phosphate.

Rock-phosphate should not be allowed to ferment with manure in piles. Experiments just completed by W. E. Tottingham and C. Hoffman of the Agricultural Experiment Station of the University of Wisconsin show that under these conditions 40 to 50 per cent of the phosphoric acid which is soluble in water and hence valuable to crops may become insoluble. This is due to the requirements for phosphorus of rapidly multiplying bacteria in the manure heap. This does not mean that the phosphoric acid used by the bacteria will not eventually reach the crops, but before this can occur, the cells of the bacteria must be more or less decomposed. This is a process requiring time as does the formation of humus in the soil.

Rock-phosphate itself is quite insoluble and to be of value to crops must be attacked by carbonic acid which can best be formed in the soil by the rapid decay of organic matter. Hence rock-phosphate gives its best results when applied to the soil with manure. Rock-phosphate and manure mixtures can be applied to the soil through the winter months with economy as the cold weather prevents fermentation. It should not be allowed to stand in piles of manure where fermentation may take place even in the coldest months.

Decomposition of manure in the soil is due principally to bacteria and while the process furnishes carbonic acid which will assist in dissolving the phosphate, the bacteria also use a portion of this phosphoric acid and apparently for this reason floats give comparatively slow returns in practice. An application of floats generally shows greatest effects in the years following the one in which the fertilizer was applied. This indicates that the bacteria must decay and their phosphoric acid be taken up by growing crops before the floats become effective.

Manure yields carbonic acid which is the most effective agent in the soil for carrying phosphoric acid to crops. Hence it is important to provide a liberal supply of farm manure or other vegetable matter where rock-phosphate is to be used. The two may be applied in mixtures and when fermentation takes place in the warm months, the process should be hastened by thorough tillage which admits air to the fermenting material and increases the action of bacteria. Under these conditions a part of the phosphoric acid will be made soluble by carbonated water and will be used immediately if there is a crop on the land. Otherwise it is quite sure to be either lost by leaching from the soil or it will be made insoluble again.

The action of the bacteria in thus holding the phosphoric acid is of course valuable, but it possesses no economy when taking place in a manure pile before the phosphate has even reached the soil. Hence farmers are advised to apply rock-phosphate and manure to the land as soon as they are mixed; or separately and turn under at once. When applied in winter, the fertilizer should be turned under in early spring. In this way, where a crop is grown and thoroughly tilled, the rock-phosphate is sure to give valuable returns.

Turnips for Sheep.

T. R. Arkell, of the New Hampshire Experiment Station, finds that turnips in the winter ration materially reduce the cost of mutton production as compared with rations commonly used. He states that the chief danger in the use of turnips lies in heavily overfeeding or attempting to make them constitute the bulk of the ration, in which case they are liable to make the ration too laxitive and produce scouring. On the other hand, owing to their watery nature, turnips render the ration more palatable and are distinctly useful when fed in moderate quantities in conjunction with hay and grain in preventing constipation and other resultant ills which so frequently occur when sheep are changed from pasture to dry feed.

In the experiments upon which these conclusions are based, turnips were fed at the rate of five pounds per animal in connection with ¾ to 1 lb. of mixed grains and 1½ to 2 pounds of clover hay, the daily cost of the ration being 3½ cents per animal.

THE STEEL COMBINE TO CONTROL PRICES OF WIRE FENCE.

The Sarnia Fence Co's Plan to Prevent it

The London Free Press, on Dec. 28th published an announcement to the effect that Hamilton is to be the Steel centre for Canada, that the Steel Corporation of Canada, which is composed of iron manufacturers who recently merged their interests under the above name and who are endeavoring to control prices for Canada on all steel and iron products. This gigantic combine is rushing to completion at Hamilton, new buildings and plant and spending millions of dollars on their equipment. We are told that the Steel Corporation of Canada, have assurances from the Borden Government at Ottawa, that they will be afforded protection either in the form of a duty, or a bounty on steel and iron products. We cannot believe that this is so, particularly in view of the fact that free fence wire was given, as a concession to the farmers and in spite of the protests of the iron manufacturers, but if by any possibility such a change should be made you may rest assured that you will have the privilege of paying the duty or bounty as the case may be.

One of the items which is of very great importance to the farmers of Canada, is wire fence. For a great many years, the sizes of wire used in the manufacture of this farm necessity, have been admitted free of duty, but a duty of 15 per cent was retained on finished fence. The Canadian fence manufacturers formed a combine of their own in order to pocket for themselves the full protection of this 15 per cent. In fact they came to look upon this 15 per cent protection as a legitimate addition to their ordinary profits.

Three years ago the SARNIA FENCE CO., opened a plant at Sarnia, and in compiling their prices, they based their profits upon a reasonable return for their money invested, leaving out of their consideration, the matter of duty or protection. The result was a very decided difference in the prices of the fence combine, and those of the Sarnia Fence Co. Needless to say that many threats were made by the combine, and methods fair, and otherwise were resorted to in order to prevent the Sarnia Fence Co., placing their fence on the market. After practically three years fight, the Sarnia Fence Co., came out on top with the largest and most modern fence plant in Canada, and 25,000 Canadian farmer customers at their backs. Now that we, with the assistance of the farmer, have made the existence of a fence combine in Canada impossible, shall the present Government hand over to the Steel Corporation of Canada a weapon in the form of protection on fence wire which undoubtedly would be used as a club to knock more dollars out of the farmer. By the placing of a duty, or by the giving of a bounty on wire rods, or fence wire, we will be deprived of the right to purchase in the open market, which assures us of a fair price on wire. We will have to look to the Steel Corporation of Canada, who will not permit us to purchase wire at a price, which will be any competition to them in the finished fence. They ask the Government for protection, in order that they may be able to control the market and compel the consumer, (which in this instance is the farmer exclusively) to pay the highest possible price.

Are you, the farmers of Canada, going to stand for this, let every farmer write his member, or call upon him personally, and protest against the giving of either a bounty, or the placing of a duty on fence wire. This means dollars taken directly from your pocket and is worthy of your most vigorous protests. You are a voter and if the farmers stand together they can head off such an outrage. We, the Sarnia Fence Co., ask for no protection. We can stand on our own footing, and will undertake to protect the Farmers of Canada against a fence combine providing, the Government will not yield to any such unfair demands from the iron and steel interests, and refuse the Steel Corporation of Canada an unfair advantage in the Canadain market at the expense of the farmers of the Dominion.

The Sarnia Fence Company, will from time to time, keep the farmer posted on the action of the government in this matter and we ask your assistance and support.

Yours very truly,

THE SARNIA FENCE CO., LTD.

Soiling Crops.

The following notes are taken from a letter written by W. M. Kelly, a well-known and successful dairyman of New York state, to the agricultural press. Many valuable hints can be found of special interest to dairymen.

The time when dairy cattle can be turned out in the summer to shift for themselves has passed. Under the best conditions, the abundance of pasture grass is certain to decrease after the middle of July, and its quality also deteriorates.

To sustain an even flow of milk we must be prepared to supply additional food. A milk-flow, allowed to decrease at this time, cannot be fully regained until the cow again freshens.

The cow that is giving milk and the growing heifer, suffer a severe shock, from which they are slow to recover if compelled to fight flies, and exist on semistarvation rations, in a drought-stricken pasture.

Many dairy farmers make the mistake of allowing the cows to shrink in their flow of milk, before beginning to feed the supplemental feeds.

Supplying these as soon as the pasture begins to fall, makes the change more gradual, and insures an even, steady thrift of the cows, which is so essential to sustaining a large flow of milk.

Another very common mistake made by many dairy farmers, is that of feeding a heavy grain-ration to the cows when a bare pasture is their sole supply of rough food. Such roughage is neither palatable nor abundant enough to produce good results.

On the modern dairy farm where corn, clover and alfalfa thrive, it is unnecessary to plan an extensive and complicated system of forage crops to supplement the pastures.

The supply may be obtained by holding over ensilage, or by cutting clover and alfalfa, and feeding them green in liberal quantities.

Oats, peas, rye, barley, and various other crops, may be specially grown for summer feeds, but none of these crops will yield as much as corn, clover, alfalfa and oats, and peas that are raised in the regular crop rotation.

The only real advantage of growing the former feeds, lies in the fact that they may be sometimes raised on land not used for growing the crops in the regular crop rotation.

I believe it generally unwise to practise a complicated system of growing catch crops, when it is possible to obtain equally good results from the green feed supplied by the regular field crops.

In actual practise, I have depended chiefly upon corn, oats and clover and peas, for soiling purposes during the summer, harvesting as much of each crop green as was necessary to balance up the deficiency of pasture grass.

The corn ensilage has the advantage of being at hand in case the drought comes unusually early in the season, when it is difficult to get soiling crops to grow heavily enough. Corn is about the best grain and soiling crop.

This fact has been a stumbling block to many farmers. In trying to save grain and ensilage for winter feeding, they have allowed many dollars to slip through their hands, by underfeeding in the summer.

The same holds good when clover and alfalfa are saved for hay, when the cattle are suffering for succulent food. In no way can we realize greater feeding value from these crops than by cutting and feeding them green.

It is the height of folly to save clover and alfalfa for hay, and allow it to lose feeding value from rain and heat before feeding it to the cows, if they are suffering in a parched pasture for want of this kind of food.

It is common to see a herd of dairy cattle in the late summer, stamping dust from a dried-up pasture, fighting flies, and vainly endeavoring to break through a fence which holds them out of a luxuriant field of corn that flaunts its prodigious wealth of dark-green foliage before them.

It is a penny-wise and pound-foolish policy to allow cows to fall away in the milk yield and condition, when a few rows of rankly growing corn would keep them in good condition.

It is true, that when corn is cut green, it has less feeding value than when it is mature, but the ripened stalk and leaves are largely wasted, as much of the crop is harvested.

When cut and fed green, there is scarcely any waste, for the whole stalk, leaves and grain are eaten.

While corn in its roasting ear stage has less total nourishment than the whole plant when matured, yet when cut at this time it will actually give better results than when husked from the standing stalk, and fed later, after the cattle have fallen away in their milk yield and flesh condition.

More than one half of the run-down condition of dairy-cattle during the winter, can be traced to a decline in condition before they go into winter quarters in the fall.

Hollow Horn.

This old-fashioned term denotes a diseased condition of the blood. The old quack method of boring a hole in the horn with a gimlet and squirting turpentine into the orifice is both cruel and ridiculous. While, in fact, the temperature of the horn is low, it is because of the general poverty of the blood of the animal. There is no merit in this kind of treatment. The most common symptoms are general debility, scanty flesh, scurvy coat and coarse hair. The appetite is also irregular and at times greedy.

Treatment is in line of better food and general improvement of the system. If lice are found on the body, they must be destroyed by disinfectants and washes. A tonic consisting of two teaspoonsful of sulphate of iron, one teaspoonful of powdered nux vomica and four tablespoonsful of ground gentian root given each day in the food or as a drench, will be very helpful in toning up the system and in enriching the blood. The most important factor of the treatment however, is in nutritious, wholesome food.

Is Salt Injurious to Pigs.

A question which very often arises with pig-owners is whether salt is really harmful to pigs. On this point there is some difference of opinion, but the general consensus is that in any considerable quantity salt is very injurious to swine. This is not disproved by the statement which is sometimes made that one has occasionally fed a little salt to pigs and found that no harm has resulted. What happens is that in many cases the pig wash that is used on farms is made up of all sorts of household refuse, in which water containing salt and soda are dissolved. No definite idea can be formed by the feeder as to what proportion of salt it may contain, but it is fed to the animals freely, and there is little doubt in the minds of experienced men that the practice accounts for many of the mysterious deaths of pigs. Some years ago a discussion took place in our columns, and we had the usual conflict of testimony, but one affirmative is worth a very large number of negative statements, and we think that readers will do well to act on the assumption, which has been found to be correct by many feeders, that the less salt given to pigs in their food the better, and they will do well to be on their guard when making use of wash from hotels and like sources.

Neat's-Foot Oil.

Simply because of lack of facilities for utilizing them many parts of animals killed upon the farm necessarily go to waste. One part, however, usually wasted may be saved and turned to profitable account. The hoofs of beef animals may be made to yield the rather expensive, very useful neat's-foot oil with little trouble. The method is as follows:

Wash the hoofs thoroughly and put them in a kettle to simmer slowly in rain water. Continue the simmering from three to five hours, preferably not less than four, then allow the kettle and its contents to cool. By morning of the next day the oil will have parted with much of its impurities which will have sunk to the bottom of the kettle if plenty of water has been used, that is, if the pot has been kept full even until it was removed from the fire. The oil may be skimmed off and put in fresh boiling soft water and allowed to settle until cold. This is to allow the fat to separate from the oil and to get rid of any impurities that may be present when removed from the kettle. The fat may be used for soap-making.

Neat's-foot oil is an excellent lubricant for machinery because it will not thicken or gum. For softening leather it has hardly an equal. The usual quantity secured from the hoofs of a single ox is approximately a pint, but for even this small amount the work involved is not excessive. To reduce the trouble, however, the hoofs of several animals may be saved and boiled at one time provided the weather is cool enough to prevent their spoiling.

When a Soil Needs Lime.

There is only one sure way of determining whether a soil needs lime and that is by trial. An application of lime over a whole field would be a waste of both time and money if the field were not in need of such an application. It is suggested that the farmer who has not already proved for himself whether his soils need lime would better conduct a few simple experiments at different points on his farm.

A few barrels of lime or a few tons of limestone would not cost a great deal and the labor of treating a strip with lime or ground limestone here and there across different fields in which crops were to be grown or so treat a small area here and there, at different points in the fields in which crops are to be grown, would involve but a small amount of labor. These areas should be very carefully located and marked and the results of the applications should be carefully studied on the succeeding crops. It is possible that the effects, good or bad, may be easily apparent. It is possible that the effects can be discovered only by carefully cutting and weighing the crops from portions of the treated areas and comparing them with the crops produced upon equal adjacent areas.

Lime should not be applied to land nure piles nor to the litter in the barn.

Lime should not be applied to and being prepared for potatoes.—Circular 11, Michigan Experiment Station.

Home Soldering.

A neat bit of soldering can be done with a sheet of tin foil when the parts to be joined fit well. After treating the edges with a good flux, clamp the parts firmly together with the tin foil between and heat thoroughly. The heat must be applied so that the foil is entirely melted, and then care must be exercised to have it cooled and crystalized before the clamps are removed.

To do the best work in soldering, it is, of course, necessary to do away with all corrosions and metallic oxides before applying a flux. The usual fluxes for soft soldering are resin, sal ammomiac and muriatic acid. Use the chemist's zinc chloride, which comes in anhydrous crystals, and dissolve it in alcohol, add a little glycerin to make it adhesive, and apply to the parts before soldering. The alcohol in the preparation lights when applied to the metal if the surface is hot enough, and in this way serves to indicate whether or not it has been fired sufficiently. The proportions in which the ingredients of this flux may be used vary according to individual taste, but the following will be found generally satisfactory: Zinc chloride, 5 parts; alcohol, 4 parts; glycerin, 3 parts. Or this Zinc chloride, 2 parts; glycerin, 3 parts; alcohol, 5 parts.—Exchange.

The Dairy Cow.

The dairy cow holds a unique place in the civilized world. In her relation to man she stands out superior to all other domestic animals. How necessary to the comfort and well-being of the human race are her products! She contributes largely to the food of the poor and the rich, the young and the old, the inhabitants of the cities and the rural districts. Her product is what nature has designed for the young, both of man and the domestic animals. And for all ages it is the least expensive of foods, the most healthful and the most desirable.

No meal would be complete without the product of the cow in some form. She has been termed the "Godmother of the human family." Her importance is tersely expressed in the following quotation: "There is nothing, aside from the milk of human kindness, so necessary to the comfort of any family as the milk of a good cow. It is like oil poured upon the waters of life; it is a perfect food for the baby; it is an excellent beverage for the children; it furnishes cream for the coffee, butter for the bread, and cheese for the lunch. It shortens the pie crust, and raises the johnny-cake; even the cat and dog cry for it."

With the farmer it goes still further. It raises the calf, it feeds the pig, it pleases the colt, and it delights the children. Yes, and if he will only give her a fair chance, the cow will clothe the children, buy comforts for the wife, pay the taxes and help lift the mortgage.—Bulletin, Maine Department of Agriculture.

Milk Rapidly.

Rapidity is one of the great essentials in milking a cow. Massage by the hand on the udder of the cow excites nervous action and in turn stimulates action of the milk glands. The more rapid are the massage movements, the greater is the nervous stimulation of gland action and the greater the amount of milk that will be yielded. Not only is this so, but the faster the milk is drawn, the richer it will be in butter fat. Often there is a difference of more than 10 per cent. of butter fat in milk between fast and slow milking in favor of the former.

One can learn to milk fast without yanking as well as to milk slow, and when once rapidity is acquired it is easier than the slow process. A good milker will sit down to a cow and draw all of her milk in a very few minutes, and the faster the milking is done, the better the cow seems to like it and the fewer movements she makes. The cow that is milked slowly is slow about giving down her milk, and repeated slow milking will cause a cow to dry up sooner than by rapid milking.—Successful Farming.

The Worth of a Wagon Lies in It's Tires.

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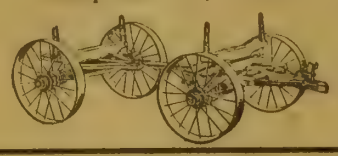

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Judicious Rotation.

The editor of the Wallaces' Farmer discussed, some time ago, the question of the rotation of crops in a way that ought to make the subject understandable even to the man of the least scientific turn of mind. Now that the season for plowing and preparation for next year's crops has commenced, the subject of the proper rotation of crops is a very much alive subject, and we are giving Wallaces' Farmer's dissertation in reply to a subscriber's expressed doubts on the subject. This is not because we think there are any Maine farmers who doubt the wisdom of rotation. Wallaces' Farmer said:

An Illinois subscriber writes:

"You advocate the doctrine that rotation of crops will increase the fertility of the land. I am of the opinion that it will neither conserve fertility nor increase it. A rotation may be advisable on account of insect enemies."

That depends on what kind of a rotation you adopt. A rotation of corn, oats and wheat, or of corn, barley and wheat, or of wheat and flax, or any possible rotation made up entirely of grain crops to be sold off the farm, will certainly not increase the fertility of the soil, nor will it conserve it. On the other hand, it will most certainly decrease it, first by wasting the humus, which contains most of the nitrogen. The residue from these crops, even if the stubble and corn stalks are carefully turned under, will not supply the humus material that is wasted in the very process of cultivation itself. Unless a larger supply than these crops can furnish is given from year to year, the black soils will become brown and brown soils a lighter shade as the years go by.

Furthermore, rotations of this kind will waste the patash. In Illinois this is not a serious matter, however, as there is enough potarh in Illinois soils for hundreds of years to come; but it will also waste the phosphorus, which is the limiting element of fertility, and sooner or later under a rotation of this sort farmers will have to resort to commercial fertilizers.

We do not regard any rotation as beneficial unless one of its prominent factors is a leguminous crop. It may be one or all of the clovers; it may be alfalfa; it may be cow peas or soy beans; but the fertility cannot be maintained without some leguminous crop. It is perhaps possible to maintain fertility by growing clover and plowing it under, although we would not say that this is possible in soils in which the limiting element is phosphorus. The clover will supply more or less nitrogen. If plowed under it will add largely to the supply of humus material. It will not add either potash or phosphorus, however. On the other hand, it will in time lead to the decrease, more or less rapid, of the total phosphorus content of the soil, because, being deep rooted, it will bring up a supply from below and put it within reach of ordinary plants. If these crops are sold off the land, a loss of fertility must inevitably follow.

Nor do we say that a rotation of crops in connection with live stock growing will prevent ultimately more or less waste of phosphorus. However, on a live stock farm where the great bulk of the crop is fed and the manure hauled out, a rotation involving clover will maintain the fertility on naturally good land for a long time to come.

Let us see how it does it. It maintains the supply of humus material, or, in other words, vegetable matter. It therefore keeps the soil in fine physical condition and renders the fertility more immediately available. It increases the nitrogen supply. It does not increase the phosphorus, however, but economizes it by restoring to the land every year a very considerable percent of the phosphorus that was taken from it. It will maintain the fertility to a period after which the present owner of the land may have an immediate personal concern about it, however much his children and grand children may need to concern themselves.

In short, the best way that we know of to maintain fertility and to restore it so far as nitrogen and vegetable matter are concerned, is a rotation of crops in which the clovers are given a large place and other grasses a subordinate place. By this method fertility has been maintained for hundreds of years in the older countries, and will be maintained in this country when farmers get down to real, practical, scientific farming.

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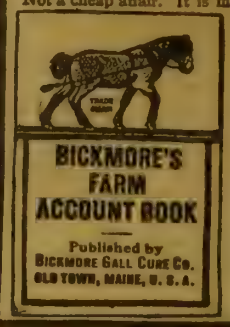

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The Dairy Bull.

There is an old saying among stockmen, "Never take any chances with a bull." This is wise with dairy bulls as with those of beef breeds. All must be handled with care. Any bull at some unexpected moment may injure or kill any person he meets.

The bull as a rule never becomes vicious until he has attained age, and some have never been known to give trouble. But very tame ones sometimes turn out to be dangerous. By securing the dairy bull as a calf and handling carefully he may be raised with a small amount of trouble, and perhaps never do any damage. By instinct most male animals will fight with provocation, and they resent annoyance from dogs or human beings. Never permit anyone to annoy the bull either as a calf or as an adult animal. Poking or "teasing" them will make them mad and resentful. Avoid going or allowing anyone to go, in the pasture or lot with red or highly colored clothing. A boy with a red sweater must stay out of the bull pasture.

Fit a good strong ring in the bull's nose, and never attempt to lead even

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Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 53 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set, exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc. 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address.

THE DR. BURDICK MEDICINE CO., Dept. 109 Toronto, Ont.

How to Stimulate Production of Nitrogen in the Soil.

Extract from

"Artificial Fertilizers; Their Nature and Use."

By B. Leslie Emslie, C. D. A., P.A.S.I., F.C.S.

"If the farmer grows a crop of clover or other leguminous crop, having in view the enrichment of the soil in nitrogen, he will naturally wish to have as big a crop as possible, and the way to ensure the proper development of a nitrogen-gathering crop, so as to enable it to rob the atmosphere of the quantity of valuable nitrogen, is to see that the crop is provided with a sufficient supply of the other plant food viz. phosphoris acid and potash.

No factory can be kept going unless regularly supplied with the motive power nessary for the evolution of the finished product; no more can this nitrogen factory in the soil maintain its productive capacity unless a regular supply of power in the form of phosphoric acid and potash be available. Legumes, although independent of an artificial source of nitrogen are nevertheless very dependent on an easily assimilable supply of the other plant foods."

Farmers can obtain copies of this and other bulletins, treating of this important subject, by applying to

GERMAN POTASH SYNDICATE,
Temple Building, Toronto, Ont.

the gentlest one without having a lead staff snapped into the nose ring. This insures safety.

If there are no good dairy bulls in the neighborhood, it will pay any dairyman with more than half a dozen cows to own a purebred male. He can be purchased reasonably cheap as a calf; outside service fees will pay his keeping, and good grade dairy stock can be secured through him. The advantages of owning your own bull are that time is saved in taking the cows away for breeding and service can be secured at any time.

The bull to be strong and vigorous and of good use must be fed, sheltered and given exercise. The stall should be roomy and strong, but not boarded up tight. The animal will be better contented if he can see out and have plenty of light. A lot or small pasture for open exercise is necessary for health and vigor. Clean stall and good general sanitation should not be neglected. An unhealthy or filthy bull will soon mean a diseased herd.

Where the regular pasture is fenced "bull tight," and no women or children ever pass through it, the bull may possibly be allowed to have this large area for grazing and exercise. He is more contented in pasture with some company—other bulls, pregnant cows or calves.

For exercise, some dairymen have the old fashioned tread power for running the separator or other light machinery. The bull is given daily exercise in this mill, just enough to keep him healthy and strong.

As to feed, the bull requires a lot of nourishment such as is good for the cows, but not so much as for a cow giving milk on full feed. It is a mistake to feed this breeding animal only hay or fodder in winter. Good clover or alfalfa hay, sillage and a small amount of corn, oats, oil meal and bran should constitute the daily ration. The young, growing animal should be fed rather more liberally and be allowed greater freedom for daily exercise than the mature bull.

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Here is Your Chance to Obtain FREE a High-grade RING
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Just send us your name and address and we will send you postpaid 15 packages of our Marvel Bluing to sell at only 10c per package. We send a beautiful gold finished Turquoise Brooch to give to every customer who buys a package from you. When sold send us the money, only $1.50, and we will send you absolutely free, one of these beautiful gold shell rings. Address Dept 125
MARVEL BLUING CO., Toronto, Ontario

Fall and Winter Pigs.

Whether to have fall and winter litters or not depends largely on conditions. If you have warm, dry quarters, plenty of good straw or litter with which to keep the pigs comfortable, they can be grown during the winter and fattened at a profit at present prices, i e, 10 to 12 cents a pound for pork dressed, especially if skim milk is used in connection with wheat middlings (not reground bran). Don't over do the feed question. Just feed heavily enough to keep them growing good until four months old, then begin to gradually add corn meal to the ration until at five months of age the pigs are receiving three parts corn meal and two parts wheat middlings and one pound of this mixed grain to three pounds of milk until you are ready to butcher them. They will stand up under such feed better than if you had fed a larger proportion of corn meal.

However, the corn meal can be safely increased for the last twenty days just previous to killing. A few roots should be fed twice each week during the entire period, as a conditioner, also some earth should be furnished the pigs once a week, at least. Keep them clean from vermin also dry and warm. Under such conditions they should dress 150 pounds each at six months of age. At present prices of grain $6 to $7 worth a pig should finish them. This leaves a good margin for milk, labor and investment.

Now, if you lack above conditions and can't supply them, don't try to have fall or winter pigs, as the result would be stunted runts, hence lack of profit. The boar hog should be fed wheat middlings, oats and a little whole corn scattered in a chaf litter in whice he can exercise. A drink of milk or water should be furnished twice each day with the ground oats and middlings equal parts mixed in it. Feed well enough so as to produce thrift and growth but do not force or overfeed. A yard should be furnished in which he may exercise. He should never be allowed to run with the herd. It is best never to use the boar until one year old or over, as otherwise you weaken his constitution and he will lack vitality, hence produce disappointing litters of pigs. Furnish dry, warm sleeping quarters. A hog can stand cold better than damp. A dry bed is always essential to thrift.

Winter Ventilation.

Avoid direct draughts, either over or under the confined animals, in front flank or rear.

Small openings under the doors may admit a draught, and the effect of such a passage of air may best be realized by standing still in it yourself for a few minutes.

Since breathed and re-breathed air has been robbed of its life-giving oxygen, an improperly ventilated barn or poultry building is not only unhealthy, but is colder than a building amply ventilated, where the foul air passes out and the fresh air enters.

During bitter cold, stormy or very windy periods one should have some means at hand for reducing the size of the openings for ventilation, or tack old gunnysacks over them, lest the extremely low temperature or the strong draught run the ventilation to detrimental extremes.

Diseases quickly spread through a whole herd or flock where their quarters are neglected as to proper ventilation, since the vitiated air will contain disease germs which, floating about the stalls, will be inhaled by all of the stock. This danger is still more potent since the advent of the dreaded tuberculosis among dairy herds.

Simply let the ventilation openings be in front of the stalls and a little higher than the animals' heads. The vitiated air thus will rise and pass out readily at one end, while the pure, fresh air will enter at the other, and by the time it reaches the stock in their stalls it will not be in the nature of a draught, but at the same time will be slightly warmed before entering the nostrils of the animals.—M. A. Coverdell.

Judge

Quaker Oats by the flavor. Taste tells you the difference when you get the cream of the oats.

Choice Oats are sifted 62 times to pick out the rich, plump grains. We get but 10 pounds of Quaker Oats from a bushel.

These choice grains, when prepared by our process, supply the utmost in oatmeal.

The richness and flavor, found in no other brand, has made Quaker Oats the world's breakfast.

It is worth your getting. For Quaker Oats, despite this quality, costs but one-half cent per dish.

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c } Except in Extreme West
Regular size for city trade, 10c }

The Quaker Oats Company

PETERBOROUGH, ONT.

Look for the Quaker trade-mark on every package.

Points on Wintering Sheep.

The question we sheep men will soon be asking ourselves is, "How can we bring our flocks through the winter in such a way that they will produce a strong, healthy crop of lambs and a good fleece of wool?" These are the two main products we must depend on for our profits.

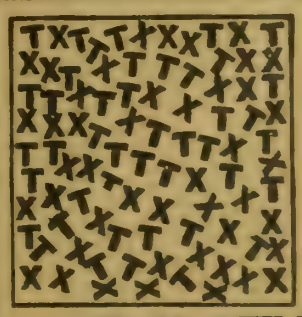
Some of the requirements to success are a healthy flock, suitable pen, good, wholesome food, fresh water and plenty of exercise.

The pen should be cool, free from draughts, light and of good height. The sheep should have free access to a sheltered yard. Nature has provided them with a coat that will protect them in any kind of weather (except wet, when they will stay inside themselves), and they will often be seen lying quite comfortably outside in the coldest weather.

For rough feed we find that nothing takes the place of clover hay, and when this is available very little else is needed. Good pea-straw may be fed the first part of the winter with good results.

When straw of any kind is fed it should be accompanied by a light ration of grain or roots, which should be increased as lambing time approaches. A gallon of oats to 10 ewes and two to four pounds roots would do very well for ordinary wintering.

The question of exercise is a more difficult one to solve. If left to themselves sheep are inclined to eat their feed and lie down again, especially where no yard is provided. A little refuse from the fanning mill, if fed in troughs on the gangway, or any bare spot, where the in-lamb ewes may be taught to go the longest way to it when their feed is being placed in the racks, will prove a benefit and keep the sheep from getting their fleece dirty with chaff, besides finding a market for all foul weed seeds.—O. Turnbull.



1912 CONTEST

COUNT THE Xs AND Ts

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And many other prizes according to the Simple Conditions of the Contest (which will be sent).

This is a chance for clever persons to win Cash and other Prizes with a little effort. **Count the Xs and Ts in the Square,** and write the number of each that you count neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. Try at once.

SPEARMINT GUM & PREMIUM CO., Montreal, P.Q. Dept. 19

Laws Relating to Butter.

The Dominion laws which apply to dairy products are, in some respects, more stringent than similiar laws in any other country in the world. The manufacture, importation or sale of oleomargarine, butterine, or other substitute for butter manufactured wholly or in part from any fat other than that of milk or cream is absolutely prohibited. The manufacture of adulterated, process or renovated butter is also prohibited. The legal limit of water in butter is 16 per cent. The law also prescribes that "No person shall brand or mark the word 'creamery' or any combination of words which includes the word 'creamery' upon any box, package or wrapper, containing butter, nor sell or offer, expose or have in his possession for sale any butter contained in any box, package or wrapper upon which the word 'creamery' is branded or marked unless the butter contained in the box, package or wrapper consists wholly of creamery butter manufactured at one place, except as to butter in rolls, prints, or packages of less than 25 pounds in weight not intended for export and manufactured in a building with the appliances used in creameries."

The effect of the law relating to the branding of butter is that practically all butter made on farms must be branded, if marked at all as "dairy" butter and sold as such. Several parties have recently been prosecuted for violations of this provision of the law. A fine was imposed on the Montreal Dairy Company, Montreal, on February 11 for branding "dairy" butter as "creamery." Charles Dumais, of Montreal, was fined $400 on February 22 for carrying on the business of manufacturing oleomargarine. This was the first attempt in Canada, so far as is known, to carry on the illegal manufacture of oleomargarine. It is the policy of the Department to enforce these laws as strictly as possible. An inspector is constantly employed watching for violations.—J. A. Ruddick, Dairy and Cold Storage Commissioner, in "Census and Statistics Monthly."

A Great Help to Alfalfa.

Recently we passed a nice field of alfalfa nearly ready for a second cutting. The stand was good and the foliage very green. We were very much surprised to learn that the field had never been artificially inoculated. We had passed the field many times last summer and had thought then that it was a failure.

The owner cut it twice last year but received from both cuttings less than what one cutting will now make. In the fall there were big bare spots in the field and some farmers would have turned the crop under and would have had nothing to do with alfalfa again. The owner, however, did not do this. He probably had read what Mr. Wing, the alfalfa expert of Ohio, said of his experience. So in the fall he applied manure to the bare spots and this year he has been repaid.

Mr. Wing says: "From experience I feel sure that I had rather take a poor piece of land, well manured, for alfalfa growing, than a naturally rich piece of land with no manure." In another part of his book he says:

"I once saw a field sown in alfalfa in Canada that was so well inoculated that in six weeks after the alfalfa was sown, the tiny nodules were found on the roots and this field was the first sown in that neighborhood, nor was it artificially inoculated. It had simply been well manured. In other states I have seen the same curious results. In Iowa, on the experiment station farm at Ames, a field was sown in alfalfa. All the seed was sown the same day and in no way was the treatment of one part of the field different from the treatment of any other part, yet there was secured a fine stand of thrifty alfalfa on one side of the field and very thin and poor alfalfa on the other side. The explanation seemed to be that on a previous year one side of this field had been manured and sugar beets grown thereon. Yet all the field seemed very fertile, and Director C. F. Curtiss thought that planted in corn all of the field was rich enough to grow 80 bushels to the acre. But that addition of some stable manure a year or two previously made one side of the field eminently fit for alfalfa, while the other side remained in unprofitable condition so far as alfalfa was concerned."—Indiana Farmer.

Sound Dairy Sense.

It costs no more to feed and maintain the best milking cow than it does the poorer ones, and when the net returns to the farmer are taken into consideration there is no comparison as to which is the most profitable. As we proceed in our endeavours to become better farmers we must eventually realize that a good cow on the farm is one way of getting better returns from our high-priced lands. Having established a herd of high-grade dairy stock, it is the first duty of the farmer to learn the best methods of feeding for economy and milk production.

Keeping the cow herd in a healthful condition is another lesson which the farmer must learn. In the past there has been too much trusting to luck in this regard, and as a result the spread of tuberculosis in dairy animals has been more or less alarming in some states. Still the dairymen are the first to scream persecution whenever the state or city authorities begin a crusade to clean up the dairy herds.

Ultimately it will be to the dairymen's advantage to weed out the animals which are lacking in robust health. By breeding up the herds and practising latest sanitary methods of dairying they will keep the well-bred cows in a sound condition of health.

Work the Stallion.

What are you going to do with that big, fat stallion, now that the breeding season is over? Going to leave him in the stable to fret and contract bad habits, turn him out to pasture and let him fight it out with the barbed wire or take him in to the harness maker and have a good collar fitted to his shoulders? Is there any reason why he should not pay his way like the rest of the horses? He is the most expensive horse on the place and therefore he owes you more. Make him earn it. The better bred and the more high priced he is, the better he should work. Nothing will keep him in better health or temper than work. It will also insure a larger percentage of foals and will show the farmers around you that your horse is made of the right kind of stuff. Let him be seen in the field doing the kind of work that is expected of his progeny. See that his harness manners are good and he will be admired both for his quality and utility. Nicely groomed and neatly hitched he is bound to attract favorable attention. Give him a chance to advertise himself and if he has the right kind of stuff in him he will make good. An idle horse is as useless as an idle man.

Species Used for Pulpwood. 1910.

Four species of wood were used to make up the six hundred thousand cords worth three million, five hundred and eighty-five thousand dollars, that were used by the pulp mills in Canada in 1910. These woods were spruce, balsam, hemlock and poplar, as ascertained by the Dominion Forestry Branch in a report soon to be published on the pulpwood consumption. The percentage of spruce, which has always been the chief wood used is gradually becoming less, although still forming over three-quarters of the total pulpwood consumption. In 1908, spruce contributed 87 per cent of the total; in 1909, 83 per cent; and in 1910, 78 per cent. The importance of balsam, the second species as a pulpwood, is increasing. In 1908 it formed 12 per cent of the total; in 1909, 16 per cent; and in 1910, 20 per cent. Another species which is rapidly becoming more important is hemlock, over five times as much being used in 1910 as in the year previous. The use of poplar fell off over one-quarter, a consumption of only three thousand, six hundred cords being reported for 1910. Spruce was the most expensive species at $6.05 per cord or 64 cents more than in 1909. During 1910 balsam became reduced 55 cents to $5.71. Hemlock remained at about the same price for the two years and is still the cheapest species. In 1909 it was $4.51 per cord and in 1910, $4.43. Poplar has increased eleven cents during the year, the price being $5.92 in 1910. The prices of pulpwood are affected not only by the properties of different species, but also by the conditions under which bought (whether in open market or on limits), and by the distance of the wood from the point of consumption.

Save the Farmer Boys From the City.

Fall work is at an end, crops have been bountiful and the harvesting and preparing for spring have meant long hours of hard labor. But now there is a lull in farm activity and the boy of from seventeen to twenty-one years of age, who has worked hard all the season begins to feel discontented. He begins now to feel as himself that he is not needed at though he wants a change and thinks of going to the city to work in some shop or mill.

Why does the young man from the farm wish to leave the home and take up strange work in a strange place? Let us look at the matter from the boy's point of view. He has worked in the field from morning until night from April to November. He has done the heaviest part of the manual labor. Certain work he has done because it is necessary to ensure the success of the crop. He does not see the reason for his labor. His father manages the work and the boy stands in much the same position as the hired man but usually receives no wages. When he wishes a dollar to spend he must ask for it and it is a very hard thing for an independent young man to ask for money. In the season of relaxation following the rush of work the boy wishes to enjoy his leisure in his own way. A new suit of clothes that he may attend an entertainment or dance; for the young man of to-day must be well dressed whether he be in the country or in town.

The day when anything in the way of clothes—the cheapest—would do for the boy is past. The electric car and steam railway have brought the city almost to the farm gate and the young man will be so dressed that he may hold up his head and feel the equal of his city-bred cousin.

The city gives the boy the chance of earning his own money and of spending it in his own way. He says: "I will go to the city and work in the shoe shop this winter." But if he goes to the city for the winter he will not return in spring, for, never deeply interested in the work of the farm, he will easily persuade

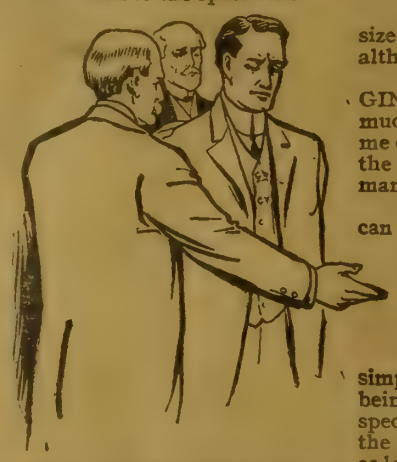
DOCTORS AFRAID TO OPERATE

Could Not Remove Stone From The Bladder. Gin Pills Enabled Him To Pass It.

JOLIETTE, P. Q.

"During August last, I went to Montreal to consult a specialist as I had been suffering terribly with Stone In The Bladder. He decided on an operation and was assisted by another doctor. They said the calculus was larger than a bean and too hard to crush, and that they could not take it out.

I returned home suffering greatly, and did not know what to do, but was recommended by a friend to try GIN PILLS. I bought a box and found relief from the pain at once. I took a second and third box of GIN PILLS after which I went back to the specialist.



THEY COULD DO NOTHING FOR HIM

He told me the calculus was reduced in size, still he could not relieve me of it, although he tried for two and a half hours.

I returned home and continued to take GIN PILLS as they reduced the pain very much, but I did not expect they would relieve me of the stone, but to my great joy, I passed the stone on October 3rd, and am now a well man and very happy.

I am sending the stone to you so that you can see for yourself what a great work GIN PILLS did for me. GIN PILLS are the best medicine in the world and because they did so much for me, I will recommend them all the rest of my life".

J. ALBERT LESSARD.

Isn't it wonderful? Just think of these simple pills, that even children can take, being able to perform what the greatest specialists in Canada could not do. Surely, the days of the miracle have not passed away, as long as we have Gin Pills. These wonderful pills dissolve stone in the bladder or kidneys because they are a natural solvent for uric acid, which causes calculus. If GIN PILLS are not sold in your neighborhood, send us 50c. for a box or $2.50 for 6 boxes. Sample free if you write us mentioning this paper. National Drug and Chemical Co. of Canada Limited, Dept. M F Toronto.

MANGA-TONE BLOOD AND NERVE TABLETS are especially for women and girls to make them well and strong and rosy. 50c. box. 113

home and he will stay and be his own boss.

Now, "fathers," in a few years your hands will not be so steady, your steps will not be so firm as they may be now and you will regret more than ever that your boys are gone, that there are none of your line to take your places and carry forward with even greater ability the work you have but just begun; and, "fathers" have you not dreamed of the symbol, --Father & Son," upon your letter heads?

Then pay the boy wages—spending money. If he is the right kind of a boy he will not ask too much. And pay it before he asks for it. Then, "fathers," you are in a rut. Your cycle of years is as a treadmill, always running in the same groove, maybe worn by your fathers. Jump out of that rut, get your bearings and go ahead on an advancing line, for the science of agriculture, farming, never stands still. Then send that young man to a school where he may learn why fertilizer makes crops grow, why he uses one grade for corn and still another lor potatoes. Let him mingle with other young men who are, with him, engaged in studying nature, as she will aid him in farming for profit.

If you are not able to send the boy for a longer time, the agricultural schools all offer short courses of one or two months in which one may study dairy problems or poultry management or other points of special interest to the man who conducts his farm for a revenue.

Let the boy rub shoulders with other boys, earnest and interested, all tending toward the same goal and some day, Mr. Father, you will perhaps see your dream of partnership come true; and when you are compelled "to lay down your implements on earth, you may enter that paradise, not made with hands, eternal in the heavens," and feel that your work has been well done, and that the future of agriculture is secure.—Clarence R. Leland in Maine Farmer.

Here we have a young man's view of a most important question well set forth. The time is not so far distant when we experienced the feeling that a small sum paid as a just compensation for labor well performed on the farm had a double value. The father who freely gives the son what he can afford, even though it be little, when the son has been diligent and faithful, will find that still better effort will be secured and what is better, a genuine interest will be taken in the work and soon more liberal payment will be possible. The boy is a man in miniature, and should be treated fairly.

Pure-Bred Bulls on the Farm.

The number of pure-bred bulls in use on farms is far below what it ought to be; still farmers are taking much more interest in grading up their cattle than they did a few years ago. Especially is this true of the dairy farmers who are depending upon their milk cows for a steady cash income. Many of these men are also beginning to realize that so long as they are going to milk they might better milk good cows—cows that produce from 200 pounds and upward of butter fat a year.

The farmers with a herd of from fifteen to twenty cows cannot use a bull more than two, or at the most three years, as he must avoid inbreeding. If a bull is bought at the age of from 12 to 18 months he must be disposed of at 4½ or 5 years—at a time when he has reached the stage of greatest usefulness. Such bulls, if they are good breeders, ought not to go to the block; they should be retained for service on other farms. The average man, however, finds great difficulty in selling a bull that he has used for a number of years, since there seems to be a prejudice against buying a second-hand bull.

The real breeding value of a dairy bull cannot be determined until his heifers come into milk; consequently a bull 5 years old should be a safer animal to buy than a young one that has never seen service. We would advise our readers never to let a chance pass to buy a good dairy bull that has been in use in some neighbor's herd for two or three years, provided the bull has proved himself to be a good sire. You will be able to buy a bull of this kind in many cases for a little less money than he costs as a youngster; but even if you cannot do that—even if you must pay almost as much as the original purchaser paid for him as a calf—provided his offspring has shown him to be a good sire—buy him anyway. Not all bulls that look well prove to be good sires. A bull may have the right conformation as a youngster; he may appear to be almost perfect in every detail, and may even come from high-producing ancestors, and still he may not prove to be as good a sire as some other bull with apparently fewer individual qualities to recommend him.

Don't be afraid of old bulls. Of course, there are some precautions to be taken when purchasing a bull from another herd. Be sure that there is no abortion in the herd. Under no condition buy a bull from a herd in which this disease has existed during the last two years or so, but where the herd is healthy and the young heifers—the offspring of the bull—are what you think dairy heifers should be; then don't hesitate. You can only use a bull three years yourself, and a 5-year-old will be none too old when you must sell him. He will then bring as much on the market as he would as a 3-year-old, and you have had the benefit of using a sire the breeding power of which you have had an opportunity to observe before buying.

Some of our best dairymen prefer to buy bulls well advanced in years for the very reason mentioned above. Some also contend that an old bull is likely to be more prepotent than a young one, and that he will transmit greater vigor and vitality to his offspring. Whether the latter is true or not, it is certain that a bull from 5 to 8 years old is as valuable in that regard as one younger.—W. M. Phillips.

Your Life Partner.

The following story appeared in a recent issue of Successful Farming. It is so applicable to conditions that are far too common that we pass the article along to our readers:

They sat in the office of the man who drew up papers for folks.

"We've decided to separate," the man said, "and we want you to get up the papers."

Something like a sob came from the woman's lips and she drew the baby closer to her side.

The lawyer fumbled about among the papers on his desk, then took off his glasses and said quietly, "I wish you would tell me all about it." Then the little woman broke in:

"We would like to tell somebody about it—I would, anyway. You see, he's a good man, but—he goes right on and does things without letting me know. Buys horses and things and mortgages them, and somehow doesn't pay for them.

"If he'd only tell me.

"So that we could talk it over, seems to me we might get along better. I expect the farm will have to go pretty soon. The man that has the mortgage says he can't wait much longer. You couldn't blame him; we haven't kept the interest up for a good many years.

"And just yesterday he came home from an auction with a lot more of old bobsleds. I don't know what he is going to do with them.

"If he had only told me he was thinking of getting them, maybe I could have said something to make him see it was no use. But he didn't.

"He never does. He thinks women don't know anything about such things. I know I don't understand all about business, but I would like to know."

"And so—"

"Well, do you really think a woman's head ought to be bothered with such things, 'Squire? Honest, now."

The man leaned forward and looked expectantly into the face of the man of the law.

"I'll tell you what I do think. If I were you and had a wife as good and as kind and sensible as yours is, I should want her to counsel with me on all matters of business. Don't you think she has a right to do so?

"She is your partner in life. You made her so when you married her. You have not made her so in fact. She has not been given her share of the burden to bear, and she ought, to take her half of the load. Why don't you let her?

"Now, I'll tell you what I would advise you to do. Not separate, but get closer together.

"Give your wife what she wants with all her heart—her fair share of the load to bear. Talk things over with her. Let her be really a partner to you.

"Don't buy bobsleds and old horses without letting her know about it.

"I know there is a temptation to bid on such things when we get a bit interested. Hold still when you feel that fire in your heart. Think of Mary and keep still."

"Do you suppose I can do it, 'Squire?"

"Of course you can, Sam! I'll go with you and stay right by you if you'll let me."

And the 'Squire did not write the letters of separation. Another document was written in the book of hearts of that man and woman. Just such a document should be signed, sealed and delivered between every man and wife in all this land.

The Use of Stable Manure.

It is a well known fact that no system of crop rotation will restore to the soil the potash and phosphoric acid removed by crops. Unless these elements that are removed be returned in some manner the soil will inevitably become too poor for a very ambitious man to cultivate. Common stable manure is conceded to be one of the best fertilizers for general purposes, and it is to be deplored that much of this valuable plant food be dumped away as so much trash, or exposed to the leaching rains even when intended for use. If it can make poor soil rich it can certainly maintain the fertility of rich soil. It is not insisted that the use of it would be advisable in all cases, since the fertility of the soil and crop to be raised should be the governing factors, but it is safe to assert that all stable manure can advantageously be used in any general farming community.—H. B. Fishburn.

VALUE $325.00

MAGNIFICENT PIANO

—AND—

$100.00 in Cash

GIVEN AWAY ABSOLUTELY FREE

FOR CORRECT ANSWERS IN THIS PUZZLE CONTEST.

1st PRIZE.— MAGNIFICENT UPRIGHT PIANO AND STOOL TO MATCH. VALUE $325.00.
Finest action and tone, beautiful hand polished Spanish mahogany case. Fit for the home of a King and the greatest prize ever offered in a contest of this kind. (It is on view any business day from 9 to 5 at our factory.)

2nd Prize	$25.00 cash
3rd Prize	$15.00 cash
4th Prize	$10.00 cash
5th to 9th, 5 Prizes of $5.00 each	$25.00 in cash
and 25 prizes of $1.00 each	$25.00 in cash
TOTAL CASH PRIZES	$100.00

THE PUZZLE.

GEPNINIW ORTONOT
NOTRAELM XFAILAH

The jumbled letters given above represent the names of 4 well-known Canadian Cities. To help you solve them we have underlined the first letter in each name.

The first is Winnipeg, now guess the rest and send us your solution of all four names in your very neatest and best handwriting.

CONDITIONS:
1. This contest is absolutely free. No one is asked to spend a cent to enter.
2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in the contest are awarded according to handwriting and general neatness. Be neat and you may win a good prize.
5. Judging will be done by three gentlemen having absolutely no connection with this firm. Their decision is to be accepted as final.
6. There is a simple condition to be fulfilled which we ask of all contestants. As soon as your answer is received we will write advising you if it is correct and telling you of this condition.

Address INTERNATIONAL MANUFACTURING COMPANY, Dept. 25 TORONTO, ONT.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

WANTED pork, dressed poultry, pigeons, eggs, rabbits, etc., fresh stock. Prompt returns. JOHN HOPKINS, established 1867, St. John, N B.

FOR SALE—Clydesdale Stallion, Kings College, 8 years old, imported from Scotland in 1907. Apply to R. M. MENZIE, Midland, N. B.

FOR SALE—Pure Bred Clydesdale Stallion, rising 3 years, great grandson of "Baron's Pride." Apply to F. E. SHARP, Midland, Kings Co., N. B.

FOR SALE.—Three pure bred Jersey bulls, one year to fourteen months. Sired by imported Fereor. A few young heifers. Write H. S. PIPES & SONS, Amherst, N. S.

FOR SALE, going out of business. 25 registered Cotswold ewes, all served with a first class ram. Aso a few rams. Prices right. DONALD INNES, Tobique River, Victorir Co., N. B.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; good pay; work sent any distance, charges prepaid; send stamp for particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

FOR SALE—1 Holstein Bull, four years; 1 Holstein Bull Calf, seven months; 1 Holstein Bull Calf, eight months. Dams records 13000 pounds. No better stock. Write for prices.—D. R. NICHOLSON, Coxheath, N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc. Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

PRIZE POULTRY FOR SALE.—Buckeye cock, won 4 firsts including first A. O. V., Maritime Winter fare, $3.00. 3 Buckeye Cockerels, including prize winners $1.50 and $2.00. 4 Columbian Wyandotte Cockerels, good ones, $2.00 each. Write C. R. MACKAY, Box 239, Pictou, N. S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers aud a few cows. Correspondence solicited. Inspection invited.
W. L. ETTER, Prop.
Shubenacadie, N. S.

FOR SALE AT ONCE

75 Barred Plymouth Rock, Cockerels and Pullets; two yearling pens, cockerel and pullet matings, also a few Light Brahmas.

Cockerels, $2.00 to $3.00 each; Pullets, $3.00 per pair.

E. T. JORDAN
Kentville, N. S.

Bloomfield Stock Farm.

We have in stock and for sale at present:—
25 Prime Shropshire Ewes
10 Ewe Lambs
10 Ram Lambs—a superior lot registered—also one Ayrshire Bull—2 years, a prize winner, one Ayrshire Bull, 14 months, and several Bull Calves—all registered and as good as the best. Prices right.
Write or Call
JOHN McDONALD & SON,
Shubenacadie, Hants Co., N. S.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

CRAIG BROS., Amherst, N. S.

Advertise in the Maritime Farmer.

Animal Individuality.

Men will forget that there is such a thing as quality in stock or poultry or at least seem to undervalue it. A hen that is sub-standard in shape and color cannot be expected to produce show birds. I have known farmers to start out to find out which was the better of two breeds of hogs by raising a litter of each together. Maybe one sow might weigh about five hundred pounds and be chucked full of quality. The other sow might weigh less than two hundred and be scrubby in every way. Nevertheless the farmer performs his experiment and is satisfied.

Would a heifer from a cow that produced six quarts a day be likely to make as good a dairy cow as the daughter of a twenty-four quart cow? A farmer once visited a famous herd of hogs. He did not seem to appreciate what made these hogs valuable and asked why his hogs were not worth as much. The breeder replied that it was in their individuality. The farmer turned up his nose at this as would a great many other farmers. But the individuality is all there is to an animal to commend him. The selection of these good animals is what has brought flocks and herds up to their present high standard. Your esteem for this matter of individuality will not determine the value of your flocks and herds and the size of your profits.—E. J. Reed.

Winter Care of Sheep.

With many farmers the sheep are much neglected in winter. One reason for this is that sheep will live with but little attention, but while they may live they come through the winter in poor shape and the ewes are not in condition to care for their lambs even if they do get liberal feeding after the lambs come.

The most frequent cause of ewes not owning their lambs is that they have been neglected through the winter, they are certainly run down and have no milk for them and what use has a ewe with a lamb when she has no milk for it.

The fleece of a neglected sheep is also light and of poor quality. If it pays to keep sheep at all it certainly pays to keep them well. Then another point in sheep feeding is that sheep should have a ration suited to their nature. While most of the food should be of a bulky nature it should furnish plenty of both protein and of mineral matter. The fleece requires a large amount of protein and of potash to grow it as it is largely made up of these substances. Some corn, oats and wheat bran can be fed to advantage to the sheep. Pea straw and clover are both good feeds for sheep but probably there is no other farm animal that will respond as readily to some green pasture such as early sown rye or winter oats. When these are not available such vegetables as turnips and mangles can be fed to advantage to the sheep.—Shepherd.

Annapolis Valley Fruit Farm

A most wonderful bargain, near depot, neighbors and school, rich fields, wire fenced, gentle southern slope to water front which it borders for 800 feet; splendid boating, bathing and fishing; 20 acres; orchard of 350 fine trees, 1 1-2 acres berries, 2 story, 10 room painted house, good barn, carriage and tool shed; grand view of beautiful orchards; to settle affairs quickly the price is only $2900, half cash including cow, pigs and long list valuable farming tools. E. A STROUT FARM AGENCY, WOLFVILLE, N. S

Forest Glen Stock Farm.
Pure Bred Ayrshire Cattle.

Nine Cows. four to eight years. Five Bull Calves, six to eighteen months. Seven Heifer Calves, eight months to two and a half years. Price and full particulars on application to

THE S. H. WHITE CO., LTD.,
SUSSEX, N. B.

Great Clearance Sale
of used
Pianos, Organs and Gramophones

It's our Semi-Annual Clearance Sale of used Musical Instruments. Every Instrument has been thoroughly gone over in our own work shop, and has been put in first-class condition, cleaned and polished. These sales afford music lovers an unusual chance of securing a good Instrument at an extremely low price.

Here are some of the Bargains:

1	Columbia Gramophone,	Former Price	- -	$ 35	now	$ 15
1	Edison Phonograph	" "	- -	35	"	15
1	Drop Head Sewing Machine	" "	- -	45	"	15
1	Gramophone	" "	- -	45	"	20
1	Bell Church Organ	" "	- -	150	"	60
1	Karn 5 Octave Organ	" "	- -	125	"	75
1	" 6 " "	" "	- -	160	"	90
1	Uxbridge Piano	" "	- -	300	"	150
1	Shirmer Piano	" "	- -	375	"	200
1	Karn Piano	" "	- -	400	"	250
1	J. A. McDonald Piano	" "	- -	375	"	250
1	Morris Piano	" "	- -	400	"	250
1	Mason & Risch Piano	" "	- -	450	"	350

Full particulars will be given upon application. Arrangements can be made to pay for them on very easy terms. Any of these items will be sent anywhere on approval.

Write today and make sure of getting one of these bargains.

J. A. McDonald Piano and Music Co.
Eastern Canada's GREATEST MUSIC HOUSE
46 Barrington Street, HALIFAX, N. S.

DON'T LET THIS GET AWAY FROM YOU

The Maritime Poultry Supply Co., Moncton, N. B., can fill your orders with satisfaction. Send for Catalogue.

CALVES WITHOUT MILK

Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed.
No mill feed The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.

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Plants that Grow.

Strawberries, Raspberries and Blackberries in many varieties. Apple, Pear, Plum, Cherry and all Nursery Stock.
Prices Low, Quality Best.
Also Bees and Bee-keepers' Supplies. Price List Free.
E. L. COLPITTS,
Petitcodiac, N. B.

FARMS WANTED.

We are now preparing copy for Farm catalogue No 3. If you wish to sell this is your opportunity. Listing will cost you nothing. Correspondence invited.

ALFRED BURLEY & CO.,
46 Princess St., St. John, N. B.
Farm Selling Specialists.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West, N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

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Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
Highfield Farm Sackville, N. B.

FOR SALE.

Columbian Wyandotte, cock and hen, both prize winners, the pair $5.00. S. C. White Leghorn, cock and hen, both winners, $8.00.

200 egg, Peerless Incubator used two hatches, too large for us, will sell cheap.

120 egg, Chatham Incubator, good hatcher, $10.00.

ORCHARD HILL FARM,
Brown's Flats, N. B.

Read's White Wyandottes

Made a clean sweep at the Maritime Winter Fair, winning every first prize in both the open and utility classes. Several specials the late Hon. W. T. Pipes silver cup for the four best birds in the show. E. N. Roades, M. P. silver cup for the best two cockerels and best two pullets in class 122.

I have a lot of nice breeding cockerels that will improve any ones stock, will sell for $2.00 if taken now. Order from this add. A. C. READ, Tidnish, N. S,

---

An Advertisement in the Maritime Farmer will sell your surplus stock.

Broad View Farm

Now offers for sale a lot of choice pure bred Barred and White Rocks, Rose Comb Reds, and Buff Orpington Cockerels and pullets at $1.00 each to make room. Order now.

EGBERT DeYOUNG,
Box 120, Dartmouth, N. S.

For Sale--Ayrshires and Guernseys.

My Ayrshire Bull is imported, his dam had a record of 12,840 pounds, testing 3.9 in 45 weeks. A number of young Ayrshire Bull calves, females any age.

I am still a breeder of Guernseys, and have a few aged cows that I will dispose of.

Chester White Pigs. I have several that are ready for delivery from 4 weeks upwards, both sexes. Correspondence solicited.

J. FRANK ROACH, 'phone 111,
"Sunnyside Stock farm," Sussex, N. B.

Hillside Stock Farm

FOR SALE—Four Ayrshire yearling bulls, fit for service. Also two imported three-year-old Clydesdale fillies, sired by "Moncrieff Marquis" and "Pride of Blacon," both of which horses have been winners in Scotch show rings. These fillies weigh about 14 cwt., and are good value.

PRESCOTT BLANCHARD,
Truro, N. S.

Rosebank Farm Jerseys

Young Bulls for sale by the imported bulls, Pogis 40th of Hood Farm and Foxhall's St. John O'Dreamwold Champion bull at Halifax and Chatham also headed 1st prize herd on the circuit. JOSSELYN & YOUNG
St. John, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

CEPHAS NUNN
Lot 33 Winsloe Road, P. E. I.

Breeder and Importer of Shropshire Southdown and Hampshire Sheep.

Some good animals of either sex of the above breeds for sale at reasonable prices. Inspection invited.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 1 Cockerel and 2 Pullets. $4.00 per Trio.

S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 K. C. R. I. Red Cockerels. $2.00 each.

These must be sold to make room for Breeding Pens.

W. H. HENRY,
Shubenacadie, N. S.

Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

FOR SALE!

We are offering at a very low figure the Holstein Bull (Victor of Fairmead) rising four years old, weight over 1800, Sire Jacob Van Voran, (twice Grand Champion, Charlottetown, over all Dairy Breeds), Dam Beauty of Fairmead, a Show Cow. "Official" record made five days after calving, 455 lbs. 14 oz. milk and 171.2 lbs. of butter in seven days—gave 12000 lbs. of milk this year on ordinary feed.

This bull won 2nd in class of five at Charlottetown this fall, and is an exceptionally fine animal in every way. Write for particulars to

LEA & CLARK,
Victoria, - - - P. E. I.

Municipal Bonds Safer Than ANY BANK

can be bought to yield 4 1-2 per cent as against 3 per cent for Savings Bank interest. Write us for full information about how to make your money earn more than savings Bank interest.

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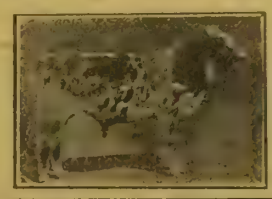
Bank of Montreal Building, ST. JOHN, N. B.

MAPLE FOREST STOCK FARM.

YORKSHIRE SWINE.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

Glen View Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns.

Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

GLEN VIEW POULTRY YARDS, - SUSSEX, N.B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S

FOR SALE.

Buff, White and Black Orpingtons, and Brown Leghorns bred for utility as well as for exhibitions. Look up my winnings at Halifax, Pictou, New Glasgow, and at the Amherst Winter Fair. Stock and eggs for sale. Write and tell me what you want, and I will give you exact description and price.

C. H. WISENER,
Pictou, N. S.

LET US SHOW YOU HOW EASILY YOU AND YOUR NEIGHBORS CAN HAVE A TELEPHONE SYSTEM OF YOUR OWN

YOU—you and your neighbors—would have a telephone system for your own community, if you only realized how easily you yourselves could construct it and get it going. If you knew, in detail, how you and the people around you could form, own and control a local, self-maintaining company, for your own use and convenience, you would have such a system. There would be a telephone system in your community to-day if you knew how easily you and your neighbors could build every foot of the line and install every instrument yourselves—and especially if you realized that you do not need very much capital to do it either. Now, there is no reason why you should not know all these facts; for we stand ready to give you, for the mere asking, every bit of this information, provided only that you are sufficiently interested in the subject to write and ask us for it.

The Northern Electric is the instrument on the wall of nine out of every ten telephone users in Canada.

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"HOW to Build Rural Telephone Lines," is an illustrated, cloth bound book of one hundred pages, full of a carefully indexed mass of information on rural telephones. This book tells everything ; with it before you, you can organize your own company and construct your own line. It tells you absolutely everything you need to know, step by step, as you go along. There is no other book in existence that deals so thoroughly with every vital, essential fact. Remember, this book has cost a lot of money and careful study to prepare. We really ought to charge for it. However, we send it free on request—but ONLY on request. To get it you have to send us the coupon and thus signify that you are really interested. The book is too valuable to distribute haphazard.

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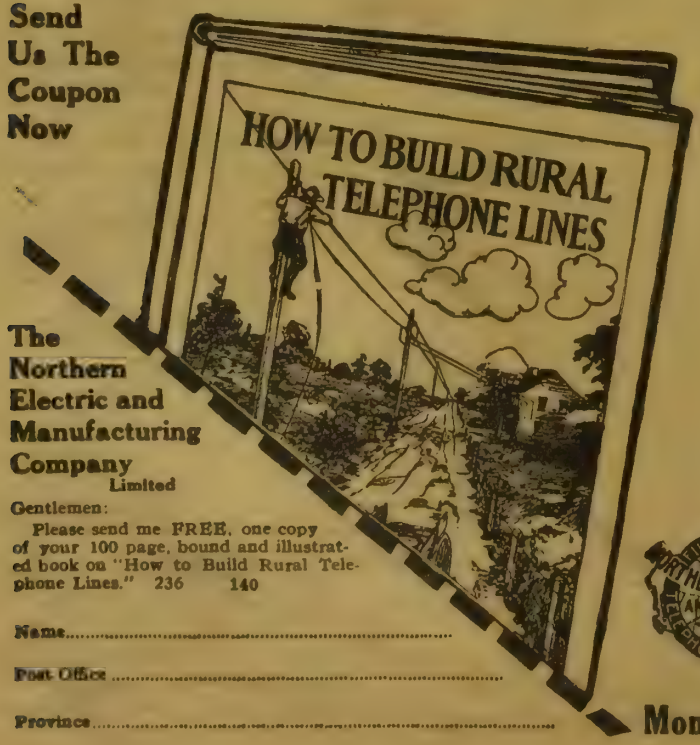

The Northern Electric and Manufacturing Company Limited

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Province.....

We Will Explain All About Rural Company Organization

YOU do not need experience to organize a telephone company in your own community, when you have our book. It tells you exactly what you have to do and how to do it. All you need to do is to follow the instructions that the book gives and then get out and interest your neighbors. Whether you want to organize a mutual or a stock company, the book will tell you how.

You And Just Your Own Friends Can Build Every Foot Of Line

BUILDING your own line keeps down construction costs. With the help we give you, you do not need to employ expert linemen. The book explains the last word in line construction and contains, in this one chapter alone, thirty-seven diagrams and illustrations, showing how to make every kind of connection necessary, how to route the line, how to put the fittings on the poles, how to guy the poles, how to place the insulators and string the wires—in fact, how to handle every detail as well as an expert lineman can. On request, we will also tell you of your provincial regulations, what your government requires and what it will do to help you.

The Cost To Operate Your Own Line is Low

YOU can readily understand that when you and your friends have the entire management in your own hands, you can regulate the cost of running the line. In the book we explain just exactly what is necessary and you can take your pencil and figure out how little it will cost you to have a telephone on the wall in your own house.

Let Us Explain To You How To Interest Your Neighbors

THE first step in getting started, is to enthuse your neighbors and get them all in with you. When you have read "How to Build Rural Telephone Lines," you will have a mass of information at your finger ends that will enable you to place positive, definite facts before your friends, to enthuse them with the idea of a self-maintaining, community-owned system and to make everybody around you anxious to help. All it needs to get a telephone system started, is for some one progressive man to start the ball rolling. With the information that we will place at your command, you can get everything organized in short order.

There Will Be A Telephone System In Your Locality — Get Posted

SOONER or later someone is going to start a telephone system in your community, just as systems are being started every day in farming centres throughout the Dominion. When this subject comes up, you will want the full particulars before you. Now is the time for you to post yourself. The book tells you everything and, if you are interested, we will be glad to send it to you free. Do you care to sign the coupon and send it to us now?

THE Northern Electric AND MANUFACTURING CO. LIMITED

Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

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Montreal Toronto Winnipeg Regina Calgary Vancouver

PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Library ... Agricultural College
Truro, N.S.

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., JANUARY 30, 1912 No. 8

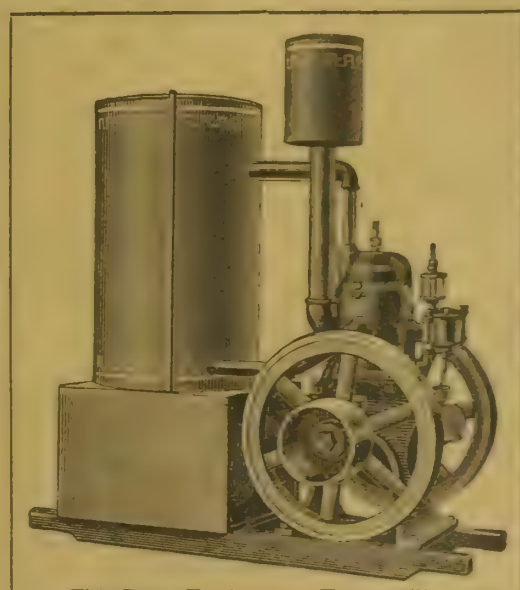
Page Work Engines

Since our first advertisement appeared a month or so ago giving particulars and prices of our engines, we have had many orders. People seem to readily realize that they cannot afford to go without an engine at prices we make—a 3 1-2 horse power at $138. or a six horse power engine for $188. The engines use for fuel either gasoline or kerosene. These engines are powerful but light and can be carried from place to place where work is to be done.

You may be wishing you had an engine to help you do your work, but may be unfamiliar with engines and have an idea that a gasoline engine is an uncertain, complicated thing. If you think so your fears are groundless, for gasoline engines are so developed nowadays as to be just as reliable as any other machine. Anyone can operate a gasoline engine, as there is no danger. No engineer is needed. There is nothing to blow up. Simply put gasoline or kerosene in the fuel tank and give the fly wheel a turn and away she goes for all day. Go off and leave it if you want to. It is safe.

A gasoline engine is started instantly. You do not have to wait to get up steam. When you are through work stop the engine and, and consumption of fuel stops at once. Hence, you can run the engine for only ten minutes, and you use only the fuel required for operating it that length of time.

As to cost of fuel, a Page engine uses only 7-8 of a pint of gasoline or kerosene per horse power per hour. Hence, if you were operating our 3 1-2—4 horse power it would use less than 1-2 gallon per hour, which at 15c per gallon would cost you only about 7 1-2c per hour. Probably you would not work the engine to its limit and fuel would be less accordingly, for a gasoline engine uses fuel only in proportion to the work it is doing.



This Page Engine on a Farm will pump, saw wood, run a cream separator, washing machine, churn, silage cutter, fanning mill, root cutter, grindstone, etc. It may be easily moved from one place to another, and is always ready to run. It does the laborious and tedious chores of the farm.

We are getting many orders from the Maritime Provinces, especially from Prince Edward Island, although Nova Scotia and New Brunswick are not far behind. Dealers find the Page engines a good line to handle as they are so low in price and so high in quality. We are getting so many applications for agency that we hope to have a thorough organization in the engine branch of our business in the near future.

Marine Engines

We have in above referred particularly to stationary or work engines. But we are also supplying marine engines from 2 to 36 horse power. Catalogue of either style on request.

The Page Wire Fence Company, Limited

37 DOCK ST., ST. JOHN, N. B.

HEAD OFFICE: WALKERVILLE, ONT.

One of the Many Letters We are Receiving Daily

Monastry of Our Lady of Charity,
Ottawa, Ont., Aug. 11th, 1911

Asepto Soaps, Ltd., St. John, N. B.

Dear Sirs:---Please accept our Sincere thanks for having so promptly sent us the premiums asked for. We are delighted with them, they are so beautiful. We remain,

The Sisters of Our Lady of Charity.

Do you realize how quickly you can procure a beautiful premium from us? and that all of the following articles carry coupons that count together on the same premium?

List of Articles That Carry Coupons With Them

Asepto Soaps

Asepto Soap.
Asepto Soap Powder.
Asepto Woollen Soap.
Asepto Carbolic Soap.
Asepto Hand Cleaner.
Asepto Potash or Lye.
Asepto Ironing Wax.
Asepto Bluing.
Asepto Gloss Starch.
Asepto Scouring Soap.
Asepto Black Harness Soap.
Naptho Soap.
Venus Floating Soap (toilet)
Scott's Scouring Powder.

Specialties

Bay Rum
Bees Honey
Turpentine
Salts
Talcum Powder
Banner Cocoa
Senna
Household Ammonia
Sulphur
Banner Sweet Chocolate
Banner Bitter Chocolate
Banner Soda or Saleratus

Ebony Shoe Polishes

Ebony Lustre - - $0.25
Success Lustre - - 10
Ebony Combination in Black Tan or Oxblood, 10c and 25c sizes
White Canvas Polish
Little Coon Stove Polish
Ebony Paste Polish

Oils

Banner Axle Oil
Camphorated Oil
Cod Liver Oil
Heavy Machine Oil
Oil of Tar
Fish Oil
Carbolated Oil
Castor Oil
Harness Oil
Sweet Oil
Neatsfoot Oil
Olive Oil
Sewing Machine Oil

Veterinary Dept.

Pendleton's Colic Cure
Pendleton's Condition Powders
Pendleton's Gall Cure
Pendleton's Hoof Grower
Pendleton's Horse Liniment

Banner Spices

Cream Tartar
Ground Cloves
Whole Cloves
Allspice
Nutmeg
Mustard
Ginger
Pepper
Cinnamon
Mixed Spice
Cassia

Banner Fruit Syrups

Strawberry
Lemon
Orange
Raspberry
Pineapple
Cherry
Lime Juice

Banner Extracts

Lemon
Peppermint
Strawberry
Wintergreen
Vanilla
Pineapple
Almond
Cinnamon
Rose

Patent Medicines

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Carbolic Salve
Corn Cure
Cure-a-cold Tablets
Dr. Eric's Dysentry Tablets
Herner's Dyspepsia Cure
Emulsion Cod Liver Oil
Jamaica Ginger
Pansy Healing Cream
Pendleton's Curative Bitter
Pendleton's Panacea
Scott's Quinine Pills
Dr. Scott's White Liniment
Dr. Scott's Pills
Dr. Scott's Honey Balm
Scott's Worm Syrup
White's Pine and Tar
Scott's Witchazel Cream
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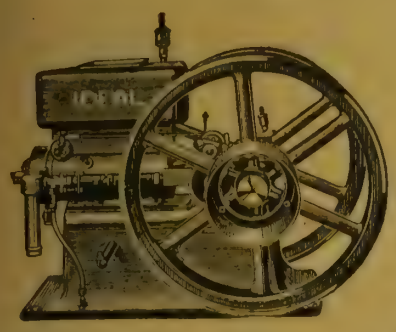
ASEPTO SOAPS Ltd., ST. JOHN, N.B.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



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We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

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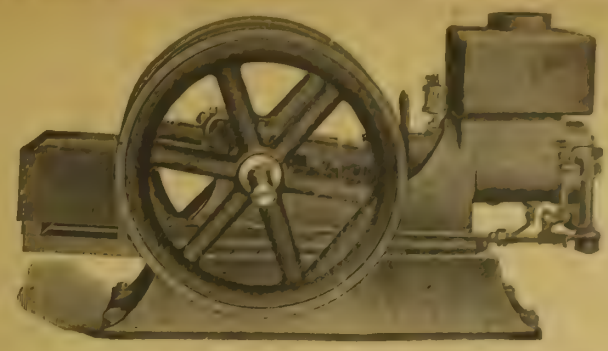

The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

WEAR TAYLOR'S

Anti-Rheumatic

Shoe For Men and Women

And get Rid of Your Rheumatism.

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The Robert Taylor Co. Limited

HALIFAX, Nova Scotia

You Don't Have to be an Engine Expert

to run a Stickney Engine. It's construction is so simple, it's parts so few, that a child can quickly learn to operate it, No other engine so easy to run and keep running.

STICKNEY Gasoline Engines

Write for a copy of our Free Book of "Experiences" and read what hundreds of enthusiastic users say about the Stickney. You'll decide the Stickney is the Engine you want to buy.

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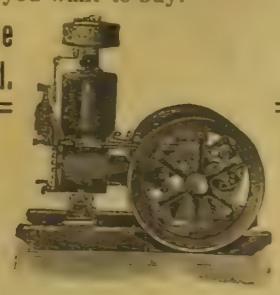


If Your Advertisement was in this space just for one issue it would be read by over 50,000 Farmers.

DE LAVAL Cream and Butter Triumph as Usual at National Dairy Show

Cream and butter produced through the use of DE LAVAL CREAM SEPARATORS made the usual clean sweep of all Highest Awards at the great 1911 National Dairy Show (including the annual convention of the National Buttermakers Association) held in Chicago, October 26th—November 4th, just as has always been the case since the organization of the National Association in 1892.

WHOLE MILK CREAMERY BUTTER

The sweepstakes or highest award in this class was won by A. J. Anderson, Otisco, Minn., with a score of 97.50, who says: "I have been using De Laval Separators for ten years and would not think of using any other."

FARM SEPARATOR BUTTER

The sweepstakes in the gathered cream factory made butter class was won by R. O. Brye, of the Readstown Creamery Co., Readstown, Wis., with a score of 97.33, this prize winner butter being made from the cream of farm patrons using De Laval Separators exclusively.

Mr. Brye says: "I was raised on a dairy farm, where my father used a De Laval Separator, and my own separator experience covers a period of twenty years. I have found the De Laval machines everything that is claimed for them."

HIGHEST PRIZE CREAM EXHIBIT

The highest award for cream was made to Nichols Bros., Bloomfield, Ky., with a score of 98.80, who say: If we didn't use the best separator we could not have made this record. Our experience has proved the De Laval the only separator that 'delivered the goods'."

DE LAVAL PRODUCTS ALWAYS SUPERIOR

Would-be competitors are naturally forced to make many claims for their separators. But the superiority of De Laval cream and butter, as evidence by the winning of all highest prize awards the world over for twenty years, is something so overwhelming as to be indisputable and unanswerable even by the most reckless would-be competitor.

173 Williams Street, MONTREAL, CAN. **THE DE LAVAL SEPARATOR CO.** 14 Princess Street, WINNIPEG, CAN.

Is Your Home Protected From Lightning?

This matter of lightning rods should be a personal one with you.

Is your home protected?

If not, can you afford to take the chances of its destruction?

You may have been spared up to this time, but give it a moment's thought and see whether it has not been through your good fortune rather than through your good management.

You have no assurance that lightning will continue to spare you.

It has visited your neighbors. Your turn may come next. If it should visit your home it means certain destruction of property. It **may** mean sudden death to you or to some member of your family.

You cannot shift the responsibility. It is a matter for you to decide. Face the issue squarely, and ask yourself the question whether you are playing the part of the prudent man in neglecting to guard your home and dear ones from the lightning stroke which may come at any time.

You have the highest assurance that can be given that the Dodd & Struthers System of lightning rods does give protection.

It is a reasonable system. The demonstrations put its effectiveness beyond question.

The position that the insurance companies have taken in the matter should have great weight with you.

Their interests are to preserve property. They have no personal interests in Dodd & Struthers.

Your interests are the same. You want to preserve your property—and your life and the lives of your family.

The insurance companies are encouraging you and making it an object to you to protect your property. The reduced rates of insurance you receive will soon pay for the lightning rods so that in effect you have home and family protected without cost.

But the insurance companies cannot force you to act. It is a question for you and a question of NOW.

After awhile may be too late. Will you answer the question in your own best interest?

All information will be supplied by writing to

DODD & STRUTHERS, Sherbrooke, Que.

Write for our Free Book on Lightning.
All Enquiries Cheerfully Answered.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, JANUARY 30, 1912. Number 8.

Natural Physics and Lightning.

Protection of Farm Buildings

By Professor West Dodd.

Not Protected and Protected.
In the Grip of the Storm—One is Taken and the Other is Left.

WHAT is lightning, and what is electricity? With a great deal of experiment and much study the civilized world has acquired a little knowledge of electricity, and that knowledge has added greatly to the happiness of mankind; for, by it we are able to sit in our parlors and talk to our friends hundreds of miles away, and by it we can light our streets and homes, and the electric railways are already performing feats impossible for steam systems.

But this mysterious, obedient servant to man, when it manifests itself in a thunder storm, is one of most terrifying and destructive forces known. And on this occasion we are to discuss electricity in its relation to lightning, the laws by which it operates and the means by which we can govern it.

If you should ask me the question, "What is lightning? I should say, "An electric explosion."

But that might not satisfy you and you would come back at me and ask.

"What is Electricity?" I should be compelled to say, "Electricity is one of the nine forms of Energy," That brings you to the main question, and you fire it at me and ask "What is Energy?" and here you corner me and force me to say, "I don't know."

But this much I do know: I know it was here when I came. By it I live, move and think, and when I am gone it will still be here.

But I know something more about energy.

I know it is indestructable. That we can neither destroy any of it, nor can we create any more.

If I am rightly informed, the patent office at Washington has to maintain a special clerk whose duties are to look after perpetual motion cranks—men who imagine they can make a machine that will create energy, and run without other power.

But it is just as impossible to destroy energy at it is to create it.

Energy has nine different forms in which it can exist. Light is one of these forms, heat is one, and electrical energy is another they are all different, all alike mysterious, and all are interchangeable—that is, we can change heat into electricity and electricity back into heat, etc.

A photograph showing a wide sphere of influence.

If we have a given quantity of heat, we can change it into a certain measure of mechanical energy and drive an engine with it. And the engine power can be changed into electrical energy by passing it through a dynamo, and the electrical energy can be changed back to light or heat or mechanical power.

The changing of energy from one form to another is called its transmutation.

The names of these nine forms of Energy are "Heat Energy," "Radiant Energy," "Chemical Energy," "Cohesion Energy," "Magnetic Energy," "Kinetic Energy," "Gravitation Energy," "Energy of Elasticity," and "Electrical Energy."

ONLY ONE ENERGY.

Do not misconstrue this and think these are nine different energies. The nine are different forms of one energy, not different energies.

Here is another most important fact about Energy. It can be stored up for millions of years and then takeu out and used.

To illustrate: If you wind up a clock spring, you transfer energy from your arm to the spring and a little racket wheel, with trigger locks it up in the spring. Then there is a constant strain on the spring which will drive the clock's pendulum for a week, and when the energy has all gone out of the spring, the clock stops.

Now all of nature is wound up just like the clock spring, ready to do work as it runs down.

A storage battery has energy put into it which puts a strain on its atoms. When electric energy is coming from the battery the atoms of the battery are being relieved of their strain and are coming back to their natural condition, and when this is accomplished the battery is run down and will not give out any more electricity till more energy is put into it, or till it is wound up.

A piece of coal is stored-up energy, just like a storage battery or a wound-up spring, and is capable of driving our railroad trains as its energy is released.

When conditions are right energy makes combination with matter and stores itself up in chemical affinity and cohesion. In this manner energy is stored up in coal.

WHAT CHEMISTRY TEACHES

The science of Chemistry teaches us that all matter, solids, gases, liquids, is made up of minute grains called atoms. They are the bricks of the Universe, out of which we and the Solar System and the Milky Way are made.

Locked up in these atoms is the cause of the heat of the sun, the nature of the electricity and the evolution of worlds.

Heat energy is a form of motion among these atoms. This motion arranges the

In the hush before the storm breaks—Grand but terrible.

atoms in a fixed relation to each other—winds them up into molecules and cells. Not only electricity, with all its phenomena, but every action of every thing, living or dead, is due to motion among these atoms.

Millions of years ago the energy of the sun's heat, acting on the atoms of the earth and air, set up a vigorous motion among them by which they made combinations and were locked together and build up vegetation.

When that vegetation was forming, the energy of heat was changing into chemical energy and held in mass by cohesion.

The heat energy of the sun was in this way transmuted and stored up in chemical affinity in the rank vegetation of by-gone ages. For millions of years it has been lying under great geological strata, and now in the year 1912, A.D., we dig through this geological strata, and take out that ancient vegetation in the form of coal. We release that same old sun energy from that coal and make it drive our railroad trains and our electric trains and run our factories and warm our homes and make our light.

Let us trace this energy released from coal in the form of heat in kinetic or mechanical energy in the steam engine, and from there into the dynamo, where it changes into electrical energy, and then through the electric motor, where it changes back again to mechanical energy and drives the cars. This will give you a better comprehension of electricity, and, incidentally, of lightning.

When coal is burning it is like a wound-up spring running down, or a storage battery giving up its energy, only in the coal the energy comes out in heat form.

When this heat passes into water in the steam boiler the water molecules become agitated, and when the temperature reaches 212 degrees Fahr. the agitation is sufficient to overcome the cohesion of the molecules, and it becomes steam and needs more room.

You have noticed railway engines when standing still suddenly blow off steam; that means the steam pressure is sufficiently great to lift a safety valve, and the steam escapes and prevents an explosion.

But when the engine is at work the steam pressure in escaping drives a piston back and forth in a cylinder, and this drives the engine and gives us mechanical energy.

If we belt the engine to a dynamo, the mechanical energy of the engine is changed to electrical energy in the dynamo, and when energy is in the electrical form, it will travel through wires or conductors to where you may want to use it. You can change it into light or heat, or into mechanical power again and drive the cars with it.

ELECTRIC MOTOR AN ACCIDENTAL DISCOVERY.

It may be interesting to you to tell you the story of the discovery of the electric motor.

It was Michael Faraday, an Englishman, who about the year 1812, invented the induction coil, which made the telegraph and the telephone possible, which made the dynamo and the electric motor possible, and opened the door for our great evolution of scientific achievement.

Mr. Farraday knew that energy had nine ways of appearing. He knew that electricity was one of the nine, and he knew these nine forms were interchangeable.

That is, he knew that heat could be changed into mechanical energy and made to do work or be changed into electricity or any of the other forms of energy, and he knew there must be a way to change electricity into mechanical power.

He did not know how to do it, but he prophesied some philosopher would discover the method. Mr. Farraday was correct in his prophecy, but the discovery was made by a blunder. Farraday's induction coil had been developed into the dynamo, and we had electric lights in all parts of the civilized world before we had electric power.

I think it was Vienna, Austria, where the blunder was made that resulted in the discovery of electric power, and it came in this way:

In a little electric light plant there were two dynamos. One moonlight night the superintendent thought one dynamo would do the work and the other could stand idle. He sent a green workman to switch in the dynamo. The "greeny" found a loose wire in the dynamo he was to use, and he connected it to the dynamo he was not to use, and when he switched in dynamo No. 1 both dynamos started; but No. 2 was going backward.

A Destructive Lightning Bolt.

Here was a revelation! Connect a live dynamo to a dead one in a certain way and the dead one will spring into action and give out power.

Farraday's prophecy was fulfilled.

A shrewd scientific man said: "I can make electric energy into mechanical energy, the same as heat, and drive the cars.

"I will build a rail track and put a car on it; then I will take a dead dynamo and put it under the car and gear it to the car axle. Now all I need is a wire to connect my dead dynamo to a live one, and when it goes the car will go.

"So I will have a power house in any convenient spot and a dynamo there driven by the engine. This dynamo will change the engine power into electricity.

"Then I will connect a wire to this dynamo, and bring it over the rail track on poles, and I will run an electric conductor from the dead dynamo under the car and carry it up over the car, put a trolley wheel on it, and let it touch the wire over the track, and this will connect the two dynamos."

When he did this, away went the car.

TREMENDOUS ENERGY IN WATER

Now at the instant when energy changes from one form into another, there is a tremendous strain thrown on or released in the atoms of matter, and if this strain is confined too much there will be an explosion. There is a way by which we can determine the mechanical or explosive force of different forms of energy. And no matter where the explosion may be it always results from a strain on the atoms.

For instance, if you had 1 lb. of water and should raise its temperature one degree, the amount of energy is equal to the energy developed by 1 lb. of lead falling over a precipice 722 feet. And 100 degrees rise in temperature in 1 lb. of water develops the same energy as 100 lbs. of lead falling 722 feet. And if you brought your 1 lb. of water to the boiling point and had it confined you would develop energy enough to have an explosion, and the same principle holds true in the lightning explosion.

Before I tell you how electric energy gets into a cloud and how the explosions occur, let me tell you how much energy can be stored up in some things.

There is enough energy stored up in a cubic foot of coal to lift 3,660 tons one hundred feet high.

An automobile goes thundering by, driven by the energy released from a few drops of gasoline.

A thimbleful of powder will blow a bullet twenty times its own weight for a distance of two miles. There is more energy stored in coal than there is an equal amount of powder or dynamite, but powder and dynamite give up their energy all at once, and that makes the explosion, while coal gives up its energy slowly and uniformly, and we can use it for work or heat.

There is more energy stored up in a thimbleful of seed than there is in a thimbleful of powder, for, while a thimbleful of powder will throw a bullet twenty times its own weight two miles, a bird may fly to-day one hundred miles on the energy it extracted from the thimbleful of wheat it swallowed yesterday. 6

According to Tyndall, the amount of energy locked up in oxygen and hydrogen, the two gases which are combined to form water, is simply amazing.

Eight pounds of oxygen and one pound of hydrogen, properly combined, will give you nine pounds of water vapor.

The strain on the atoms is released as soon as these gases combine to form water, and the amount of energy released in making this nine pounds of vapor is enough to lift 48,000,000 pounds one foot high, or, if conserved for explosion, would blow a ton of lead four and a half miles high.

But when this nine pounds of vapor is condensed into water, still more energy is released, and this time enough to lift a ton one-half mile high.

But there is still more energy left in the water, and when we reduce it to nine pounds of ice out comes the balance of the energy, and this time there is enough to lift one ton 433 feet high.

So, if Professor Tyndall is correct, our nine pounds of oxygen and hydrogen interchanging to vapor, water and ice, give up enough energy to equal that of a ton weight falling five miles from the sky.

I have stood at the base of Niagara Falls and have seen a mighty river falling over a precipice 160 feet with a vehemence that shook the very earth. Yet to produce from its constituent gases a quantity of snow which a child could carry demands an exertion of energy sufficient to lift the whole of that mighty river back up over the precipice and drive it back into Lake Erie.

With this conception of the amount of energy that can be stored up in such a small quantity of matter, we are less surprised at the grand outburst of power released at the birth of a lightning flash.

HOW LIGHTNING FORMS.

And now let us turn to lightning and see, if we can, why life and property are endangered by it, and what we must do to secure safety in our homes. First, let me tell you how Electric Energy collects in a cloud, for, before any lightning appears, something is going on in the clouds.

The sunbeam is the prime cause.

The cloud does not gather electricity out of the air, as many people imagine. The Electric Energy in a cloud is due to sun heat which brings about rapid evaporation of water.

Remember that heat is one of the nine forms of energy, and when evaporation of water takes place the sun heat that caused the evaporation changes into one of the other forms of energy. The little globules float away, each carrying its own little quantity of "energy" or "strain" on its surface and when the countless billions of these energized, invisible globules rise to the sky, where the cold of elevation rapidly condenses released in the form of electricity, them into raindrops, this energy is ready to give back the energy of the sun condensed into lightning flashes.

Here is an interesting little experiment that will help you to realize how heat changes into some other forms of energy when evaporation takes place.

Lift a kettle of boiling water from the fire. You can set the kettle on your naked hand and it will not burn you. If the kettle is nearly full it will continue to boil for five seconds after you lift it from the stove, which will give you time to carry it sitting on your naked hand across the room. But when it ceases to evaporate or pour out steam, it will begin to burn you.

This test shows how heat vanishes when evaporation begins. In this manner the energy of sun heat is transmitted when water is evaporated and reappears in the form of electricity when condensation takes place in the sky.

Now let us see just how the flash of lightning is made.

Your philosophies tell you, "Before a house is struck with lightning, the house is first charged by induction." Now that word induction is too big.

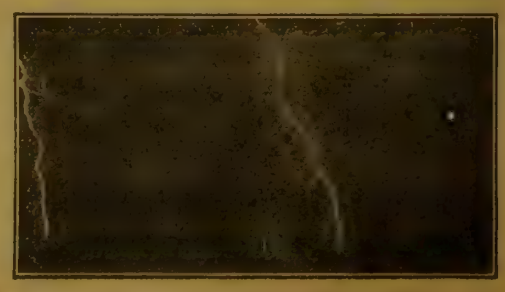
Induction is taken from the word "induce," and induce means to coax or pull your way."

So your philosophies try to teach you this: "Before a house is struck by lightning an electric strain is placed upon it." That is, a condition has been coaxed into it, and it is this condition we have to deal with if we would prevent it from bursting into a lightning explosion.

But if a fog extended from the cloud to the earth, this condition would not exist, as the electricity easily reaches earth through the fog and makes no lightning.

You will remember you never saw lightning on a foggy day, but when the air is dry the earth directly beneath the charged cloud is electrified in sympathy with the cloud and tries to discharge to the cloud the same as the cloud tries to discharge to it, and a great electrical strain is between the cloud and the earth.

Now the air is a poor conductor of electricity, and things that stick up from the earth into the air, like houses and barns, become discharging



You expect a deafeningclap of thunder to follow this.

points for the earth's electricity, and in this way the house gets ready to be struck.

So the lesson we wish to impress here is this: Lightning is due to causes. Electricity first gets in its work and loads up a cloud. Then this cloud fixes up things on the earth and induces an opposite electric condition, and the two electrified surfaces strain and pull on each other, and when the strain gets great enough so that the air cannot resist any longer, off she goes with an explosion through the house, and the undertaker has a job on his hands.

SAFETY AND DANGER ZONES.

Having shown as clearly as possible in so short a time the cause of lightning and how the flash is brought about, let us consider briefly the remedy or how the stroke may be averted.

Let us begin by calling to mind that there are some things lightning will not strike,

There is a reason for it.

"Chance" is not known in the operation of nature's forces.

There is no safer place on earth from lightning than in a steam engine or in a railroad coach. No one was ever known to be injured by lightning when in a railway train.

Lightning will not strike a building if its sides and roof are covered with metal.

Lightning will not strike the business part of a big city. The tall skyscrapers, of our large cities are immune from lightning, and insurance companies never have any losses from lightning on any building with metallic sides and frame work of iron or steel.

Lightning will not strike a modern battleship on account of the material of which it is constructed, and a steel windmill tower is never injured by lightning.

There is a reason. Every one of these things is its own lightning rod. They need no further protection.

But there are things that lightning will strike.

Lightning will strike a country home, or a home in the suburban part of the city.

Lightning will strike a barn or a church or a school house or a tree or a stack or an animal, especially if near a wire fence. All of the lightning losses our insurance companies have to pay are on this class of risks, and a man has to be blind almost purposely not to see room for thought in these observations.

When energy is given up slowly it is useful. When it is given up instantly, it is destructive, and we have an explosion. Lightning is an explosion, an electrical explosion. Electricity is not lightning, but is ready to change into lightning and smash things if we let it.

ELECTRICITY CONTROLLED BY KNOWN LAWS.

There is nothing known which is so responsive to law as electricity. Indeed it is the only thing you can send round the world in the twinkling of an eye. It is the most obedient servant or the most cruel master, according as we are intelligent with it or ignorant of its ways.

Note this law: "Through some things electricity passes easily; through some things it does not." When electricity passes through an easy road the effect is very different from what it is in passing through a hard road.

If electricity passes through metal, that is an easy road, a good conductor, and there is no heat or lightning on the conductor.

If electricity passes through the air, that is a poor conductor, and because it resists energy in the electric form, heat and mechanical violence are generated, and you say lightning. Anything that resists electricity will either get hot or fly to pieces, or both.

As an example: We have here the electric lights in this room. Now if I should ask any of you if these electric lights came through the electric wires, you would promptly answer, "No, the light does not come through the wire. If it did, the wires would be covered with fire; but the electricity comes through the wire, and there is light only in the lamps."

The answer would be correct. The reason is this: The wires are good conductors of electricity, and offer so little resistance that very little heat is generated in the wires; but in the lamp is a filament of cellulose, which is a poor conductor of electricity—a little loop—it looks like a black thread; you know what I mean: Now when the electricity comes to this loop, it meets with great resistance, and has now a hard road to pass through, and on account of this resistance the loop in the lamp gets white hot, and you say, "Electric Light." So you see, if the filament in the lamp was as good a conductor as the wire outside the lamp, there would be no electric light.

I think you see what I mean when I tell you electricity has a different effect when it passes through a good conductor from what it has in passing through a poor one; and when I tell you that lightning no more goes through a lightning rod than the electric light goes through the electric wires, it begins to look intelligent to you.

Nature seeks the path of least resistance between the cloud and the earth, and in this path the lightning flash is to appear.

When the path of least resistance has been established, the atoms and molecules along this path and near to it are put under a tremendous strain, and when that strain reaches a certain tension, there is an explosion along the whole line, and we say "Lightning."

HOW LIGHTNING RODS PROTECT.

That brings us to the scientific use and purpose of the lightning rod. Namely, to cause the electric energy in the earth and building to pass off into the air gradually, to prevent "charging," to relieve the stress in the building, and thus to avoid the sudden explosion or the lightning "stroke."

The railroad trains, high steel buildings, steel windmill towers, etc., are themselves conductors of electricity, and therefore need no rods to disperse the electric energy and avoid lightning.

But in the case of ordinary houses, barns, churches and the likes, you are to learn the lesson that lightning rods and the sharp points that are placed upon their tops are not erected to "draw" lightning, but the thus avoid lightning by doing away with the conditions which produce very opposite. They quietly discharge electricity into the air and lightning.

There is absolutely no necessity for the present fearful destruction of life and property by lightning.

The prevention of lightning is a scientific accomplishment. But, being a scientific proposition, it must not be entrusted to unscientific hands.

If you had appendicitis, I think, maybe, I could cut off your appendix, but somehow or other I think you would die afterwards. You would show better judgment if you got a man who understood that business to do that kind of a job. And that is exactly the situation in the lightning rod business to-day.

There is no set of fixed rules that will apply to all buildings, and what would protect one building will not protect another.

The material of a lightning rod and its size are of far less importance than the system of putting it on.

You know when steam pressure reaches a certain strain in the boiler, it lifts a valve, and the steam escapes, and that keeps the boiler from exploding. When electric strain reaches a high tension on a lightning rod the points act like a safety valve and relieve the strain, and this prevents the lightning stroke.

We need your help and you need ours. Give us a boost by joining the Maritime Sheep Breeders' Association.

We must know the philosophy of these things, but by far the most important thing is the skill necessary to protect a modern home from lightning. It is a serious mistake to think that any class of men can do this work, and it is unfortunate that ignorant and imcompetent men are allowed by law to engage in the lightning rod business.

The insurance companies, however, are rapidly lining up on the importance of this scientific profession, and many of them are ready to make reduced rates in farm insurance where the property is rodded in one way which squares with integrity and science.

Questions and Answers.

1.—What is the cause of lightning?

Atnospheric Electricity. The Atmosphere is a very poor conductor of Electricity and resists its passage, and on account of this resistance the road over which it discharges is made white hot. You see the white hot road and you call it lightning. Learn right here, Lightning is not Electricity, but explosion and fire, due to resistance. Remember the word "Resistance."

2.—If the air had not resisted the electricity, would there have been any lightning?

No, none whatever; electricity makes no fire disturbance or violence unless resisted.

3. Do all materials resist electricity alike?

No, metal of all kinds resists electricity very little, and is therefore called a good conductor. Wood offers much resistance, and is frequently shattered to pieces on that account. The atmosphere offers still more resistance, and in consequence is reduced to an intense white heat.

4.—Does metal attract lightning?

No, the question is not intelligent and is erronerous. It is an absurdity. Lightning is not flying around at random to be attracted by anything, but is the result of abnormal electric conditions. Read question and answer No. 1 again.

5.—What? Does not lightning go down electric rods into the ground?

Oh! No, no. Just stop and do a little thinking at this point. You have seen the electric light? Yes. Well, if I should ask you if the electric light runs along the electric wires, you would quickly answer; "No. If it did the wires would be covered with fire." You see, where electricity finds a good conductor, like the wires, it passes through without making light or heat, but in the electric lamp the thread-like filament is not a wire but a very poor electric conductor, and on account of this resistance the filament becomes white hot. From this you learn "Wherever there are good conductors for electricity to pass through, there is no fire, and a good lightning rod bears the same relation to a lightning flash that an electric wire does to an electric light. It lets the electric discharge find an easy way over the house rather than causing explosion and fire in the house for lack of a conductor." See!

6.—Are all things equally liable to be struck by lightning?

No, indeed. Some things lightning never strikes at all; other things it strikes quite frequently. This shows it is not an accident or a freak of nature but is subject to control and only requires intelligent management to render it harmless.

7.—What things are never struck by lightning?

This may surprise you. Lightning will not strike—A railroad train; Buildings covered with metal on sides and roof; Buildings with iron frame work throughout; Steel wind mill towers; Modern steel battleships; Business blocks in large cities, etc. What do you think of question No. 4 now? 6

8.—What are the things lightning will strike?

Imperfect conductors of electricity, such as—Country homes and barns; Three-fourths of our city surburban homes; School houses; churches; stacks and trees; Cattle and horses especially, if near wire fences. Do not these observations make you thoughtful, and show that chance is unknown in the operation of nature's laws.

9.—What is the cause of a house being struck by lightning?

This is an intelligent question. Let us be intelligent with it. To begin with get the truth well planted. "Before any lightning occurs, nature first prepares a class of conditions." Remember "Conditions." These conditions are the storage of electric energy. This accumulation of electricity is called a charge. It first collects in the cloud, and tries to discharge to earth, but the drier air beneath the cloud is a very poor conductor of electricity and resists the discharge, and the charge continues to increase. While this is going on in the cloud, the earth directly beneath the cloud becomes affected in sympathy with the cloud and becomes electrified too, only in an opposite condition, and the electric stress on earth pushes toward the cloud, the

(Continued on page 275).

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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JANUARY 30, 1912.

DATES OF ISSUE.

February ..... 13—27
March ..... 12—26

A RECORD ATTENDANCE AT THE COLLEGE SHORT COURSES.

"I recently advised the Provincial cashier to forward you cheque in payment of account for advertising. You have certainly given us full returns for the money.

The attendance, 340 actually enrolled, is a record one for Nova Scotia and, I think, for Canada, and I have not the slightest doubt that the assistance which you lent us through the columns of your paper has assisted very materially in bringing about this very much desired state of affairs."

Thus reads a letter received recently by THE MARITIME from Prof. M. Cumming of the Nova Scotia Agricultural College.

Aside from the fact that we are always pleased to help along the progress of Agricultural education in Maritime Canada, we are also pleased to note, with no small degree of pride, that any efforts we may have put forth have borne fruit.

The N. S. A. C. is, however, so well known through the medium of its good works and the recommendations of its ex-students that as years go by the number of students enrolled at the various courses is steadily increasing. Students coming from various and widely scattered sections of Nova Scotia, New Brunswick and Prince Edward Island return home, at the close of the courses, filled with enthusiasm and love for their profession. Not a few cheerless agricultural prospects have beed brightened and encouraged by the influence of the N. S. A. C. Each and every member of its staff have the best interests of the community at heart. They belong to that class that knows not sect nor rank so far as dealing with the people they come in contact with is concerned. Any farmer, no matter what his station in life may be, will always be assured a cordial welcome whether he visits the college or meets the members of its faculty at any of the agricultural functions that radicate from the influence of the school.

Three hundred and forty is no small number. The seed sown in this case will undoubtedly, in the majority of cases bring forth the proverbial hundred fold. No one need say that agricultural interests are on the wane in Maritime Canada. They are very much alive and are going to live. The next decade will be that of the East and we will go forward until some of the older agricultural districts of Canada must look well to their laurels.

Let each and every man, woman and child in the Maritime Provinces make a long, strong, co-operative pull for a Maritime Agricultural College so that its present uplifting influence may be more fully realized throughout the highways and byways of our fair provinces, A larger college with more opportunity for original research work that would benefit everybody would result.

TRAINING FOR HOME BUILDING.

One reason so many people whose duty is to erect and maintain homes are not qualified for this important work is because they have had no training in home economies. There are many people who have had educational advantages wholly ignorant of the requirements and art of home making. It is one of the obvious defects of our educational system that the practical every-day affairs are neglected and stress placed upon many things of less practical importance. But it is encouraging to note that our schools are being improved and teachers directing their efforts more toward the practical side of life.

Parents should give their children suggestions upon home making and direct their attention to the importance of home art. It is especially desirable that young people attend farmers' institutes where lectures are given upon domestic science and home economies. Practical ideas can usually be obtained at these lectures and many young people get an inspiration for better home life.

Most of the agricultural colleges have short winter courses and some summer lectures upon home economies. A few weeks at the college is of much benefit to old as well as young people, since in addition to the lectures and demonstrations, one can learn something about equipment for the kitchen, the dining room and the furnishing of the home. Here information may be had about the water supply, heating, ventilation and sanatation and the cheapest and best methods of making the home attractive and comfortable.

All of our high schools and colleges should have courses in domeitic science, home economies and the elementary principles of laidscape gardening; pupils should be required to take these courses. Home life is important to the country as well as to individuals and schools that do not emphasize these features are not properly training our boys and girls for home building.

THE BOY'S CHOICE.

It is hard for a normal boy between the ages of, say, twelve and twenty, to realize that the school is the best place for him for about eight months out of the year. To him, farming looks to be a case of handling horses and machinery, and he feels that about all he needs to do that is a little more strength. He is not aware of the need of knowledge of business to help him take care of a farm's produce; he does not appreciate the value of a broad, general information to place him in the sphere he should occupy as a citizen; he generally rather scorns the learning of the art of correct speaking; in short, his physical nature is dominant, and he wants to work off his surplus energies.

This is what he should have a chance to do, but at the same time he may be directed into the getting of more out of school. A good deal depends upon setting up an ideal for the boy, or rather in helping him to establish an ideal that is worthy of his efforts. In most cases the minister, the school teacher, the store keeper or even the parent, is not the boy's ideal. Very often the man who runs a threshing outfit, or the engineer on a railroad, are the men he wants to be like.

When a boy has such ideals, the thing to do is to encourage him to be like these men, only to be more clever. Show him they have had to go to school, they have to figure and read, and that the one thing most of them regret is that they have not more education.

The youngest child has a way of asserting his rights in the choice of his ideal; let him have his choice and he will make it just as worthy as he is capable of becoming.

AN IMPORTANT QUESTION.

One of the most important matters now before the people of this country is the subject of good roads. Its importance lies in the direct bearing it has upon the social and economic welfare of the whole people. It is at the best of the great problem of transportation, that problem which is vital to the interest of all classes—producers, dealers and consumers.

The rural highway leads from every farm to every market, and over it passes annually the food supplies of the nation. The condition of our rural highways is not the sole concern of the man who lives upon them, but it is the concern of all. We should have the finest roads in this country that wise expenditure and trained engineering skill can produce. They will prove a source of national wealth, a bond of national unity, and a crown of social and intellectual advancement upon the ruddy brow of rural life.

Do not for the sake of the soil and those who will be dependent upon it after you, burn the weeds, stubble and vegetation. Turn under all of these materials and let them be converted into humus, which is so essential for the soil. Be progressive and not retrogressive.

* * *

There never was a time when economic feeding ment more to stockmen and farmers. Feed is too high to feed it in a careless manner.

Nova Scotia Farmers' Annual Convention

The Sixteenth Annual Meeting of the Nova Scotia Farmers' Association was held in the Y. M. C. A. Hall, Yarmouth, N. S., on Tuesday, Wednesday and Thursday, January 23rd, 24th and 25th.

The opening meeting took place on Tuesday evening at eight o'clock. The spacious hall was crowded to overflowing with representative delegates and the interested citizens of Yarmouth. On the platform, with President W. H. Woodworth, were the other officers of the Association, His Worship Mayor Kelly of Yarmouth, Prof. M. Cumming, Prof. J. H. Grisdale, Director Experimental Farms, Geo. H. Barr, Chief of the Dairy Division, Ottawa, W. T. Ritch, Sheep Commissioner, Mr. Churchill, President Yarmouth County Farmers' Association, S. A. Cook, Vice President Yarmouth Agricultural Society, H. W. Corning, M. P. P. and B. B. Law, M. P.

PRESIDENT'S ADDRESS.

To the Officers and Members of the Nova Scotia Farmers' Association.

Gentlemen,—

As President of this Association, it gives me great pleasure to extend to you a hearty welcome to this, the sixteenth annual convention. Meeting as it does for the first time in its history in the town and county of Yarmouth, a county that not many months ago paid a high tribute to Agriculture, by sending one of its prominent young farmers as their representative to the Legislative Halls of the Province.

Another year has passed since we last met and as farmers we have every reason to be thankful to the Giver of every good gift, for the bountiful harvest of the past season. The fruit growers of the Annapolis Valley have gathered in and are now marketing their largest and cleanest crop of apples ever harvested in this province, some 1,500,000 barrels. This large crop finds a ready and paying market in England, Scotland, the Canadian West, Africa and Newfoundland. The quality and flavor of the fruit cannot be excelled in the world. A large portion of this crop is handled through the Co-operative Companies. The weather during September and October was very fine and a little advertising brought an abundance of help from outside districts to gather the crop. To the Orchardist the drought of Spring and Summer was only a blessing in disguise, for it secured for him fruit free from fungus growth and also proved to those who carefully cultivated their soil that by conserving the moisture of early spring and keeping it under a dust mulch, that plants and trees can be made to flourish over a long period of dry weather. The absence of rain also encouraged the formation of fruit buds, and I am pleased to report that as far as fruit buds are concerned there is a fine show for a good crop next year.

The hay crop was not up to the average but in many sections of the Province large quantities of old hay was left over from last season which will help out the shortage this year. The large quantity of roots produced goes a long way to improve the conditions of our stock. The varied products of our farms continue to find a ready market at good prices, nevertheless the high prices have not up to the present stimulated the producers to supply enough to satisfy the demand of the consumers, and food products are being imported.

As yet there are large areas of land fit for cultivation in the Province remaining unimproved and the Census returns show that the towns and cities are increasing at a much greater ratio than the rural districts, showing that the people are flocking to the towns and cities at the expense of the country. This fact is one of the most depressing signs of our times. The only hope that we have of a permanent national prosperity is by every means to induce more people to become tillers of the soil and thus by becoming producers they will not only feed themselves but help to produce for the masses and thus reduce the high price of food. Reasons not very difficult to discover, yet exist, why our young men leave the farm. Land in the Agricultural districts is held at a very high price, and there is a desire rather to increase their holdings than to sell unoccupied lands or even to divide it among their boys.

Farming is not looked upon by a majority of our people as very noble or elevating and you can find but few mothers using their influence to induce their sons to follow farming, therefore by the natural conditions of things the boy gets educated off the farm rather than to it. The natural tendency of human beings, like the birds, is to live in company with their kind, and on account of the loneliness of the country life the young men seek the town or city for more social life. Men would rather almost starve in a town than dwell in the country with plenty.

Much has been done to make the country conditions more enjoyable. In many sections we have the Rural Mail Delivery, the Telephone and an abundance of valuable reading matter coming into our homes daily.

I remarked in a former paragraph of this address that prices were good, but if we would have them better we must combine and form Co-operative Societies, through which we can sell our products and buy our supplies, thus cutting out the speculator and the middleman.

In the past few years our farmers have learned many valuable lessons. Intensive farming instead of Extensive farming is the word, producing double the crop on an acre and having fewer acres under cultivation. By the use of leguminous crops and a proper rotation, supplying the soil with humus and encouraging bacterial action of the soil.

Our Provincial Exhibition has come and gone with its usual deficit. If fruit is to be successfully shown at Halifax it must be shown on or about October 10th. Local Exhibitions were a success both as to number of exhibits and attendance. The Fruit Show at Yarmouth was a great credit to the county.

The Maritime Winter Fair was a grand success and is steadily growing in public opinion. The Horse Show has far exceeded the hope of its promoters. Our College at Truro is doing good work and the attendance increasing each year, we hope in the near future to see a Dormitory erected of sufficient capacity to meet the needs of our boy students. We are glad to see so many of our young men attending our Agricultural College. They should be a great source of strength to our agricultural interests. The Short Course was well attended this year and is an excellent opportunity for those who cannot take the full course to get in touch with the up-to-date methods of modern farming.

Our Institute meetings have done very much in the past to help introduce modern methods among those who could not leave home. But in order to get the best out of the meetings some means must be devised to get the farmers generally, to attend. The more the farmer studies his business the more successful he will be. Lack of education is one of the greatest hindrances to progress.

We have gentlemen with us well qualified to address us on the subjects assigned to them and when we return to our homes let the inspiration of these meetings assist us to do better work on our farms.

I ask your assistance in conducting the meetings of the next two days and hope that every delegate will be in his place at the beginning and during every session.

ADDRESSES OF WELCOME.

His Worship Mayor Kelly on behalf of the citizens of Yarmouth extended a most cordial welcome to the delegates. He considered the delegation of the utmost importance to his county and town. He was glad to note the feeling of a better understanding between urban and rural citizens. Old time barriers and prejudices were being pulled down and it was to the farmers' efforts whether in delegation or in combination that the world must look for cheaper and better food.

President W. Churchill, of the Yarmouth County Farmers' Association, read the following address:

Mr. President, Members of the Nova Scotia Farmers' Association, Ladies and Gentlemen.

As President of the Yarmouth Co. Farmers' Association it affords me great pleasure to welcome you to our county, and to extend to you the cordial greetings of this Association numbering over four hundred members—an Association that has had an active influence in this county for many years. Although we have been so long waiting for your first meeting in this county, yet it is with feelings of appreciation and pride that we greet you to transact the business of your sixteenth Annual Session.

The far reaching influence and benefits that agriculture in Nova Scotia has received from Agricultural and Farmers' Associations, and their unions, are both direct and indirect. Amongst the former and more plainly visible results might be mentioned the Agricultural College at Truro, the Horticultural College at Wolfville, and Prof. M. Cumming.

Though less in evidence yet equally important are those indirect results, such as are manifest in the improved appearance of our farms, farm houses and buildings, with their contents, the use of improved methods and machinery on the farm, the note worthy increase in the number and the quality of our Pure Bred Stock, and the greatly enchanced value from year to year of our farm products. Nor must we forget to mention in this connection, the inspirations received by our delegates when attending similar meetings elsewhere nor the good results which the application of knowledge there acquired have brought about. We, as citizens of Yarmouth County, are indeed proud of to gain instruction, that we believe, our local Association and feel confident of deriving still further good from your careful guidance.

In obtaining these good results the College at Truro and its staff must be given due credit for it is there we send our boys and men and women togain instruction, that we believe, is second to none in our Dominion.

It was on one occasion jokingly remarked by an officer of one of our county Associations that the Yarmouth County Association could boast at least of numbers and fog, I think I can show that we can boast of some other things too.

The value of the lumber products for our local market and for export amounts to about three hundred and fifty thousand dollars annually.

Our fisheries yield a yearly [illegible] of about one and a quarter million dollars.

The shipping of dried and baled eel-grass to the American markets, an industry confined exclusively to Yarmouth County, reaches the total of about three hundred and fifty tons a year.

The total value of Blueberries and Strawberries sold in the local market and exported amounted in 1911 to over fifty thousand dollars.

Yarmouth has a larger number of Pure Bred Cattle than any other county in Nova Scotia and is head quarters for some of our best dairy breeds. This should be of great encouragement to the proprietors of the newly started butter factory, which we hope will give the dairyman a better price as well as lighten his labor and place on the market a more uniform article.

The large number of oxen for work as well as for beef is continually increasing in number and quality.

There are also large herds of Devons, Durhams and Herefords in several sections of the county, while we are all proud of the herd of Shorthorns recently started at Lawndale Farm by one of our townsmen. Yarmouth makes an excellent showing both in dairy cattle and beef cattle.

The demand in the local market for farm produce, beef, pork, poultry, eggs, butter, and vegetables exceed the supply. The apple production of the county although not to be compared with that of the Annapolis Valley is by no means of small importance.

We have an excellent fruit belt lying along the Tusket and Carleton Rivers and in the Deerfield Valley. This industry is steadily increasing and year by year we see at our local Exhibition a larger and cleaner exhibit showing the benefits of spraying and more careful selection. It is owing to these favorable conditions of climate, of cheap and valuable fertilizers on our sea shore, of a good local market and of our proximity to and daily intercourse with a much larger market for any excess products that while the recent census has shown a regrettable loss of population in some counties, Yarmouth County has not only held her own but gone ahead gaining about 300 in numbers.

There is another industry to which I wish to make special reference an industry that might and could under proper conditions be made of great value, not only to Yarmouth County but the whole Province, I refer to sheep raising, were this industry not so handicapped by the dog nuisance that many of our farmers cannot enter upon it, the raising of sheep for both wool and mutton would soon assume larger proportions. This is an occupation for which no county is more favorably adapted than Yarmouth.

Having given an outline of what is being done and the possibilities of what can be done you will readily see that a great work lies before us as county Association and we urgently desire that you will in the future as in the past give us your careful attention. Situated as we are so far from the Agriculture College at Truro we cannot avail ourselves of the opportunities offered as well as the nearer counties. Therefore you should remember your faraway offspring in some other tangible way.

Again on behalf of the Yarmouth County Association we give you a cordial welcome and we trust that your deliberations on the great question of Agriculture will be such as will strengthen every citizen to go forward with renewed effort.

[illegible] M. P. [illegible]

delegation the most important that had ever visited Yarmouth. His experience had been that farmers were as intelligent and honest as any other class and that they must be reckoned with. He was proud of the delegation that visited Ottawa last winter. It was composed of men of calibre and were straight forward in making their demands. The number of farmer representatives in the halls of Parliament was steadily increasing and he looked for the time when the farmers' demands would be paramount over all other questions.

H. W. Corning, M. P. P. spoke of the inspiration he had personally received from attending the Farmers' Association meetings. He considered the organization the main spring of the Province. Unless the Province of Nova Scotia were peopled with an intelligent, industrious class of citizens she could not take her place with the other Provinces of the Dominion. He dwelt, at some length on the Association and its influences. He had a good word to say in favor of a Dormitory for the Nova Scotia Agricultural College at Truro. As a farmer he was proud of the College and its staff. He was glad the 'Association was meeting in Yarmouth as it would inspire the local organizations to do better work in Agriculturally making for a greater Nova Scotia.

Mr. S. A. Cook, Vice President of the Yarmouth Agricultural Society welcomed the delegates as follows:—

Mr. President, Ladies and Gentlemen:—

It devolves on me, in the absence of our President, to bid you a hearty welcome to our County, and extend to you the glad hand for our Agricultural Society; it being the first time of your meeting here. We are exceedingly glad to have you with us as we have been looking forward to this for a number of years. I trust you will return from this meeting feeling amply repaid for the long and tiresome journey many of you have taken.

Our County, generally, is not thought to be an Agricultural County yet I believe we have possibilities along the lines of Agriculture that few dream of. It has always been our boast that we could produce as much to the acre as can be produced any where of hay, oats, potatoes, mangols, turnips, carrots and ordinary garden truck; besides we have as good grazing ground as one could wish, we also have the name of putting up the best County Agricultural Exhibition in the Maritime Provinces. I would invite you to take a stroll out to our Exhibition building and grounds, it is only a matter of five minutes walk and five minutes more walk and you will reach Lawn Dale Stock Farm owned by our friend, Dr. Lovitt, where you can see a fine herd of Short Horns. Another feature of Agriculture that has sprung up within a few years is the growing of strawberries for the Boston market. This branch is growing year by year and while the expenses are heavy and a number of draw backs such as the late arrival of the Steamers in Boston and no cold storage accommodations yet those in the business find it fairly profitable.

REPLY TO ADDRESSES OF WELCOME.

Mr. A. S. McMillan, of Antigonish replied to the addresses of welcome and in the course of his remarks spoke of the educational value of the meetings held under the auspices of the Nova Scotia Farmers' Association. The aim and object of the individual members of the Association was to help their fellow farmers and in so doing they were helping to promote the various other professions. He thanked the Yarmouth County Farmers' Association for the active interest they had taken in the mother organization, by sending one of their members to meet the delegates and assign them their places at the various hotels and providing conveyances to take them to their respective boarding houses.

Mr. C. E. Saunders, of the Entymological Staff of the Federal Department for Agriculture, who is on Brown tail Moth extermination work, in Western Nova Scotia was present and gave an outline of the work that is being done. Yarmouth and Digby Counties were holding their own but in Annapolis County, owing to a lack of co-operation on the part of the farmers, the Moth was increasing in numbers. He mentioned the fact that possibly, in the near future, a station for the study of insects, injurious to crops, would be established in Nova Scotia.

Short addresses by Prof. M. Cumming, Prof. J. H. Grisdale, Director of Dominion Experimental Farms, Geo. H. Barr, Esq., Chief of the Dairy Division, Ottawa, and W. T. Ritch, of the Sheep Commission, inspersed by readings, solos and duettes by some of Yarmouth's excellent talent followed by refreshments completed Tuesday evening's programme.

WEDNESDAY MORNING.

At the opening session, Wednesday morning, the following committees were appointed:—

Credentials—Samuel Freeman and D. R. Nicholson.

Resolutions—E. J. Elliott, F. W. Foster, Geo. Vinten, Howard Kennedy and D. R. Nicholson.

An unanimous vote of thanks was tendered to the various entertainers who had taken part in the entertainment given at the close of the Tuesday evening session.

Following the reading of the Directors' report, Mr. G. Nichols, Berwick spoke to the reference made therein to telephone systems and strongly emphasized the necessity for the Provincial Government to take over the control and operation of the trunk telephone lines throughout the Province as a means to an end in giving farmers cheaper telephone communication for business and social purposes.

DIRECTORS' REPORT.

In submitting their 16th annual report your Directors think they may congratulate you, as a whole, upon the continued prosperity of Agriculture. The Province of Nova Scotia, although smaller than those further west, is of no small importance and one which can offer substantial inducements to capital and labor on agricultural and horticultural lines. We have been handicapped, to a certain extent by the booming of the Western Provinces, and the "lure of the West" drew many of our bone and sinew that way; but there is an end to all things and this, we are glad from a provincial standpoint to a very great extent has had its day. Farming is a business and needs running on business principles to make it financially successful. Many are looking at it from this point of view, and by applying more thought and using more advanced ways in their operations are more and more realizing it. The leaven of the Agricultural College, the Institute meetings, this Association, Exhibitions, Live Stock Shows, and more progressive farmers have been working towards leavening the whole of the province to more economical production and the welfare of the province.

Something has been done in the past; the future is ours. Let us plan for still more progressive work, that more intelligent soil management and crop production may be further inculcated, that the importance of selected seeds, the destruction of weeds, under-draining and the innumerable improved operations in Agriculture be ever brought before the people, and let us more earnestly endeavor to put into practice what we know to be best. We, in no half measure urged upon the Government the establishment of our Agricultural College; we have got it and on a grand scale. We are proud of it. It is progressing year by year. Let us give it our individual and collective support, so that its work may still be more effective; let us put more life into our County Farmers' Associations, and formation and enthusiasm for the advancement of rural pursuits and rural social life.

Last year we met at Windsor, we had excellent meetings. We went home, having moved, seconded and carried individually a resolution to the effect that we should do better than ever we had done in the past. We meet again this year, at the most westerly point of the province we have visited (and we are not likely in the future to meet much further west) with the same intention and to talk over our endeavors and progress of the past year and gain more in-

Top Row—A. S. McMillan R. J. Messenger G. R. Nichols Samuel Freeman Prof. E. S. Archibald Daniel McDonald
Bottom Row—Chas. R. B. Bryan H. W. Corning R. M. Jackson Wm. O'Brien W. W. Black

Officers of the Nova Scotia Farmers' Association for 1912-13.

President—R. M. Jackson, Jacksonville, Cape Breton Co.
1st. Vice-President—H. W. Corning, M.P.P., Chegoggin, Yarmouth Co.
2nd. Vice-President—Wm. O'Brien, Windsor Forks, Hants Co.
Directors—A. S. McMillan, Upper South River, Antigonish Co.; Samuel Freeman, Amherst, Cumberland Co.; G. R. Nichols, Berwick, Kings Co.; R. J. Messenger, Bridgetown, Annapolis Co., Daniel McDonald, Sylvester, Pictou Co.
Sec.-Treas—Chas. R. B. Bryan, Durham, Pictou Co.
Auditors—Profs. J. P. Landry and E. S. Archibald, Truro, Colchester Co.
Exhibition Commissioners—R. S. Starr, Port Williams, Kings Co. and W. W. Black, Amherst, Cumberland Co.

formation and enthusiasm for the present year.

We may say that a cordial invitation was extended to Hon. Martin Burrell, Minister of Agriculture, to be present, but pressure of departmental duties prevented him from accepting. We are pleased at having secured the services of Prof. J. H. Grisdale, Director of the Government Experimental Farms, and we take this opportunity of congratulating him on his elevation to that position. Together with Mr. Geo. H. Barr, Chief of the Dairy Division, Ottawa, and Mr. W. T. Ritch, Wool Expert of the Dominion Sheep Commission, to address these meetings, feeling sure we will gain a lot of useful information from them, not only in the meetings but by intercourse between sessions. We wish to express our thanks to the Department of Agriculture at Ottawa for their services; to Prof. Cumming, Prof. Archibald, Prof. Shaw and others we extend our thanks for help on the programme.

Crops in 1911 were on the whole fairly good, no crop being much above the average, except apples, which was a record one, and during no year have so many been shipped from the far-famed Annapolis and Cornwallis Valley. Not only has the quantity been great but the quality has never been excelled.

The various resolutions passed at the last annual meeting were duly dealt with and action urged in the several quarters, a committee, who interviewed the Premier, were most cordially and heartily received; later on you will hear from this committee so we need not say more here.

The Hon. Sydney Fisher replied in regard to dividing the Dominion Grant to Exhibitions into annual grants, to the effect that the Government undertook to give to each province $50,000, to assist in exhibition work. The question of a second round had not been discussed and until it was he could hold out no hope that this vote of $50,000 would be continued after the Saskatchewan Exhibition.

The matter of the Tariff Reform resolutions, introduced by Mr. F. Miles Chipman, and referred to the Directors, came before the people. It was discussed the length and breadth of the land and the result published in the press Sept. 22nd.

A question brought up at our meeting in Digby three years ago, in regard to the telephone service appears to need further consideration, as the rural communities are not receiving the advantages they should do and which should be possible. One company has now the control of all lines in the province, they are financially very strong, receive provincial privileges and concessions and apparently are amenable to no one. The Public Utilities Commission appointed three years ago does not meet the case. There is but little doubt that the service could be made to pay and pay well, with rentals and tolls considerably reduced, so rural communities are paying more than is necessary for, or are being deprived altogether, by the excessive rates, from the advantages of telephone communication which not only business now demands but social life also. We trust this matter will be again opened and some good come by it, so that we will be able to get an efficient service for a fair and equitable rate. The provincial privileges and concessions should not be given to the shareholders primarily, for dividends but towards advancing the welfare of the province at large.

Before closing we would express our gratification to the Provincial Government for the liberal grant to Agriculture, We trust they will not weary in well-doing, and remember that we are urgently calling for a dormitory for the college at Truro, a thing which is being more and more required as the years go by. We are also pleased that the commercial progress of Nova Scotia in 1911 was very good. The prospects are bright for better and more railway facilities, and initial movements tend towards better and more permanent highways. All of which we trust will materialize in the near future to the advancement of the province.

We hope we have placed a good programme for this Convention before you and trust the meetings may be interesting and profitable.

The treasurer has prepared the following Financial Statement, which you have in printed form in your hands.

TREASURERS' REPORT.

Cr.

Balance January 1st..... .....$	49 10
Government Grant.....	1000 00
Membership Fees.....	15 50
	$1064 60

Dr.

Annual Meeting..... .....$	610 64
Annual Report.....	73 25
Directors' Expenses.....	26 75
Dormitory Committee.....	23 90
Parliamentary Committee... ...	23 89
Secretary's Salary.....	150 00
Stationery and Printing.....	4 65
Postage, Telegrams, Etc.....	13 48
Balance December 31st.....	138 04
	$1064 60

CHAS. R. B. BRYAN.
Sect.-Treasurer.

Durham, N. S., January 1st, 1912.

AUDITORS' REPORT.

We, the undersigned Auditors of the Nova Scotia Farmers' Association, have examined the books and accounts of the Secretary-Treasurer, Chas. R. B. Bryan, and find them correct and neatly kept.

E. S. ARCHIBALD,
J. P. LANDRY,
Auditors.

Truro, N. S., January 13th, 1912,

THE EXHIBITION COMMISSIONERS' REPORT.

Mr. President and Gentlemen of the Nova Scotia Farmers' Association.

As your representatives on the Exhibition Board, we again beg leave to make our Annual report.

On the whole, we consider the Show of 1911 well up to the average—and in many ways far above it. On the whole, the buildings were fairly well filled, with the exception of the Horticultural Hall, which, owing to the early dates contained no fruit of any kind.

The live stock exhibit showed a slight falling off in some departmeats particularly in beef cattle and heavy horses, while the dairy entry was the largest ever received. The poultry how was particularly good and showed to great advantage in their new quarters.

The Fisheries building was a source of great attraction to all visitors, and contained the best display ever exhibited in the building.

The Mines building contained displays of the Province in both raw and finished states and was well filled.

Machinery Hall was not so well filled as on some occasions. The principal exhibits were carriages, spraying outfits, automobiles and mill machinery.

Nearly every available foot of space in the Main building and annex was occupied by Manufacturers and Dealers. The annex being practically filled by the "Made in Halifax" exhibit.

Owing to the early date and the dryness of the season, the Agricultural Hall did not present the appearance that we should like to see. The same might be said of the Dairy products. The cost of running the show was about the same as last year and varies very little from year to year. This year the maintenance account is a little larger than usual, owing to necessary repairs to the buildings and fences.

The amount paid for Prizes is much less than last year owing largely to the fact that there was no fruit exhibit, and went to the Provinces as follows:—

Nova Scotia.....	$6,160.50
New Brunswick.....	1,088.50
Prince Edward Island...	841.50

The financial statement shown at the end of the year, to our mind, was very satisfactory. The Subsidy (for this is the name that the deficit should be called) being only $11,288.-10. When you consider that included in this, are fixed charges such as Insurance, Interest, Caretaker, Maintenance, Etc., amounting to over $5,000, it certainly makes a very creditable showing.

You will, no doubt, remember that last year we had no special attraction in front of the Grand Stand. This year we returned to our former practice of putting on attractions, other than the races, and we think the results prove conclusively that they are required.

The receipts from the gates and exhibitors tickets were $4,800 more than last year, while that for privileges was nearly $400 more. The entry fees (owing to not having a fruit exhibit) were nearly $200 less, while in the speed classes they were $1,000 more. The total receipts being $6,100 more than 1910.

We would again urge this Association to make a move whereby legislation may be obtained at the coming Session, so that any part of the grounds can be used for legitimate means of revenue, during any time of the year.

With regard to the coming Show, the dates have been set for the middle of September, which should be a good time for both exhibitor and visitor.

The Prize list has been passed upon and with the addition of Fruit is about the same as last year.

We again appeal to you to stand shoulder to shoulder for the betterment of our Show, and let us all do all in our power to make our Nova Scotia Provincial Show the best in Eastern Canada, for in our hands lies its future.

Thanking you, gentlemen, for the honor of representing you on the Board of Commissioners,

Respectfully submitted,
R. S. Starr,
Chas. R. B. Bryan.

The Exhibition Commissioners' report was followed by a lengthy discussion on Exhibition matters.

Mr. C. A. Maxwell, of Pictou, said the average farmer was not benefited by the Provincial Exhibition. The local show was, however, a splendid educator and a means to an end in interesting the disinterested.

Mr. Howard Kennedy, Past President of the N. S. F. A., also spoke in favor of the local shows but thought the Provincial shows also played their part in advancing agricultural interests. Local shows were feeders to the Provincial show.

Mr. G. Nichols, of Kings Co., expressed the view of the small exhibitor. It was difficult for a small exhibitor to go to Halifax with his stock and come away with the balance of his winnings on the right side of his ledger, yet he favored the holding of an annual exhibition at Halifax. The small fruit shows in various parts of the Provinre had outlined their usefulness.

Mr. Wm. O'Brien said Halifax was the place for the holding of a Provincial fair but the time stock was required to be kept on the grounds was entirely too long. He reierred to the Royal Show, England, as being a one week Fair and thought Halifax might profit by following the example.

Mr. C. C. H. Eaton, would like to see more encouragement given to exhibitors of grade steers at Halifax. The present status of the beef raising industry demanded further encouragement He thought the Halifax Fair did not fill the bill in this respect.

Mr. F. L. Fuller, Superintendent of Agricultural Associations, in Nova Scotia, explained that many of the local County Shows received larger grants in proportion to the amount of prizes paid out than did the Halifax Exhibition. The Halifax Exhibition received no grants such as the Local Shows received and consequently the yearly deficit of the Provincial Fair looked more formidable than it really is. The city of Halifax pays one-half of the exhibition deficits and he thought they were getting full value for their money.

Mr. F. W. Foster, also thought the time live stock was required to be kept on the grounds was entirely too long.

Mr. W. W. Black, also said the time was too long. He tnought the Exhibition should open on Saturday and close on Thursday night. He recognised the Halifax Fair as being a highly educational Show. Breeders of pure bred stock must be encouraged to show as they, not infrequently pay large sums of money for imported sires, while they sell the progeny of these sires for the improvement of local herds at low figures.

Mr. S. A. Logan, said the grade stock received as good a Show at Halifax as did pure breds. The Show should have the unanimous support of the farmers as it was at Fairs of that kind that pure bred live stock breeders could educate the masses to the ideal in their respective lines.

Mr. C. R. B. Bryan, said the Provincial Fair was one of the best advertisements Nova Scotia could possess. The only trouble in regard to shortening the show period was the fact that if adverse weather conditions obtained, for a day or two while the Fair was being held, it would be very detrimental to the Exhibition finances.

Mr. H. W. Corning, referred to the satisfactory arrangements that had been made re the transportation of live stock from Western Nova Scotia to the 1910 and 1911 Halifax Exhibitions. He was in favor of opening the Halifax Show on Saturday and closing on Thursday night. It was not all plain sailing for even the most extensive prize winners to be retained at Halifax for over a week. The expense account incidental to showing was very materially increased through a prolonged show period. He believed both pure bred and grade classes should have an equal footing on the prize list.

Col. S. Spurr, said he himself was a better farmer through the incentive received from visits to the Halifax Exhibition. Each and every farmer in Nova Scotia could exhibit some of their produce and help to increase the interest in and improve the exhibition. Local fruit shows were not so valuable as the provincial fair in advertising the fruit growing possibilities of the Province. He believed if suitable dates were secured and a proper prize list arranged fruit should be shown in car-load lots as well as on plates, in boxes and in barrels. The Halifax Fair was held too long.

Mr. J. R. Webster, favored the scheme of showing fruit at Halifax in car lots.

Mr. A. S. McMillan, thought the local shows were doing good work in reaching the classes that are not interested in the Provincial fair. While the exhibits were not so numerous at the former, in many cases the quality was just as good as of that shown at the latter.

S. A. Cook, said the local shows were doing a good work in interesting the boys in live stock judging.

Mr. Wm. Murray, Pictou Co., thought the Halifax fair was getting monotonous as there did not seem to be much new blood introduced. He had seen the same old animals led out to victory year after year.

Mr. W. W. Pineo, said the breeders

Continued on page 272.

Nova Scotia Fruit Growers' Convention

The forty-eighth annual meeting of the Nova Scotia Fruit Growers' Association was held in Wolfville, N. S. on the 15th, 16th and 17th inst. Despite the driving storm that raged without a large and appreciative audience listened to R. J. Messenger's presidential address in the course of which he referred to the year's work and the prospects of an increased facility in the establishment of an Experimental Horticultural Farm at Kentville.

Mayor Harvey of Wolfville welcomed the members and the remainder of the evening was taken up with addresses by A. L. Davison, M. P. P., Dr. Cutten, Prof. Cumming, W. T. Macoun and others.

PRACTICAL PACKING DEMONSTRATION.

Mr. Carey, of Toronto gave a practical talk accompanied by demonstration on packing apples before a representative gathering on the morning of the second day of the Convention. He was assisted in his work by Inspector G. H. Vroom. The afternoon and evening sessions were devoted to orchard practice and the commercial end of the apple business.

EXPERIMENTAL FRUIT STATIONS

W. T. Macoun, of Ottawa, spoke on "The work on an Experimental Fruit Station." In the beginning he asked pardon for speaking on this subject, which properly belonged to the new Superintendent, Prof. Crowe, whose appointment to the Experimental Fruit Station in Kentville, had just been confirmed, but the subjects had been assigned before the appointment had been made.

Prof. Macoun gave a list of all the fruit stations in Canada. His work is to visit all these, to confer with the Superintendent, and suggest new lines of work, and be of any possible aid.

(1) The most economical way of using fertilizers to get the best out of our fruit trees. The question of commercial fertilizers and the value of ploughing under the green crop, and the necessary fertilizers to be added to this were things all to be learned and then taught from the Kentville station.

(2) The best method for cultivation for big crops—not only quantity but quality, color, uniformity of size,—and told of the methods of investigation carried out in various parts of the United States.

(3) How can we best cultivate our fruit for color and maximum size, is a most important question. Top grafted trees, particularly, produce high-colored apples, and these are particularly desired in the markets of the world, how to produce them best is a very vital point.

(4) What ages of trees and what method of cultivation will give early bearing? One or two-year old trees were, in his opinion, the best. The variety of trees, the stock, etc.

(5) Fall vs Spring ploughing was a great subject for experiments.

(6) What is the best cover crop to use?

(7) What is the best method of pruning for our fruit?

(8) The most economical methods of spraying, the time, and how often we should spray. This question could not be answered hurriedly as the experiments would doubtless extend over a period of five years.

(9) The relative resistance of different varieties of apples to scab and codling moth.

(10 The relative keeping and shipping qualities of the different varieties of fruit.

The testing of new varieties, especially of British and European varieties. It is a well known fact that they succeed better here than elsewhere in Canada. The Government are getting 38 new varieties to plant on the Kentville station in the Spring. Of the 35 varieties now grown in the Annapolis Valley, there will be planted 25 trees each for the purpose of comparison. About 1200 trees in all will be planted this year. Not a really perfect variety of apple is produced here, and this station hopes to ultimately produce an apple combining all the good points of our most marketable apple.

The raising of seedlings and cross-breeding will receive considerable attention.

(11) The relation of farming to fruit growing will be shown in the development of a part of the station as a practical farm where cattle will be raised, etc.

(12) How best to use the land when the young trees are growing.

(13) The beautifying of farms and fruit-growers' houses, and how the stations hope to help along this line of work. The station is to be a Bureau of information on all points to farmers and fruit-growers.

During the entire address, Mr. Macoun answered questions and made comments on the work in hand, which were of great benefit.

Mr. J. R. Starr, acting superintendent of the Kentville Experimental station, told briefly what had been done at the farm while under his charge. The farm consists of 240 acres, 3-5ths of which will be devoted to horticulture, a portion to general agriculture, a portion for grass land, a large part for forestry, and about ten acres for buildings and beautifying. Twenty-five acres are now ready for planting the experimental orchards. Ten acres more will be used in the following year. Roads will be laid out and landscape gardening will receive a good share of attention.

Colonel Spurr, of Melvern Square, one of the old stand-bys of the Association, introduced several resolutions respecting the recent appointment of Mr. Martin Burrell as Minister of Agriculture, and the pleasure of the Association in regard to the appointment, and also their entire sympathy and confidence in the appointment of Prof. Crowe, as Director of the Kentville Experimental Station.

The third resolution was: "Whereas the system of inspecting apples in the Province of Nova Scotia, which has been in practice for the past few years, mainly at the port of shipment, is not entirely satisfactory to the fruit-growers of the Province,

"And Whereas, as many of our apples are shipped through different channels. whereby they receive no inspection at all,

"Therefore be it resolved. that inspection be done at the fruit warehouses or railway lines, and but a small part at the place of shipment. In order that the best results might be obtained in apple inspection, we would recommend that the apple section of the Province be divided into districts, and each inspector be given a district to care for."

POULTRY RAISING.

Mr. M. K. Ells gave a very practical paper, his personal experience in poultry raising, in connection with orcharding.

The raising of beef cattle was rather arduous work. Dairy products were more or less, too, of a risk, and entailed considerable labor,—but the hen gave the finished product. In other words, she milked herself and made the butter. The food was, of course, the secret ol good production, and he laid his scheme of diet before the audience and answered innumerable questions. Mr. Ells puts it that the apples with him are a by-product of the poultry industry, and in his opinion no two things worked together could produce better results.

The resolution regarding apple inspection was fully discussed. Capt. C. P. Allen, Kentville, condemned the whole system of inspection. Halifax was no place for it. The apples should be inspected at the warehouse or the place of packing. Mr. W. W. Pineo did not agree with Captf Allen, and showed how it would be a foolish move to change the method of inspection. He did not approve of the dividing of the district into small sections. The best man to inspect the fruit was not your own neighbor, but someone from outside the district. He said that the trouble was that there were too few men on the force. They need young, vigorous, sturdy men, who could stand the rigors of the work, and then there would be no complaint.

Mr. J. V. Chute, Waterville, condemned the present system of inspection,—it was done too hurriedly. The warehouse was, in his opinion, the place. There was to be a change in the system. He was speaking with authority, and the Government were looking to the fruit-growers to tell it what they wanted.

J. Howe Cox, Cambridge, was of the opinion that apples should not only be inspected at the warehouses, but at the docks as well. The crying need in Halifax was a place to store apples while they were waiting for the steamer.

Col. Spurr advocated for each man his own warehouse, if possible, and apples honestly packed at home. "How long," he asked, "after the barrel had been packed could it be condemned? What were our delegates to say when they went to Ottawa? Let us act as sensible men, stick together and fight for it, and we'd get it sure."

Mr. C. R. H. Starr, Mr. Bigelow, Mr. Robert Starr, Mr. Innis, Mr. John Buchanan, Capt. C. O. Allen also spoke.

Mr. C. R. H. Starr moved that this much discussed resolution be referred back to the committee for amendment.

This is regarded as one of the largest meetings in the history of the Association. Beside the old members, there were many new faces. The meetings were all well attended.

BROWN TAIL MOTH.

During the meeting, there was considerable heard about the brown-tail moth. This subject was not on the programme, but the talk was due to the fact that this terrible pest is on the increase. The party in search of the nests at Bridgetown have located some 1200 nests, and another party operating at Bear River, Smith's Cove, Deep Brook and Middleton, have found 2,364 nests. In former years, this pest attacked only apple, plum and pear trees. This season nests have appeared in oak, thorn, wild pear, quince, maple, cherry, elm, beech and birch. The moth is also becoming acclimatized, and spins its nest to meet the climatic requirements.

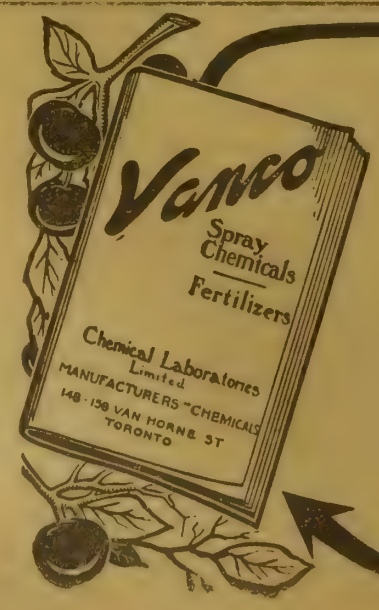
Now is the time for everyone to get out and fight this pest. If not, it has come to stay, and only active co-operation, with the official agents will stay the ravages of this most destructive insect.

TRANSPORTATION AND MARKETS

Tuesday's evening session was devoted to "The Commercial End of the Apple Business," and the first speaker was W. W. Moore of Ottawa, who took for his subject, "Transportation and Markets."

His figures were very interesting, and surprised many in the audience, when he stated that up to Jan. 12th, the total export from the Province to British, foreign and home markets, amounted to 1,020,657 barrels. The only year previous which came anywhere near this record was in 1909-10, when the mark reached was 711,000 barrels. Speaking of each market individually, Mr. Moore said that this year Nova Scotia apples had won a high place and were now recognized as somethiog to be reckoned with. The German market, practically unknown before, might, in time, become very important, and he explained the climatic situations, tar-

(Continued on page 278).



THIS BOOK READ IN JANUARY,
MEANS PROFITS IN SEPTEMBER.

Vanco Spray Chemicals and Fertilizers.

Vanco Lead Arsenate will destroy all leaf-eating insects—never burns—sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Co., was for "Vanco" Lead Arsenate.

Vanco Lime Sulphur Solution is strong, uniform, clear, efficient — the strongest perfect solution that can be made. Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

Fertilizers Muriate of Potash — Sulphate of Potash — Acid Phosphate — Nitrate of Soda. We are the only house in Canada selling only straight chemical fertilizers —analysis guaranteed.

BUY WHERE YOU CAN BUY EVERYTHING AND SAVE FREIGHT.

SEND FOR THE "VANCO" BOOK NOW—study it at your leisure, and spray for future profits.

CHEMICAL LABORATORIES, LIMITED, Van Horne Street, TORONTO. 32

Fruit Pit or Baldwin Spot.

It will be of interest to fruit growers generally to know that this disease has been reported from practically every apple growing section of B. C. and the neighboring States this year. Not only is the Interior affected, but the Coast as well, while probably the greatest losses are reported from the most prominent fruit sections.

This trouble goes under a confusing variety of names. The principal ones commonly given by fruit growers are: Baldwin Spot, Fruit Spot, Dry Rot, Bitter Rot, Brown Rot, Physiological Dry Rot, and Fruit Pit. In Germany, the common name is Ztippen, or Stippichderden; and Bitter Pit in South Africa. No scientific name has been given, berause no specific cause has yet been discovered.

At first the appearance is that of roundish brown spots, just below the surface of tne skin of the apple, or perhaps up to one-quarter of an inch deep. When near the surface, there is a smaller circular depression just above the spot. On the colored portion of the apple this depression is surrounded by slightly deeper color, and on the green parts of the apple the depression is deeper green, changing later to brown. The brown spot is pithy in character, dry, and comparatively tough. The spots are generally from one-third to three-sixteenth of an inch in diameter, and of not quite the same depth.

As the trouble develops, more spots occur, and finally the brown may extend in a more or less complete network through the outer tissues of the apple. The affected flesh is dry and flavorless, but not bitter. The appearance and saleability are very much impaired, and, even for cooking purposes, badly affected fruit is not of much use.

In the third stage, the apple becomes practically entirely brown, and quite worthless.

In its first stages, the Fruit Pit is hard to distinguish from the effects of hail. Another type affects early apples particularly, causing a more or less complete browning of the tissues surrounding the core. In this case, the apple becomes valueless commercially before its outward appearance is much affected.

Variations of the above forms, and very similar forms, are found in the apple, pear and prune.

This disease has been known and been under investigation for thirty years, principally in Germany, and, during the past ten years especially, in the United States and Canada. It is agreed that it is not caused by any fungous, bactorium or insect. The organism causing it is absolutely unknown. Spraying experiments have proven absolutely valueless. Scientists are now thoroughly agreed in designating it as a physiological trouble in the same class as Water Core.

The true Baldwin Spot of New York State, the true Bitter Rot of the Middle West, the true Apple Scab or Black Spot—are all fungous diseases, and the life history of the organism, like that of typhoid and tuberculosis, is well known to investigators. The disease above described is none of these.

While the absolute cause is unkown, there have been discovered certain inducing causes. These are:

1. Light yields of sappy, usually large, fruit.
2. Heavy wood growth, from two to four or five feet in length.

The light yields and heavy growth are due to the following causes:

1. A heavy crop the previous year.
2. Young trees.
3. Heavy winter pruning.
4. Excess of water by rainfall, seepage and irrigation.
5. Clean cultivation.
6. Nitrogen in the soil in excess over potash and phosphoric acid.
7. Unhealthy or winter injured trees.

Any one or any combination of the above conditions may be sufficient to bring on Fruit Pit.

The remedies are:

1. A good, heavy crop of fruit.
2. A reasonable growth, consistent with the age, size and health of the tree.

To secure heavy crops and a mature growth, the following are of importance:

1. Rational winter pruning, replaced by summer pruning if absolutely necessary.
2. The maintenance of the proper moisture supply, less irrigation, proper drainage.
3. Less clean cultivation. Put the orchard in sod, if necessary.
4. Decrease the amount of soil nitrogen by lessening cultivation, by putting the orchard in sod, or planting intercrops, and where necessary balance the nitrogen supply by adding potash and phosphoric acid. Unhealthy trees should be given proper conditions as above, to regain vigor. Properly cared for, they will produce a much higher class of fruit. Badly diseased trees had better be removed.

It is the application of the above remedies under local conditions, which calls forth the skill of the grower.

More rational methods of orchard cultivation are absolutely essential to permanent control of this disease. Its prevalence this year has aroused much needless apprehension in the minds of fruit growers. The disease can be avoided almost entirely by the proper methods. It is significant that good intentions, rather than wanton neglect, have brought it on, to a very large degree. The methods above recommended, skilfully applied, will result in much greater yields of fruit per tree and per acre. The cost of production per box will be actually lessened considerably, and the general quality and color of the fruit raised in equal degree.

In view of the possible injury which may be caused by needless alarm, it is to be hoped that fruit growers will investigate the subject rationally, and, having formed their conclusions, work out the remedy best adapted to their own orchards. It is encouraging to note that the prevalence of Fruit Pit in one orchard has no effect whatever on the orchards of the same district. Contagion and infection are impossible.

An Orchard for the St. John Board of Trade.

On the recommendation of Mrf A. G. Turney, Provincial Horticulturist for New Brunswick, members of the St. John Board of Trade have subscribed funds for the purchase and operation of a commercial orchard near St. John. This is a move in the right direction. Mr. Turney has recently addressed several of the most progressive Boards of Trade in the province and much enthusiasm re commercial and experimental orcharding has been the result.

Every farmer worthy of that distinguished appellation should have a good family apple orchard and he greatly discounts his own intelligence by its neglect.

Yellow Dale Farm Barn—Roofed with NEPONSET Paroid Roofing.

The Real Rival of Best Shingles

Time was when you could buy old fashioned heart-of-the-log shingles and you *knew* they would *last*. But are the shingle roofs you have been laying in recent years *really* going to *last?* Time will tell you. Time has already shown thousands of farmers that

NEPONSET

PAROID ROOFING

Lasts Like Old Fashioned Shingles

Many of its long-wear records have been made on farm barns and farm buildings just like your own. And NEPONSET Paroid costs less than shingles—it costs less to lay, too. You are sure of its quality—every roll is inspected, tested, guaranteed. In addition, NEPONSET Paroid gives real fire-protection.

When are you going to stop buying roofs that you *think* will last and start using NEPONSET Paroid that you *know* will last? Get all the facts. Write for booklet and name of NEPONSET dealer. Learn how other farmers are economizing on their roof problems.

NEPONSET *Proslate makes a handsome reddish brown roof for houses.*

F. W. BIRD & SON, St. John, N. B.

Established 1795. NEPONSET *Roofings are made in Canada*

Winnipeg Montreal Hamilton, Ont. Vancouver, B. C.

Free to Syrup Makers, Maple Sugar Makers

Many makers of Maple Syrup delay buying their requirements until sap runs, expecting their orders to go forward at once. February and March are our busiest time. It would be to your interest to buy now, and avoid delays. We make the Champion Evaporator in 22 sizes for large or small groves. Write us to-day for booklet.

The GRIMM MFG. CO., Limited, 58 Wellington St., MONTREAL, Que.

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Maple Evaporator

Price low—quality high—product the best possible—the kind you like syrup—it retains its maple taste—all unnecessary expense and middlemen's profits cut out. Sold at a price the poorest man can buy. Every one guaranteed. Write for pamphlets and recommends. Do it now.

Steel Trough & Machine Co., Tweed, Ont.

FERRY'S

Plant breeding and selecting nas been our business for years. We market the results in the shape of thoroughbred vegetable and flower seeds. They grow good crops.

1912 SEED ANNUAL FREE ON REQUEST

D. M. Ferry & Co., Windsor, Ont.

SEEDS

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

DAIRYING.

Farm Dairying.

There has come to hand quite a dainty volume on "Farm Dairying." It is the work of Miss Laura Rose, Demonstrator and Lecturer in Dairying at the Ontario Agricultural College, Guelph, Ont., who has since become Mrs. W. F. Stephen, Huntingdon, Que. It is probably unique in being the first publication of such magnitude on the subject of dairying from the hand of a woman in Canada at least.

In a brief introductory note the authoress says: "In this book it has been my earnest desire and aim to present the dairy industry in a simple practical manner, in the hope of benefiting those desirous of improving and succeeding in their chosen occupation." Being the product of the experimental work and study of one who is a practical dairymaid and college professor combined, the volume presents itself as a particularly useful and welcome work to the legion

Mrs. W. F. Stephen, Huntingdon, Que., well known to our readers as "Laura Rose."

of women engaged in or associated with the dairy industry.

But it is not merely because it is a woman's work that the book should appeal to women; it is because of its high excellence, thoroughness and completeness of exposition of the dairy industry in Canada and in Ontario, in particular, that it should become a handbook of information and reference to all dairymen and dairywomen. It is particularly well suited to the aptitudes of the young as well as to their needs in the various branches of dairying. The distinguishing literary marks of Miss Rose's "Farm Dairying" are, combined with an animated, graceful style, condensation without loss of matter and a simplicity and lucidity that would make any subject pleasant reading. It is nicely printed and bound by A. C. McClurg and Co., and the matter is so conveniently and clearly arranged that, no matter where the reader opens the book, he finds himself at once at home and in medias res, so to speak. It is also beautifully and profusely illustrated, and its very appearance invites close acquaintance.

As a sample of her style Miss Rose will permit the reviewer to present tne following passage to the readers of The Maritime Farmer. She is writing on the necessity of a standard and a record. She writes:—

"There is but one way to determine the value of a cow when you have her, and that is to weigh and test her milk systematically. This gives proof positive of her profitableness. Shrewd dairymen are universally adapting this plan.

"Receiving good care, a cow should give six thousand pounds of milk, testing at least 3.6 per cent fat, or should make two hundred and fifty pounds of butter in a year. A heifer should reach this amount in her second lactation period. This is not a high standard, but if put into force throughout the country would mean that three-quarters of the cows would be doomed. The average yearly yield per cow is not over four thousand pounds of milk. With such an average, how many very poor ones there must be! What about yours? In nearly every stable there are sleek, gentle cows, who stretch their necks as greedily as can be for mangels and meal, and who walk forth with a leisurely important air to pastures green and luxuriant, the pets often of the herd; and yet if X-rays of the scales and the test for fat were thrown on such cows, the revelation would assign them to the butcher's block.

"Keeping a daily record gives the owner and his help a personal interest in, and oversight of, each cow. It often results in a severe weeding out of the poor ones. It makes the work of herd-improvement quicker and surer."

One of the best chapters in the book is devoted to that subject about which dairy people can never know too much and only too frequently realize that they know too little, namely, the care of the cow in calving time, and also the proper care of the young calf. A great deal of attention is paid to feeding and the composition of rations, to fodder crops and ensilage. The instructions on milking are about the best, most complete and most common-sense ever read anywhere by the reviewer. An observance of Miss Rose's directions would result, and at no additional cost or labor, in much more clean milk for the factory. All that is required is to do the right things at the right time and, above all, have as clean an atmosphere as possible at milking time.

There are chapters devoted to—Milk for the Cheese Factory, Separating the Cream, the Pasteurization of Cream, Butter-making, the Retail Milk Trade, the Retail Cream Trade, Profitable use of the By-products of the Dairy, the Babcock Milk Test, Diseases Common to Cows, Symptoms and Treatment.

The book is a very complete, thorough and wholly reliable manual on Farm Dairying and should have a place in every farm-house in Canada. Its ideals are true, economic and would prove profitable, and they are realizable by any farmer of intelligence and ordinary ambition in the land.

The price of the book which contains 300 pages is $1.35 postpaid. If you want a copy and The Maritime Farmer would advise you to get one, send your order to The Maritime Farmer or to Mrs. W. F. Stephen, Huntingdon, Que.

Following are some of the good things authorities say about "Farm Dairying": "I have had occasion to read a multitude of books and publications on dairying, but I assure you that when I say I have never read anything that seemed to me so complete, so comprehensive and at the same time so concise and readable on this subject as 'Farm Dairying,' I quite fail to express my appreciation. This book seems so well calculated to be of use to every man or woman interested in milk production and milk handling on the farm that I hope it may meet with an immense circulation. Let me assure you that I shall not fail to advise its purchase by any seeking full and reliable information along these lines."—Prof. J. H. Grisdale, Director, Experimental Farms, Dept. of Agriculture. Ottawa, Canada.

"I would like to see a copy of 'Farm Dairying' in the hands of every dairyman in Canada. It is full of practical information, carefully compiled, and based on scientific principles. It is just the kind of a book which is needed, and I shall be surprised if it does not have a very large sale."—J. A. Ruddick, Dairy Commissioner for Canada.

Cream Profits That Stay in Your Pocket

Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

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they can get not only the style and size separator they want, but also the one that nets the greatest return for the money invested for the longest term of years—the one that makes profits that STAY in their pockets.

Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

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We also handle Gasoline Engines and Rock Island Dry Batteries. Write us for prices first mail.

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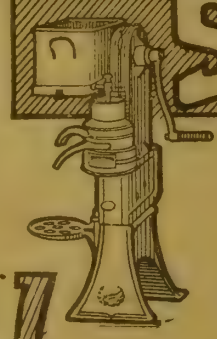

Constructed on approved mechanical principles
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Embodies the points of advantage in all other Separators
Has four important improvements excluded from all others by our patents.
Costs very little more than ordinary Separators
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Our Catalogue will be sent you upon request.

THE RENFREW MACHINERY CO. LTD.
Sussex N.B. Renfrew Ont.

Mechanically Superior
The SHARPLES
Tubular Cream Separators

The world's greatest mechanical men use Tubulars, thus endorsing and guaranteeing their superiority.

The Canadian Pacific Irrigation and Colonization Co., Strathmore, Alta., one of largest of its kind in world; Mr. Barlow Cumberland, Port Hope, Ont., well known steamship man; Mr. W. F. McLean, Donlands, Ont., editor Toronto World; Mr. A. S. Mathias, Marquette, Man., Pres. Winnipeg Street Railway Men's Union, and hundreds of others, the most competent and successful business managers, use and endorse the world's most perfect cream separator.

Follow their lead, for they want simple, durable, powerful separators and so they select and use Dairy Tubulars, which have no disks or complications, are mechanically far superior, and have double skimming force.

Write for catalogue 194.

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

"I Don't Believe It."

Hoard's Dairyman says:—

"Take one of the common sort of dairy farmers you meet with everywhere, as we did in a short auto trip the other day. His main attitude of mind was "I don't believe it." He had a poor lot of low Shorthorn grades for cows.

"Their gross earnings at the creamery last year were $48 per cow. When we ventured to remark that there was a better and more profitable breed of cows for him to employ his time on and provide feed for, than those he had, his attitude and manner spoke as loud as words "I don't believe it."

"We told him of herds that we knew about, of other herds that had averaged last year in some instances, over $100 per cow, but still it was "I don't believe it."

"We called his attention to the silo and told him what a wonderful saving a good supply of ensilage had been to us the past summer, and how it enabled us to keep a large stock on the same capital in land and thus make that capital pay a better interest. But his face looked as unbelieving as ever and said plainly, "I don't believe it."

"We spoke again of the wonderful feeding value of alfalfa and how nicely it helped to raise the young things and pour out milk from the cows. But still he "didn't believe it."

"None of the better things and methods of a more profitable kind of dairying did he believe in. He was "agin it all." He was morally certain that everybody who would try to run a dairy on that basis would lose money by it. He had to admit that he was having "hard sledding" himself, but we could no more get him to consider that it was because he was using wrong methods than nothing at all.

"We noticed, however, that his son, a youth of eighteen, was listening eagerly to what we were saying. But when the boy undertook to put in a word or two, the father would shut him up by saying, "What do you know about these things?"

"Here was a man fighting his own betterment and trying to maintain old wasteful ways. There are thousands of such men today who are keeping cows for profit and making a losing job of it. A keen, practical dairy farmer said to us one day: "I wish we could have about two years of right, hard times." "Why?" "Because it would drive out of the business the stupid men who don't know any better than to make butter that costs them ten cents a pound more to make than they can sell it for."

"The thick hide of disbelief of every right way and method that these men wrap themselves in, is one of the big questions of the day in the work of all agricultural improvement. What they don't believe is making thousands of wiser farmers rich. What they do believe is making them poorer every day. And still they "don't believe it."

$15.95 AND UPWARD
AMERICAN SEPARATOR

SENT ON TRIAL, FULLY GUARANTEED. A new, well made, easy running separator for $15.95. Skims hot or cold milk; heavy or light cream. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from ST. JOHN, N. B. and TORONTO, ONT. Whether dairy is large or small, obtain our handsome free catalog. Address,
AMERICAN SEPARATOR CO. Box 1212 BAINBRIDGE, N. Y.

Dairying in Nova Scotia.

One of the most popular publications, gotten out by the Department of Agriculture for the Province of Nova Scotia, was a series of articles on Dairying in Nova Scotia, first published in 1908. The original publication of these articles became exhausted about six months ago and the Secretary for Agriculture of the Province of Nova Scotia has had these articles revised and added to and the new edition is now ready for circulation. Those farmers, who are interested in getting the most up-to-date information in regard to such subjects as the feeding of dairy cows, testing of milk, the history and description of the various breeds, a description of method of treatment of the various diseases, will do well to write to the Department of Agriculture at Truro and ask for a copy of this bulletin. As long as the edition lasts, it will be supplied free.

Altogether the edition comprises 172 pages and it is replete from beginning to end, with practical information in regard to almost every phase of the dairy business. There are excellent illustrations of cows of the various breeds and also a few illustrations of dairying scenes in the Province of Nova Scotia.

There are two excellent articles on Stable Construction. These include several cuts of the dairy stables at the Nova Scotia Agricultural College.

The bulletin begins with a quotation from a speech delivered by the Hon. Sydney Fisher, late Minister of Agriculture for the Dominion of Canada, which runs as follows:

"Whenever I have visited the various parts of the world, I have found the most universal prosperity in dairying communities. Moreover, I have always regarded the Maritime Provinces especially adapted to this industry."

This is really the key note of the whole publication and we would strongly advise all who are interested in the important subject of dairying in the Maritime Provinces to secure a copy of this publication.

Weigh the Milk.

It is as impossible to estimate the productiveness and value of a cow as it is to guess the exact number of bushels of corn a certain field will yield. The scales and a Babcock tester, when rightly used, will accurately determine whether any of your cows are grafters just as surely gs a pair of farm scales will show the exact yield of corn. Don't put up with a robber cow.

WINDSOR DAIRY SALT

"Expect to get the prize for the best butter, this year?"

"Of course I do.

I have the best cows in the country—and here's my Windsor Butter Salt.

You can't beat that combination.

You know, I have won first prize for the best butter ever since I began to use Windsor Butter Salt"

"Hope you win"

"Thank you, so do I"

Our 1912 Style Book of Women's and Girls' Outer Apparel Mailed Free to Every Lady Reader of "The Maritime Farmer" for the Asking.

A 32 PAGE CATALOG compiled by a New York style specialist. It shows the latest styles in COSTUMES, COATS, DRESSES, BLOUSES, etc.

We are printing 30,000 copies of this catalog, but already 20,000 copies are asked for, so we earnestly urge you to write us. A postcard will do.

Here are a few hints of what our catalog contains.

Pictures of beautiful waists and blouses in washable materials ranging from **75c to $1.55.**

Magnificent cloth costumes with coats lined with guaranteed satin Price from **$13.75 to $24.50.**

Charming wash dresses for Misses and Women. Prices run from **$1.95 to $5.00.**

Beautiful wash dresses for Girls in print and chambray priced from **75c to $1.50.**

AT LOWEST PRICES we show the season's best styles in Coats, Skirts, Golf Coats, Fine Dresses, Underskirts, Kimonos, House Dresses and Bathing Suits, etc.

We Prepay All Transportation Charges.

The demand for OUR CATALOG will be so great that thousands will be disappointed—so if you want to see the Charming Garment Styles which will be worn in 1912, write now and a copy will be promptly sent.

T. R. GAINES, Limited,
MONTREAL, QUE.

This Advertisement will not Appear Again.

Subscribe NOW for the Maritime Farmer.

LIVE STOCK.

Black Leg.

W. J. Campbell, Cumberland Co., N. S., I have a few questions to ask re diseases in cattle. Two of my cattle died this fall. A yearling heifer was first affected, the symptoms being a shortness of breath followed by the swelling of a shoulder, lameness and sudden death. In about two weeks after the heifer died a calf died being similarly affected. The heifer's shoulder was black with dark watery blood under the skin. I burnt the carcasses. Can you give me a cure for animals so afflicted? Please give me all the information you can re this matter.

Ans.—This disease is known by several names, viz: Blackleg, Black Quarter, Quarter Ill and several others. Blackleg being the most common term. It is a rapidly fatal infectuous disease and mostly affects young cattle from six months to two years of age. Sheep and goats may contract the disease but man, horses, hogs, dogs, cats and fowls are immune. The cause of the disease is a bacillus or germ. Symptoms may be general or local, more frequently local. The general symptoms are loss of appetite, cessation of rumination, dullness, debility and high fever, the temperature rising to 107 degrees F. To these may be added lameness or stiffness of one or more limbs and a tumor or swelling under the skin, which when rubbeh produces a crackling sound due to the gas formed in the part. The tumor may appear in the thighs, shoulders, neck, breast, flanks, throat or base of the tongue.

In this disease remedies have thus far proved unavailing. Many remedies have been recommended but thorough trials have proved them valueless, so precaution is the advisable course. The Hypodermic injection of Blacklegine, a Blackleg vaccine, is the only safe course. This should be performed by a competent veterinarian as the doses should be regulated according to the age and size of the animals treated. The remedy may be secured from several makers but the veterinary director General's Department, at Ottawa, furnishes a reliable vaccine with full instructions for use, so it is advisable to apply there. Of course it is advisable to destroy all d animals that die from this disease preferably by burning as well as all contaminated litter and then disinfect stables. Remove healthy animals from poluted pastures a good way, to rid infected pastures is to allow the grass to grow long, become dry and then burn it. It is advisable to repeat the burning two or three times. As to the efficiency of the vaccine treatment in the United States where 7,700,000 doses have been sent out of the percent of loss has been reduced in some localities from 20 percent to less than 1 percent per annum and equally good results have been secured in Alberta where the disease caused heavy losses before the discovery and use of this preventative.—J. Standish, V.S.

Minard's Liniment Co., Limited.

Gentlemen,—I have used MINARD'S LINIMENT from time to time for the past twenty years. It was recommended to me by a prominent physician of Montreal, who called it the "great Nova Scotia Liniment." It does the doctor's work; it is particularly good in cases of Rheumatism and Sprains.

Yours truly,
G. G. DUSTAN,
Chartered Accountant.
Halifax, N. S., Sept. 21, 1905.

Preventing "Fly" or "Maggot" in Sheep.

Every shepherd and sheepowner is familiar with the conditions under which sheep become "fly"-blown, and with the effects produced by the maggots, but not all of them are aware of the means of prevention, or at least they do not put them into practice. Prevention, in the case of "fly," saves the animal much pain and annoyance, and the owner loss of mutton and considerable damage to the fleece. It includes the prompt treatment of shearing cuts, dealing with wounds, or abrasions of the skin generally, at the time of their infliction, and especially of shearing wounds, which are too often neglected. The increasing employment of machines in shearing is tending to the reduction of this cause of "fly"—they do not nip out pieces of skin like the old-fashioned shears, carelessly or unskilfully used. For the protection of wounds, oxide of zinc ointment, to which ten drops of pure carbolic acid has been added to each ounce, or a mixture of flowers of sulphur and carbolised oil is useful. The sulphurated oil may be carried in a can, and applied with a brush, after stirring. The removal of dirty locks of wool, and the trimming up of soiled parts, when, owing to the nature of the food or other cause, the animal suffers from diarrhoea, is of much importance. These precautions, however, will not always suffice, for the yolk of the wool, unless poisoned or rendered distasteful to the "fly," proves a sufficient attraction, and the pest will sometimes "strike," especially on hot, sultry days, and when there is "thunder in the air."

POWDERING, DIPPING AND SPRINKLING.

"Powdering" used to be the favourite method of prevention by poisoning the fleece, but dipping or sprinkling with a fluid preparation has largely superseded it, as being more economical as well as more efficient. Fly powders consist for the most part of mixtures of sulphur, arsenic, powdered hellebore, white lead, alum, cinnabar of antimony, prepared chalk, umber, Armenian bole, and whale or fish oil, in various combinations and proportions, and some old-fashioned sheep farmers still cling to such agents; but they are not nearly so effective for "fly" prevention as a reliable dip. As to what constitutes a reliable dip, there exists some difference of opinion, but as an effective preventive of "fly," and in order that it may be lasting, it is necessary that it should be of the poisonous variety. The "poison" bogey frightens a good many, but, properly prepared, poisonous dips are perfectly safe, if properly used, which, of course, includes rigid adherence to specific directions framed by the proprietors to ensure safety and efficiency. Such a dip, by remaining in the fleece, will, if employed in the early part of the season, to a great extent confer immunity from "fly" attack, as well as prevent the development of the larvae. Sprinkling is very much akin to dipping, the same solution being used. It is practised when it is not convenient to dip each sheep individually, and secures the saturation of the fleece at parts most likely to be "struck." For sprinkling, sheep are penned closely together, and the solution applied to the fleece by means of a watering-pot with rose attachment, but this plan is not to be compared for efficiency with individual dipping.

With further reference to the selection of a dip, there are preparations, though quite equal to killing any vermin the sheep may harbour at the

FREE!! $200.00 IN CASH

AND 1,000 VALUABLE PREMIUMS GIVEN AWAY

1st Prize, $50.00 in Cash - 3rd Prize, $35.00 in Cash
2nd Prize, $40.00 in Cash - 4th Prize, $25.00 in Cash
5th to 9th Prizes, each $10.00 in Cash.

Herewith will be found the picture of a stylishly dressed lady. Around her figure are concealed the faces of her seven daughters. Can you find their seven faces? If so, mark the faces with an X. Cut out the picture and send it to us, together with a slip of paper on which you have written the words, 'I have found the seven faces and marked them.'

Write the above words plainly and neatly, as in case of ties, both writing and neatness will be considered in this contest. Should you not happen to be a neat writer, point out this advertisement to some friend of yours who can write plainly and neatly, and have him or her enter this contest in his or her name for you. First, agree with the person who is to do the writing, that you are to receive any prize money or prize that may be awarded. This may take up a little of your time, but as there is TWO HUNDRED DOLLARS in cash and One Thousand premiums given away, it is worth your time to take a little trouble over this matter.

Remember, all you have to do is to mark the faces, cut out the picture, and write on a separate piece of paper the words, "I have found the seven faces and marked them."

We do not ask You to Spend One Cent of Your Money in order to enter this Contest.

Send your answer at once; we will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received over One Thousand Dollars in Cash Prizes from us, and full particulars of a simple and easy condition that must be fulfilled. (This condition does not involve the spending of any of your money.)

Winners of Cash Prizes in our late competitions will not be allowed to enter this Contest.

Below will be found the names and addresses of a few persons who have won some of our larger prizes in recent contests. Your opportunity to win a good round sum is equally as good as that of anyone else, **as all previous winners of cash prizes are debarred from entering this contest.**

Names and Addresses of a few Prize-Winners in Recent Contests

Mrs. W A. C. Orr, 298 Gunnell St. W'peg, Man.	$50.00	Miss B. Brodeur, 6 Gilleapie St. Sherbrooke, Que.	$50.00
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AND MANY OTHERS

Address:

BOVEL MANUFACTURING CO.

BOVEL BUILDING, MONTREAL, CANADA.

A Convincing Argument.

A Pair of Cattle Gained 550 Pounds in 34 Days.

ON October 7th last, L. C. Prime Company, Limited purchased from Nova Scotia a pair of cattle which were in fairly good condition weighing respectively 1465 and 1585 pounds each. These animals were purchased for making a test of **MOLASSINE MEAL.** They were stabled for thirty-four days and fed on one pint Corn Meal mixed with two pints Molassine Meal three times a day. On November 10th the animals were again weighed and tipped the scales at 1745 and 1855 pounds each, making a total gain of 550 pounds. They were sold to Mr. M. J. Collins, Fairville, New Brunswick. A copy of a letter from this gentleman is published below.

We do not propose to say anything further with reference to the quality of **MOLASSINE MEAL,** as this is conclusive proof that Molassine Meal is the best food on the market for fattening purposes.

The price is low, especially as compared with other feeds at the present time.

FARMERS! Is This Not Interesting to You? Let Us Hear From You.

If you wish to try a bag of this Molassine Meal and your grocer or nearest general store cannot supply you, we will see that it is delivered to you. **MOLASSINE MEAL is made in England.**

We can furnish you with the names of a great many satisfied customers and will be pleased to hear from any farmer with reference to it.

L. C. Prime Co. Ltd., St. John, N. B.

Letter From Mr. M. J. Collins.

Fairville, N. B., Nov. 15th, 1911.

Messrs. L. C. Prime Co., Ltd.,
South Wharf,
St. John, N. B.

Dear Sirs:—

"The pair of Cattle purchased from you were knocked down the first of the week and I am now writing to inform you that we have never handled better Beef. This Beef was equal to anything coming from the West and weighed when dressed 2185 pounds."

"I can honestly say that I know of nothing that is equal to Molassine Meal for bringing Live Stock into good condition quickly."

Yours truly,
(Signed) M. J. Collins.

time of their application, that are evanescent, and their odour, on which they depend for deterring the "fly," is quickly dissipated. As they are non-poisonous, and do not remain long in the wool, they do not poison the "maggots."—Pateley Bridge.

Selecting Breeding Hogs.

In selecting breeding animals I devote particular attention to securing sturdy, straight limbs and strong, upright feet, upon which the pigs are able to stand squarely and steadily. We must avoid pigs with long, slender legs, small weak pasterns and those that fail to carry the end of the ham well down on the hock.

Good blood is desirable but we should not give up good individuality, and place too much stress upon the fancy points and family names, as long as pork growing is our main object. Constitution, robustness, a large digestive capacity and a true meat making form go to make up a desirable market hog.

Strong arched backs, well sprung ribs, full heart girths, broad shoulders, deep hams and strong feet and legs are all vital points to be observed in building up a herd of useful hogs.

Select large, roomy sows with good length, deep bodies and neat heads, broad between the eyes, medium sized flinty bone, and a large heart girth indicating well developed vital organs and a good constitution. Select the sows from dams of prolific families, kind disposition and good sucklers and when you find a good breeder don't sell her as long as she continues to be a good mother. You would not think of selling one of your best cows that has been a money maker, stick to the good sows in the same way.

When mating I prefer to use a medium sized, compact male. In selecting hogs for pork growing the male had best be of the same breed as the sows and an excellent individual and should be kept in good vigorous breeding condition if good results are to be obtained. It does not pay to allow a few dollars to stand between a good breeding boar and a scrub, for his influence upon forty or fifty litters of pigs amounts to a large amount of money and it is few boars that do not get that number of litters.

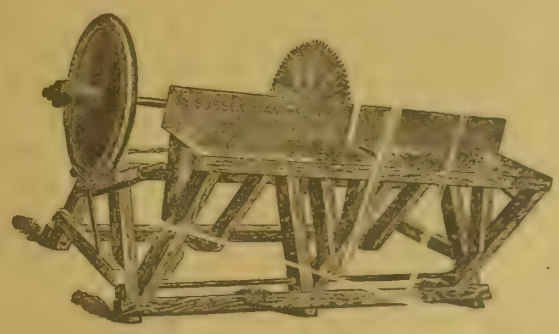
The boar should be selected from some prolific line of breeding and should be strong in every point that goes to make up a profitable market hog. It is a mistake to try cross breeding, better stick to one breed and grade up your herd. When you have used a good boar as long as possible without too close inbreeding buy another of the same breed and keep up the good work of grading up until you have a herd as good for all practical purposes as the pure breds from which the first cross instituted.

Sometimes one cross gives good results, but it is not the proper course to pursue and will in time lead the stock back toward the original scrub or worse; but grading up by the use of good sires is a gradual evolution forward and should not be termed as cross breeding. Success is sure to follow any persistent effort to improve the quality of a common herd of hogs.—L. J. Meredith.

Believes in Deep Plowing.

J. A. Clark, Hazeldean, Ont., says that the new idea of shallow plowing is not giving results, and that the crops are decreasing in yield. We will have to return to the teaching of our fathers and plow deeper, he says, and that the old axiom, "plow deep while sluggards sleep," is as true to-day as ever.

WOOD CUTTERS MADE IN 3 SIZES.



We make the best Wood Cutter on the market. The length of table on our Long Swing is 8 feet, 3 inches; distance between balance wheel and saw 4 feet, 3 inches. Heavy substantial frame and well braced. Steel plate table.

Length of table on Flat Rolling Machine is 8 feet, 3 inches; distance between balance wheel and saw 4 feet 3 inches. The table of this machine moves on grooved rollers and vd. track, which holds the table in position, making it move very easily to and from the saw.

Our Short Swing is built on the same principles as the Long Swing, the arbor and frame is shorter; length of frame 4 feet, 3 inches; distance between balance wheel and saw 3 feet, 6 inches.

On all our machines the arbor is the same size, made of the best turned steel and runs in bearings of the best babbitt. The balance wheel is a solid web and weighs 180 pounds.

We have a large number in stock and can ship promptly. All enquiries will have prompt attention.

The Sussex Manufacturing Co., Limited, Sussex, N. B.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

THE HORSE.

Work Better Than Idleness for Stallions.

We have of late received letters asking what may best be done with a stallion that fails to settle his mares. One correspondent submits that his horse shortly after importation contracted a bad case of distemper, and was a long time in recovering. He did recover, however, and then got sick again, later regaining complete health. In the spring he failed to settle his mares, but did quite well in this regard during a short fall season. This year again he is of little use. We are invited to describe the easiest and quickest method by which a cure may be effected in such a case.

Cases of exactly similar sort have come under the notice of the writer in his personal experience and likewise have been drawn to his attention by others seeking counsel. The disappearance of the spermatozoa from the life-giving fluid, their subsequent return and second retirement nevertheless complicates the case somewhat. While the recurring disappearance may not be a bad sign, it is certainly not a favorable one.

Without going too deeply into the subject, the absence of the spermatozoa from the fluid proves that they are not being developed in the seminiferous tubules of the testes. Just what condition has stopped their production cannot be told at long range. A skillful veterinarian should be able to determine the cause after an exhaustive examination. However, no matter what the active, local cause may be, it is probable that there is only one way in which the stallion may be brought back to fruitfulness. That lone way is to put him in the harness and work him just like any other farm horse.

Horses to gain the greatest degree of productivity must be in the best possible bodily health. That condition can only be obtained through constant judicious and rather hard work in the harness every day. This horse proved his possession of a high degree of potency, became entirely barren, regained his potency and then lost it again. Both lapses may in all probability be traced to one and the same cause. That cause, again, is likely the severe attack of distemper through which he passed. If after his recovery from the first attack he had been put to work it is far from likely that he would ever again have failed to settle his mares, once he had shown his ability to do so. At that time, after he had completely recovered, he should have been put to work, gradually toughened into the labor, and then worked moderately hard until every tissue of his body subject to wastage and repair had been changed over and altogether rebuilt. This having been accomplished, no trace of the disease would have been left with him. His organs would have been made sound—granting that such progress was possible—and continued labor in the leather would have been and remained all the treatment he required.

Now, the only thing to be done, provided the stallion seems to be in rugged health, is to break him and put him to work. Exercising in a light rig will not do. Work in which he must exert his muscles, sometimes to their full capacity, is required. The process of toughening him into work in the field and on the road must, of course, be a mighty gradual process. A stallion is never a hard beast to break, for the reason that he is generally unafraid. Naturally it will require a skillful, firm hand to guide him, but such hands may be had—indeed, must be had in this instance, because the horse is no account as he is, and there is no other method from which a thorough and radical cure may be expected. He should not be allowed to serve a mare for a year. He should be kept in a stall where he can have the companionship of the people about the farm and hear and see the other horses. If he is secluded he will get into all sorts of bad habits. He must be watched closely, and, if found to be abusing himself, remedial measures must be taken promptly. However, it will be found that as soon as he is broken to work and comes in nightly tired from doing his daily stunt in the leather, he will be content enough to rest and recuperate without bothering greatly about his productive organs or abilities. It will be worse than ever to shut him away off by himself when in the stable. Solitary confinement and vice go together always with entire horses.

Then the matter of feeding comes up for discussion. If the horse is condemned to a life of idleness and loneliness such as he must undergo if incarcerated even in a large paddock well out of the way of human companionship, it is generally quite a hard job to feed him so that his health remains at concert pitch. On the contrary, when he is worked it makes very little difference what he is fed so long as the hay and forage are sound, fresh, and sweet, the quantity not too great, yet great enough, and no sudden and violent change is made in the substances fed. Horses working every day up to about their maximum capacity are invariably the most healthy, and will eat and assimilate and thrive on a variety of foods that would not do at all as maintenance rations for idle animals. A stallion working every day need have no food different from that which is given the other work animals, so long as he gets enough of it to repair the daily wastage of his system.

Preferably oats, a little corn and a little bran, the proportions arranged as the horse is found to do best, form the ideal ration. Carrots in quantities not exceeding seven pounds per day are usually relished by horses, and may be fed with advantage. Larger quantities of green grass, alfalfa, fodder or the like should be avoided in feeding all working horses. The feeding of bran mashes is at times proper, but as a rule it is deleterious to mix hard and soft food in the daily ration. "The Saturday night mash" has been productive of much death among horses. Find out the foods on which the horse works best, going mighty slow in making any change or addition, and then hew religiously to the line indicated. However, only the eye of the feeder can determine on what foods any horse should be fed.

Instances are plentiful enough of stallions having been rescued from a state of apparent impotency by the treatment outlined. We have known of stallions being seemingly of no reproductive use at all the first year after importation, or even the second, yet recover without any special treatment. In such instances their return to potency came in spite of the care taken of them, not because of it. Work is the great panacea for all the ills that beset entire horses. Medication must by times be resorted to in order to combat or offset attacks of disease or their results, but in the grand majority of cases work is the best remedy after the necessity for the veterinarian's attendance has passed.—J. H. S. Johnstone, in Live Stock World.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevent the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR:—I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.
Hillsboro, N. S.

MESSRS FRASER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASER THORNTON & CO., Cookshire, Que.

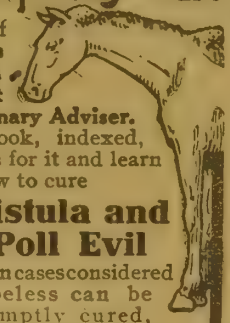
DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASER THORNTON & CO., Cookshire, Que.

How to Completely Cure



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Fistula and Poll Evil

Even cases considered hopeless can be promptly cured, with very little trouble, by using **Fleming's Fistula and Poll Evil Cure.** Your money back if any Fleming Remedy fails to do what we claim.

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RADIOL treatment for horses, reduces swellings, cures strained and puffy joints, prevents filled legs, relieves pain from lameness, etc. NO BLISTER, Enforced Rest or Removal of the Hair Necessary.

Booklet on request—$2.00 flask delivered on receipt.

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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Mrs. A. R. Tabor, of Crider, Mo., had been troubled with sick headache for about five years, when she began taking Chamberlain's Tablets. She has taken two bottles of them and they have cured her. Sick headache is caused by a disordered stomach for which these tablets are especially intended. Try them, get well and stay well. Sold by all Dealers.

Erythema.

A Subscriber:—I would like to ask a question regarding a young five-year-old mare. She tries to gnaw the back part of her legs and ankles and there seems to be a yellow scruff in the hair next to the skin. I never had any experience with grease but am afraid that is what it is. Is there any cure for it? If so please prescribe through your valuable paper.

Erythema is the name applied to this disease but different names are applied to varying stages and cooditions of the disease. Neurosis being the name applied when there is only functional nervous affection without any appreciable change in nerve structure. When it advances to have small pimples or popules which may vary in size from that of a millet seed to a large bean it is recognised as Eczema. These pimples may form blisters and the rubbing causes them to break when they are called Pustules. We will consider this case as Erythema.

Causes are many. Chilling when the legs are clipped, irritation from salt at times applied to icy streets, filthy, slushy yards or roads, in the western provinces Alkaline mud surrounding ponds, a delebated state of the general system often induced by bringing an animal in from pasture and stabling in a badly ventilated stable and depriving it of frequent exercise also feeding too heating a ration as corn, wheat and buckwheat, foods that should be fed in very small quantities if at all to animals having a tendency to swelling in the legs (stocking).

An animal having Erythema, in any stage, should not be allowed corn, wheat or buckwheat at all. Washing the legs frequently but not properly drying them after washing and the application of irritating liniments or lotions containing oil of turpentine or other essential oils or rancid fats. Urine or liquid feces by splattering on the heels when dropping on solid floor may produce it and it occurs when the hair is being shed as the hair folicles and general surface is then exposed and irritable.

If due to a local irritant the removal of the cause may be all that will be necessary to affect a cure. But when the feeding or system is at fault these conditions must be corrected. A purgative will be useful, from 6 to 10 drams of Borbadors Aloes, quantity to be regulated by size and age of animal. Old animals as well as large ones require larger doses than small or younger ones. About four drams of Ginger should be added to the Aloes which may be given in the form of a ball or as a drench. The animal should be prepared for the physic by being restricted to a wheat bran mash and water only for 10 or 12 hours before administering and for 24 hours after when hay and grain, oats, should be given in reasonable quantities, gradually increased until enough is given to nourish the animal according to work required. Twenty-four hours after the physic was given give 2 to 3 drams of nitrate of potash in food, boiled oats and bran, night and morning, for 4 days then from 1 to 1½ ounces of Fowler's solution of arsenic, once a day, in food.

Exercise daily, preferably twice a day, after the physic operates. While operating keep animal quiet. Wash the part affected with warm water, in a place where the wind does not strike the legs; dry well and apply a weak solution of salt water, half an ounce of salt to one quart of warm water or use sugar of lead, one ounce; sulphate of zinc, six drams and one quart cold water, applying once in 3 or 4 days. If weather is cold use sagar of lead, one dram; opium, one dram and vasaline, two ounces; mix well. Creolin, half an ounce; sugar of lead, half an ounce and raw linseed oil, one pint, applying once every 3 or 4 days may also be used. There are many other remedies but these are generally convenient and effective.—J. Standish, V. S.

Feeding the Working Horse.

In a bulletin recently published by the Wisconsin Experiment Station there appears a contribution on the above subject from J. Z. McLay, of Janesville, Wis. Among other things Mr. McLay says that approximately 10 pounds of oats, five pounds of corn and three pounds of bran, divided into three equal feeds, make a day's ration that can not be improved on for the work horse. The relative amount of corn can well be increased during the winter months, and for sake of variety it may be omitted at the morning meal and fed at noon. The weight fed at each meal should be kept about the same and for the evening meal crushed oats should, when possible, be substituted for the whole grain, along with the bran and a few handfuls of cut hay, fed wet and salted enough to render it palatable. Horses soon become very fond of this food and this alone aids digestion. Sixteen pounds would be a fair amount of hay per day, the larger portion, of course, being consumed at night. Would prefer clover hay if in perfect condition. The reason clover hay is in bad repute for feeding work horses, we think, is because horses are allowed altogether too much of it, they come fond of it. Some advocate the omitting of the evening meal entirely, claiming that the grain fed is forced along the digestive tract too fast to be properly assimilated. While this might do very well with horses on light work, we would scarcely have the heart to withhold the grain ration entirely, but would certainly decrease it. While some well-known authorities advise the using of more barley as a ration, we are satisfied that it is of so little value as not to be worth considering. Fed in any form in considerable quantities, we have found it more irritating to the blood than corn and seemingly to have an especially irritating effect on the skin, and when fed unground exceedingly liable to cause intestinal irritation. The only way we would allow it fed would be on Saturday nights, well boiled and mixed with an equal bulk of bran while hot, and this only during the winter months, when grass is not available. As to the feeding of idle work horses, it would be well if we would dispose of this subject by saying there should never be any, for this undoubtedly is the hardest treatment the work horse gets—the occasional rest when kept absolutely idle, tied to a manger, with all the fodder before him he can consume. Never allow the idle horse to remain in the stable, but see to it that he has a pasture or yard to exercise in part of every day, winter and summer, of course materially cutting down the amount of grain and using more succulent food, if possible.

Laying Hens Are Money Makers

WE GUARANTEE

that by the use of Pratts Poultry Regulator you can have plenty of eggs even when prices are highest and busy hens pay big. A small dose of Pratts Poultry Regulator added to the feed will put more money in your pocket. Try

Pratts Poultry Regulator

on all your hens. Or if you want to make a more careful test, give it to a few for a month, then compare results. Pratts Poultry Regulator doubles the nutritive value of the feed by keeping the digestion in perfect condition.

SATISFACTION GUARANTEED OR MONEY BACK

Our dealers will promptly refund purchase price if you do not find Pratts Preparations pay a handsome profit. If your dealer cannot supply it, write us.

25lb. pails $2.60. Also in smaller packages and 100 lb. bags.

Pratts Roup Cure in 25c. and 50c. packages is economical to use and prevents and cures this terrible disease.

Ask for free copy 1912 edition Poultry Book.

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Pratts Animal Regulator is the great stock tonic.

Don't Cut Out A SHOE BOIL, CAPPED HOCK or BURSITIS FOR **ABSORBINE**

will remove them and leave no blemishes. Cures any puff or swelling. Does not blister or remove the hair. Horse can be worked. $2.00 per bottle delivered. Book 6 E free.

ABSORBINE, JR., liniment for mankind. For Boils, Bruises, Old Sores, Swellings, Goitre, Varicose Veins, Varicosities. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Will tell more if you write. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

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HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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None genuine without the Signature of The Lawrence-Williams Co.

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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

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POULTRY.

Trussing and Boning.

The Agricultural Experiment Station at Ames, Iowa, has issued Bulletin 125 on Trussing and Boning Chickens for Fancy Trade. The Bulletin is by William A. Lippincott, and is so completely illustrated that the following from it without the pictures does not do the bulletin justice but gives some idea of the operations:

"A chicken sold on the general market as dressed has been killed, bled and picked. To be in the best condition for keeping it should be killed by piercing the brain with a sharp knife, bled through the mouth by severing the jugular vein, and dry picked. It is now ready to be transformed from common chicken into an extra fancy product that often retails as high as 50 cents a pound.

"The first thing to do in bringing about this transformation is to singe off the hair-like feathers that cannot be plucked. Wood alcohol makes a good flame for this purpose. It is smokeless and does not give the meat any taint or odor. Be careful not to sear the skin.

Next remove the tendons that run up the drumstick and persist in getting in the teeth when it is eaten. Insert the knife close to the shank bone. Pass the knife all the way up and down between the hock joint and the foot. In the incision thus made slip a hook; a bent nail will do. The beginner will find it easier to remove the tendons one at a time instead of all together. They are easily distinguished and separated. Give a steady pull and they will come out readily. This leaves the drum stick much more tender and palatable, and as desirable as the other parts.

"Having removed the tendons from both legs the shanks should be cut off at the hock joint. If about half an inch of the yellow shank skin is left the meat is not nearly so likely to slide up the bone as it generally does when roasted. This makes the bird appear much more attractive on the table. In marketing fancy poultry products an attractive appearance often makes a marked difference in the selling price.

"To remove the neck make an incision in the skin at the point on the back of the neck where it joins the body. Cut the skin along and then loosen from the neck. Next cut off the neck itself, but do not cut the skin. This leaves the head attached to the body by the skin to be taken care of in a later operation.

"Now slip the knife down close to the base of the neck. Cut it on both sides and then across the top. If the ligaments surrounding the neck are carefully cut it can be easily pulled off. If an attempt is made to pry the neck off without properly cutting the ligaments a broken knife is likely to result. Having removed the neck, loosen the crop and gullet from the gizzard and also pull out the wind pipe and remove the head.

"Now place the bird on its rump, fold back the loose skin of the neck, scrape the wish bone bare and pass the knife blade under it. Do the same on the other side, loosening the bone from the shoulder in each case. The more thorough the scraping the easier it is to lift out the bone and the cleaner it leaves the bone. This is important because a great many people have considerable sentiment about the wish-bone and desire to keep it. It should always be wrapped up and sent with the bird when sold.

"Then pass the finger along the wish bone and free it from the meat and lift it out.

"A great many more slices of breast meat may be carved off without striking the bone when the wish bone is out of the way. This adds far more to the attractiveness of the bird than one would suppose before trying it. It also makes possible the drawing of the bird in such a manner that the bird is not torn and the dressing is held in much better shape.

"The bird is now ready for drawing. The heart, lungs and liver can be reached easily from the front. Insert the point of the blade by the side of the vent and cut entirely around it, making the smallest hole possible. Then insert the finger and loosen the intestines and draw them out. They will break off at the gizzard if they are properly loosened. If they are not carefully loosened before drawing they are likely to break several times and allow considerable fecal matter to escape into the body cavity.

"The gizzard can then be pushed out the front way. It avoids unsightly tearing at the back. Be sure to remove the oil sack from the base of tail.

"All that remains to put the bird into condition as an extra fancy roasting bird is to cut a couple of slits in the skin of the abdomen and insert the drum sticks and to fold the loose skin of the neck up over the back and lock the wings over it.

"If it is desired to bone the bird it is unnecessary to go through any of the latter operations. Take the bird as it is after the removal of the wish bone and turn back the skin over the wing. Slip the knife blade in and dislocate the wing from the body, being careful not to cut the skin. As in the case of the neck, the wing loosens easily when all the cords binding it are cut.

"After dislocating the second wing in the same manner, stand the bird on its rump and proceed to cut the flesh from the ribs and back. Instead of skinning the bird, simply cut the flesh away along the skin, being careful not to cut or break the latter. If the skin is cut it allows some of the dressing to escape and spoils the appearance of the finished bird. In case of a slip the cut or tear should be neatly sewed together with white linen thread. This can often be done so that the opening shows very little. It holds as well as coarse string and looks very much better to the customer.

"When the hip joint is reached grasp the leg firmly in the right hand and dislocate it by twisting. This does not require much strength. There is a certain knack about it that can easily be acquired by a little practice. Care should be taken not to grasp the drum stick in such a way as to bruise the flesh or rub the skin. Bruises are unsightly and make the carcass keep poorly.

"Having dislocated both legs, continue to carefully cut away the flesh from the bones surrounding the body cavity until they are all uncovered. Cut a small hole around the vent. The back ribs and keel containing the entrails and giblets may now be easily slipped out. This leaves only the wing bones, drum sticks and thighs.

"It is then a small job to get the bones from thigh and wing. The wing is cut off at the last joint, as there is not meat enough on the rest of it to pay for the trouble of saving it. The rest of the wing bones and the drum stick are worked out by turning the skin and flesh inside out like the finger of a glove.

"The boned bird should be stuffed and roasted and served just as the trussed bird would be. A pigeon, prairie chicken or even a second chicken cut up and included in the dressing adds greatly to its palatability.

"With the boned bird it is possible to cut slices of chicken which include light and dark meat and dressing.

"Turkeys and guineas may be boned as readily as chicken. Ducks are a little more difficult, particularly if they are very fat."

The Moncton Poultry Show.

The fourth Annual Poultry Show held under the auspices of the Westmorland Poultry and Pet Stock Association was held at Moncton, N. B. on the 10th to 13th inst.

Despite the severe weather the show which was as usual highly creditable to the Association and its various exhibitors was well attended. The number of exhibits exceeded that of a year ago by at least twenty-five percent with a marked improvement in point of quality. Mr. Seth Jones, the Provincial Government expert, in the course of his remarks at the formal opening stated that the Show was fully three hundred percent ahead of the first exhibition held by the Association.

J. V. Jackson, President of the Association, was at the helm directing affairs. His Worship Mayor Reilly of Moncton gave the Association some words of encouragement and the citizens of Moncton some good advice re the value of exhibitions and the citizens' duty in attending them. Mr. Geo. Robertson, of Ottawa, the well-known poultry expert placed the awards and Mr. Seth Jones gave some interesting talks on various phases of poultry lore.

Mr. C. W. Osborne, Mount Pleasant Poultry Yards, Penobsquis, made a fine display of dressed chickens which were much admired. The display consisted of fifty birds, beautifully dressed, and weighing from four to seven pounds each. They found ready sale at 25 cents per pound.

One of the pleasant functions in connection with the show was the Banquet tendered by the Association to Judges Robertson and Jones.

A Correction.

In our report of the Maritime Winter Fair, Mr. A. C. Reid's address was inadvertedly given as Tignish, P. E. I. instead of Tidnish, N. S. Mr. Reid had the best White Wyandottes at the Fair and was successful with them in capturing the Silver Cup donated by the late W. T. Pipes for the best cock, hen, cockerel and pullet in the American Breeds; the Silver Cup donated by E. N. Rhodes, M. P. for the best two cockerels and best two pullets in the utility class, as well as a score of cash prizes and other Specials.

Pointers for Poultry Fatteners.

The following pointers for poultry fatteners are taken from Bulletin 25 of the Department of Agricultural, Saskatchewan, Canada. The bulletin is by W. A. Wilson and is entitled "Fleshing chickens for market." It contains much of interest for the poultry fattener:

Birds of the utility breeds are easily fattened and are in demand by the general trade. They should weigh from 3 to 3½ pounds when put into the feeding crate.

The egg laying strains are not suitable for fattening.

The most profitable period for fattening is from three to four weeks.

Be careful not to overfeed chickens the first week. Feed lightly and remove any feed left in the trough half an hour after feeding. Keep the troughs clean and sweet.

After the first week give chickens all they will eat, regularly twice a day.

The oats or mash must be ground very fine. Oats ground for horse feed are not suitable.

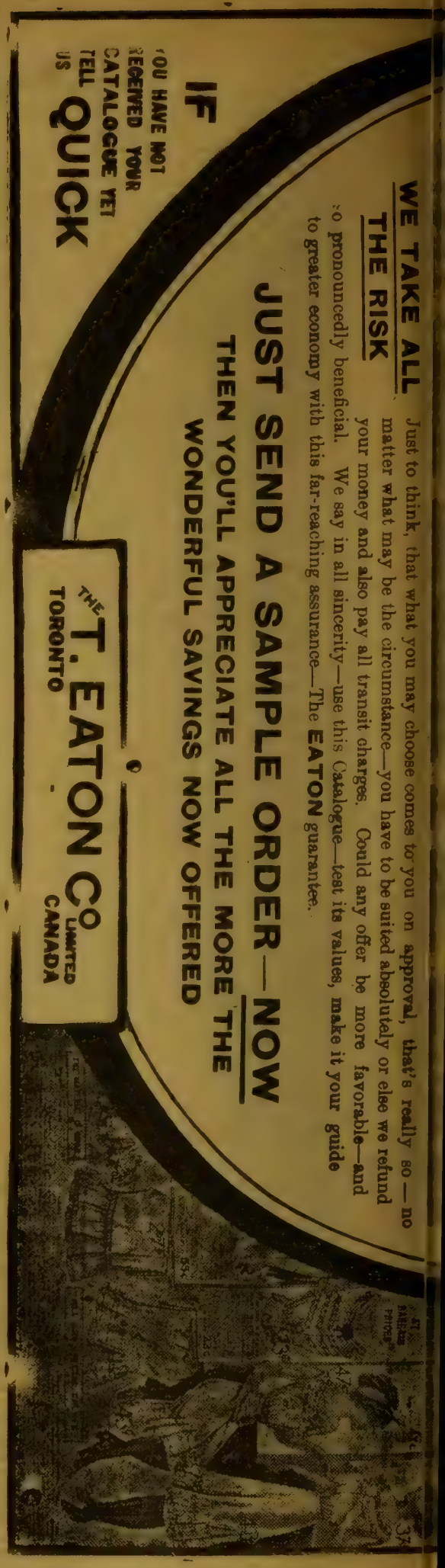
Feeding milk or buttermilk whitens the flesh, which is desirable.

Put a little salt in the feed.

Give water in the troughs twice a day.

Give some form of grit twice a week. Sifted gravel will do.

Feed tallow during the last ten days. Begin with one pound per day to 70 or 100 chickens and increase to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ICK BUYING

one pound to 50 to 70 chickens.

To prepare tallow: Weigh quantity required for three days, melt it, and thicken, while hot, with ground oats. Mix one-sixth of this paste with the morning and one-sixth with the evening feed.

If a chicken gets off its feed, remove it from the fattening pen for a few days, allowing it to run free.

Do not allow any food for thirty-six hours before killing.

Kill chickens by dislocating the neck or by bleeding in the roof of the mouth. Use care so that no outside blemish is made.

Market birds with heads and feet on.

Dry pluck at once, while the bird is warm. Observe the buyer's wishes as to whether the bird should be stripped of all feathers or a rim left on the first wing and leg joints. Leave about two inches of feathers around the neck.

As soon as plucked, place the chicken in the shaping board to give it a compact, square appearance.

Chickens should not be drawn.

When cold, wrap in clean parchment paper, and pack tightly in shipping case to prevent injury by knocking about.

See that chickens, paper and cases are kept perfectly clean.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

Love's Barrier.

(Continued from last issue).

CHAPTER XVI.

ABOUT AUDREY.

"Mrs. Secretan gives herself a good many airs, Geoffrey, but I can't afford to quarrel with her."

Mrs. Hayes spoke these words rather snappishly, as if she regretted the circumstances which rendered a quarrel with the Rector's wife unadvisable.

"Airs, Maria! I can't say I've seen them," replied her husband perplexedly, as he endeavoured to bring the ends of his tie just right for the neat bow he aimed at. "She seems always the same to me—quiet, unassuming and a lady to the tips of her fingers."

"Oh, of course she is like that to men," said Mrs. Hayes, with a slight, cold emphasis. "I've seen her perk up and smile like anything when you speak to her, and I consider that she flirted something disgraceful with that old Sir Anthony at the Mardocks' garden party. A Rector's wife ought to set a very different example. And Audrey so fond of her! It's a perfect infatuation. I'm always at her about it."

"At her about it, Maria!" repeated Hayes, a trifle nettled. "What in the world should you be at her about it? I am only too thankful to think that she has such a friend in Mrs. Secretan. She needed her. There are not so many girls of her own kind in this neighbourhood. I should have thought, now, that you would have been glad to see the child happy, running to and fro to the Rectory."

"Audrey hasn't much common sense. When she is fond of people like that, she simply sets them on a pinnacle and worships them; she was just like it with the Rector before she came. But there, we can't alter folks, though I often wish Audrey were just a little different. She doesn't help me much."

Geoffrey Hayes put down his hair-brush, and looked at his wife with much amazement.

"Why, Maria, what's the matter with the child? I wouldn't have her altered one little bit. She's—she's—but there! She's my own little girl, and the sunshine of my life, and I wonder to hear you."

It was not often that the master of High Ridges let himself go like this before his wife. At home he was a very mild man, though in the realm of business he was accounted both shrewd and keen; both as master and friend, however, he was a general favourite. He had small quarter, it is true, for idleness or vicious qualities, but he was a just man, and beneath a somewhat reserved exterior hid an uncommonly tender heart. In his married life he had undoubtedly lacked that sympathy which is the core of happiness. But he had never made a complaint, only all his affection had been lavished on his only child, who returned it to the full. It hurt him even to listen to the semblance of blame being cast upon her.

"I'm not finding any serious fault with the child, Geoffrey, so don't get into a bad temper about nothing. I'm only stating facts, cold facts, but there are people seemingly that don't like them."

"Well, and what do you want to be after now you have stated the cold facts?"

"I think we haven't done enough for Audrey. She's nineteen now, and she hasn't come out properly yet. She hasn't really had a chance to get to know people properly, and we ought to do something more for her."

"Well, give a big garden party, Maria, before we go off to Marienbad, and give her the chance to see more people," he said, with a twinkle in his eye. "Though I don't think the prospect of it will fill the child with any lively delight."

"She's like you, Geoffrey; she has no sociable instincts. She only likes a few people, and I should just, one day, for the fun of the thing, like to get her to make out a list for her own party. It would be a queer one, I promise you. Probably Ann Coyne and Lydia Rash would head the list. She'd liefer any day I gave a tea to the Girls' Club than have a decent dinner party. What I'm troubling about is that she doesn't get a chance to meet—well, to meet the people among whom she might make a marriage that would please us."

"That would please you, you mean, Maria," said Hayes bluntly. "I don't want the child to marry, I assure you. High Ridges without her would be inconceivable."

"Well, but she must marry, Geoffrey. She won't always have us, remember, and with her looks she might get in anywhere."

"But I don't want her to get in anywhere. I've seen enough of folks trying to push themselves out of their sphere. If Audrey were to fancy a good, honest, hard-working fellow that would make her happy, I shouldn't worry myself about his position. It's happiness that child wants, not empty titles or belongings, and I mean that she shall be happy if I can manage it."

"But, Geoffrey, it is quite possible to get happiness and position, too," said his wife, trying to speak amicably and persuasively. "The Duchess admires her very much, and thinks she could aspire to anything."

"Did she tell you that?"

"Well, she didn't, but I heard it in a roundabout way."

"Well, what have you up your sleeve, Maria?" said Hayes, with much good humour. "Out with it, and let's get down to breakfast. If it's a garden party, and you can get the Duchess to come—well, I'm willing to pay the piper."

"No, no; I wasn't thinking of that at all. A garden party is a sort of social dust-heap, really. It wouldn't help anybody or anything along. Audrey ought to be presented at Court. She shall be next spring, in March, if I can accomplish it. I'm wondering whether the Duchess would present her."

"I should think she doesn't attend any more on Court functions, if she ever did."

"If she ever did!" repeated Mrs. Hayes scoffingly. "Why, her position gives her the entry. They can't keep her out if they wanted to. She was very kind and affable to me at the garden party, though she hasn't returned my call. But with that sort of people one can't be too fastidious about trifles. What I don't like is that I shall have to get at her first through Mrs. Secretan. They're so intimate, calling each other by their Christian names; it would be much better than writing or trying to see the Duchess for myself."

"I should think Mrs. Secretan would oblige you if she could, and anyway, she would be quite courteous and frank about it. But I won't have the child made cheap, remember, and she wouldn't like it herself. She's perfectly happy as far as I can see, and not troubling her head about Court functions."

"Audrey is a silly little fool, Geoffrey, and if she were left alone, and not watched, nothing would surprise me."

"Well, you can sound Mrs. Secretan, if you like, though the whole thing seems a little unusual."

"Unusual! Why, it's done every day, and I've heard of people even paying large sums to the right people to bring their daughters out."

"You won't catch me doing anything of the sort, Maria. I don't want the child to 'come out' in the sense you understand it. You never came out, my mother never did, and I haven't had any fault to find with the way you conduct yourself, though we don't always agree on the main points."

"Geoffrey, you are very tiresome," said his wife, with a resigned air; "and for a man of your means, I never saw one with less ambition."

"'Fling away ambition: by that sin fell the angels,'" quoted Hayes lightly, being in his leisure moments a student of Shakespeare. "Well, having had my morning tea, so to speak, can I go down to breakfast, and won't you smooth out your face and give me a decent kiss, eh, Maria?"

Often his whimsical humour flashed out like this at moments the most inopportune. In spite of herself, Mrs. Hayes was obliged to smile.

"Oh, I say," he cried, looking back from the door, "John Ridd will be out to dinner this evening. I told you, I think, that he was going over to Canada on some very important business, and I want to show him this little attention before he goes."

Mrs. Hayes did not look pleased.

"I think I shall suggest, then, that Audrey should go and spend the evening with Mrs. Secretan. The brougham can fetch her at nine o'clock."

"Why should you do that, Maria? I want John Ridd to see Audrey, and see her he shall."

"It isn't quite safe, Geoffrey. He admires her very much, you see, and we allowed them far too much scope last August, when we were at Scarborough. Surely to goodness you don't think that John Ridd would be good enough for Audrey?"

"Well, why not? She might do worse, I tell you. Ridd is a very fine young man, Maria, and he's going to be a partner one of these days. There are very few men I'd give Audrey to with better heart, if I must give her to somebody. But that I don't exactly see."

Mrs. Hayes looked unspeakable things.

"Who are the Ridds, anyway? It is true, I believe, that his father was only a gatekeeper at the Howorth Mills, and they educated him out of his sphere. I think he is an upsetting youth, and that you might have found a more suitable representative to send out to Canada."

"I think we know our business, Maria," said Geoffrey Hayes dryly. "And I hope you'l, have an extra good dinner to-night, and see that Audrey wears a pretty frock. Can't you see for yourself, my woman, that we can't help these things. There will be a destiny for her somewhere, I don't doubt."

"Folks make destiny for themselves," she retorted sharply, and made no promise.

The cloud disappeared, however, from both their faces at the breakfast table, where Audrey dispensed the sun. She was so gay and so winsome, so brimful of the joy of life, that somehow unpleasant things could not live where she was. Immediately after breakfast she coaxed her father round the green-houses, though he kept telling her he ought to be off to business.

"You don't want particularly to marry and leave your old dad, do you, Kitten?" he said quite suddenly as they emerged from one of the houses upon the sunny path through the walled garden.

Audrey stood still and laughed.

"Mamma's been saying something," she said comically. "No, I don't want to marry anybody, darling. I want to stay here with you for ever and ever. Dear daddy, do try and persuade mamma to let me have the Girls' Club up for a long Saturday, and to ask Mrs. Secretan, and dear Miss Jane, and the little Courtney boys. I want to have them so badly, only she won't listen. Mayn't I have them?"

"Yes, certainly, if you wish. When would you like it—this Saturday?"

"That would be the day after to-morrow. No, of course, there would not be time; but before the strawberries are over. Why, baskets of them are going to waste, and they would love it all so much. And I can have a Punch-and-Judy show up from Bradfield, and do just as I like about the games, and no preaching allowed?" She broke off out of breath, and Geoffrey Hayes indulgently smiled and promised that she should have her way. But he prudently did not speak to his wife about it that morning, knowing quite well that John Ridd for dinner would

AFTER DOCTOR'S FAILED

Lydia E. Pinkham's Vegetable Compound Cured Her.

Midgie Station, N. B.—One can hardly believe this as it is not natural, but it was my case. For ten months I suffered from suppression. I had different doctors, tried different medicines, but none helped me. My friends told me I would go into a decline. One day a lady friend told me what your medicine had done for her, so I wrote you for advice and received your reply with pleasure.

I started taking Lydia E. Pinkham's Vegetable Compound, and at the second bottle showed improvement. Now I am regular and never was so well in my life, thanks to Mrs. Pinkham's medicine.

Please publish my letter for the benefit of others.—MRS. JOSIAH W. HICKS, Midgie Station, N. B.

Indian Head, Sask.—Lydia E. Pinkham's Vegetable Compound is indeed a boon to women who suffer from female ills. My health is better now than it has been in my five years of married life and I thank you for the good your advice and medicine have done me. I had spent hundreds of dollars on doctors without receiving any benefit.—MRS. FRANK COOPER, Box 448, Indian Head, Saskatchewan.

The most successful remedy in this country for the cure of all forms of female complaints is Lydia E. Pinkham's Vegetable Compound.

be sufficient cause of offence for one day. He sighed a little as he drove the swift thoroughbred down the hill to the station. He did not like the obligation to exercise a certain amount of diplomacy in his dealing with his wife. But her temper was uncertain, and she could make the whole house wretched for days when she had one of her fits of temper on. Hayes, himself, was a man of peace.

About three o'clock that afternoon Mrs. Hayes drove into Midcar in the open Victoria drawn by her smartest pair. She did not ask Audrey to accompany her, nor was the child disappointed. She had asked some of the cottagers' children on the estate to tea in the barn, and her hands were full.

Mrs. Hayes found the Rector's wife at home, busy, indeed, in the garden, to which she had lately given much of her attention. The little cosy house was now as nearly perfect as a house could be.

Helen, to whom six months of matrimony seemed to have imparted a more gracious charm, wore a simple gown of blue linen, embroidered in white by her own clever fingers. She had no hat on her head. Her glorious hair caught the sunlight in every mesh of it, and she had the loveliest, most delicate colour in her face. She was certainly a very pretty woman, and had an air of unusual distinction which caused in Mrs. Hayes a sudden discontent with her own expensive clothes. A few shillings would have paid for Mrs. Secretan's gown, yet it was something decidedly out of the common. Helen heard the jingling of the bells on the harness, and came forward to the open French window of the study, where she saw the figure of Mrs. Hayes. There was a little dismay in her eyes, because she was alone to entertain her, and because Audrey was not with her mother.

But she greeted her pleasantly enough. Time was when Helen would have had no qualm about being "not at home" to Mrs. Hayes, but something in the new life was teaching her that sweet, fine consideration for others which she saw exemplified daily in her sister-in-law's life, and in a less degree in her husband's. These six months had begun to work a slow but very gracious miracle in the heart of Helen Secretan, and she was happier than she had ever been in her life, or than she believed it possible for a human being to be. It was a strong, deep, secure happiness, built on the foundations of peace.

"Audrey did not come?" she said, with a smile, as she shook hands quite cordially with her visitor.

"No; she has a tribe of children to a barn-tea this afternoon, and I was glad of it. I rather wanted to have a nice little private talk with you. Is the Rector at home?"

"No; he is away in Essex, at my old home, seeing to a little business for me. Would you like tea in the garden, or shall we have it just here on the veranda? I am so proud of the veranda, Mrs. Hayes. Don't you think it a great improvement to the back of the house?"

"Yes, it is, and your house is really very pretty, Mrs. Secretan," said Mrs. Hayes graciously. "I am often saying to Mr. Hayes what changes you have made, and how the Rector must appreciate them."

Helen smiled and rang the bell. When Bates appeared, she asked for tea to be brought at once.

"That is an excellent page-boy. What good manners he has! I suppose he was trained in some big house, and will pass on to be an under-footman soon. If you ever part with him, be sure you let me know."

"Bates has never been in any big house," said Helen amusedly. "He was our greengrocer's boy at Colchester, and I trained him myself. I don't think he has any ambition towards a footman's place; and it is a great comfort to me that he never seems to grow any bigger. Are these not lovely days, and how quickly one forgets the long, cold spring! Did you ever see anything so lovely as the moor just now? I'm afraid I spend a great many idle hours on it."

"Yes, it is very nice indeed. I noticed the colouring as I drove down this afternoon. Will you be going away for a holiday in August?"

"We may just take a week at the sea if we can get away, and if Miss Secretan can be persuaded to accompany us."

"You and Miss Secretan are very good friends. I have always thought her rather a difficult person, though I must say she seems to have done a great deal for Tom Courtney. I hear on every hand that he is a different man. I was only saying the other day to Mr. Hayes what a good thing it would be if he would marry her."

Helen's colour rose, and at the moment Bates appeared to lay the cloth. By the time he had retired again, she had recovered herself.

"Don't you think it would be a good thing for her? The Courtneys are a very good old family—what they call yeomen in the West Riding—and Geoffrey says he is quite well off."

"Did Mr. Hayes think it would be a good thing for my sister-in-law, too?" inquired Helen rather curiously.

"Well—no, he didn't; he said she was far too good for him."

"Well, that's just what I think, Mrs. Hayes," said Helen, with that little touch of hauteur she could so well assume when she wanted to check familiarity or change an unwelcome subject.

"Have you seen the Duchess lately?" inquired Mrs. Hayes, as she took the cup from Helen's hand, incidentally noticing what a beautiful old piece of china it was, and how exquisitely in keeping with all the appointments of the table.

"Yes, I saw her yesterday. She goes off for her annual cure the day after to-morrow."

"Where is she going, do you know?" inquired Mrs. Hayes, with unmistakable eagerness. Helen immediately became evasive.

"She has discovered some new little place in the Vosges mountains, I believe; a place with an unpronounceable name."

"How long will she be gone?"

"About six weeks, I suppose. Then she will go out in the late autumn to her daughter, Lady Lipstoke, whose husband has a ranch in California."

"Then she is not returning to Mardocks for the winter?"

"No, I think not."

"How very sorry everyone will be," said Mrs. Hayes sincerely enough. "May I say something to you about Audrey, Mrs. Secretan?"

(Continued in next issue).

Vigorous Manhood.

Two "Health Belt Men." One 50 Years Old, the Other 30. Can You Pick Out the Younger?

I can show you how to restore your youth and how to keep it. A "Health Belt Man" CANNOT grow old; he must be young forever. Years count for nothing in this life, so long as you have great vitality. Weakness, Nervousness, Unmanliness are conditions to be laughed at by the intelligent user of my great appliance, it gives, in abundance, all that vim, vigor and nerve force which the weakened system craves—Worn every night and all night for two or three months, it sends a great, warm, glowing volume of electricity into your body through the nerve centres at small of back; from the first hour's use you experience a decided benefit; there is a great mysterious force which gets right to work. No drugs to be taken; no conditions imposed except that dissipation must cease. Help nature that much; the Belt will do the rest. It takes the weakness and kink out of your back; it drives rheumatic pains away from all parts of your body, you will feel and look young and strong again; woman and man noticing your physical change will be more attracted toward you on account of your new vitality and life; in two months you can experience the full vigor of perfect manhood, or you need not pay.

YOU CAN PAY WHEN CURED.

If you're sceptical I'll prove it first. I'll take all the risk by letting you have the Belt on Free Trial, not to be paid for until cured. Send it back if it doesn't do the work.

Let Me Send You These Two Books FREE

They fully describe my Health Belt and contain much valuable information. One is called "Health in Nature," and deals with various ailments common to both men and women, such as rheumatism, kidney, liver, stomach, bladder, disorders, etc. The other "Strength," is a private treatise for men only. Both sent upon application, free, sealed, by mail.

If in or near this city, take the time to drop in at my office that you may see, examine and try the Belt. No charge for advice, either at my office or by mail. If you cannot call, fill in the coupon and get the free booklets by return mail. They are better than a fortune for any one who needs new vigor.

DR. M. F. SANDEN CO., 140 Young St., TORONTO, Ont.

Dear Sirs—Please forward me your books as advertised free.

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ADDRESS .....

For regulating the bowels, invigorating the kidneys and stirring up the lazy liver

Dr. Morse's Indian Root Pills

have proved for over half a century, in every quarter of the world, absolutely safe and most effective.

25c. a box everywhere. 27

THE ST. JOHN Business COLLEGE

Last year we thanked the people for the best year we had ever had. This year we give most hearty thanks for a very much better one.

Our new term will begin Tuesday, January 2nd. Send for Catalogue.

S. KERR, Principal.

Read the Advertisements in the Maritime Farmer.

Nova Scotia Farmers in Annual Convention.

(Continued from page 259).

of pure bred stock were the main supporters of the Halifax exhibition and he thought their efforts should be recognised by the Farmers' Association by going on record in favor of a yearly exhibition.

Mr. Crane, of Grand Pre, concurred with Mr. Pineo's views.

Mr. F. L. Fuller, in reply to Mr. Murray's remarks said it was interesting to watch young animals striving to out-class the so called stand bys. If an old animal was good enough to win over a lot of younger animals it deserved to stand at the head of the class.

Mr. W. M. Woodworth, referred to the holding of local fruit shows as being inadequate to the advertising requirements of the Province. Local fairs were nothing more nor less than local mutual admiration societies.

Mr. Bryan, would like to see the Halifax Exhibition grounds thrown open for use for other legitimate purposes. Such an action would greatly reduce the demands on the maintenance funds. He would like to hear more constructive criticism and less destructive criticism in regard to the fair.

Mr. Merritt, thought lower transportation rates and special trains run to the grounds instead of to the station at Halifax would be a great incentive for people to visit the fair.

Prof. M. Cumming, explained that the grant for the holding of a fall fruit show was at the disposal of the Nova Scotia Fruit Growers' Association. He favored holding the fruit show at Halifax on suitable dates, when the fruit growing possibilities of the Province could be shown to the best possible advantage.

Messrs, Wm. Corning, A. S. McMillan and Wm. O'Brien were appointed a committee to deal with the Exhibition Commissioners' Report.

IMMIGRATION.

Mr. Cutten, of the Provincial Immigration department, was present and stated that he would be pleased to meet and converse with farmers who required hired help or who had farms for sale.

COUNTY REPORTS.

ANNAPOLIS COUNTY.

Mr. L. W. Elliott, reported for his County as follows:—

We have to report a year of great prosperity for Annapolis County. Our Association is fairly successful. Our membership numbers 209.

Institute meetings held, 34, not as many as the year before. Messrs. W. H.Woodworth and L.D. Robinson were the chief speakers on subjects of general interest to the farmer. Mr. J. N. Chute also addressed several meetings on the live subject of Co-operation. Eight societies and five packing houses for the purpose of co-operation in packing and marketing fruit has been organized in our County.

Mr. Mitchell, of the Dairy Department, Ottawa, was to address three meetings, but owing to severe storms only one meeting was held. We hoped to have some meetings in June, but were again disappointed.

In August we held our annual Farmers' Picnic. Prof. Cumming favored us with his presence and words of advise and cheer. The Government Commission for studying our fruit conditions represented by Mr. Bunting, visited our valley at that time, and spoke at this picnic.

Our crops harvested during the year were fairly good—hay and grain not far below the average, roots good, turnips abundant while an en-

INVINCIBLE FENCING

Invincible Fencing, as the product of the largest Canadian Steel Producing Company, represents a standard founded on a determination to merit the Canadian trade by producing Canadian quality, viz.: The quality Canadians want. The best Canadian iron ore converted into the finest, new process, open hearth high carbon steel, by skilled Canadian Steel makers, is made by expert Canadian workmen into Wire, and into Invincible Fencing. Invincible Fencing, in its locks, uprights, and strands has the Grip and tenacity—the "Never-let-go" of a Bulldog, and of the British kind at that.

Edison, the wizard inventor, Graham Bell, of Telephone fame, Jas. J. Hill, the Railroad King, are men of Canadian birth and training. Our Canadians, at home, in the Steel and Wire industry, are equally capable of leading the world. Those who in years past have boasted about their imported Wire should look now at the rusted wrecks of the "Close-wiped" wire fences seen everywhere. The cause? Simple enough; Canada has been the dumping ground for their overplus. Spelter for galvanizing costs about three times as much as steel; so the makers of this imported wire scrape the coating to a mere wash. Invincible Fence is honestly galvanized with a heavy coating under the care and direction of our superintendents, who produce thousands of miles of high grade wire specially for the largest telegraph and telephone companies in Canada. We have for years satisfied their extremely high standards, and we can more than satisfy you.

Ask the railroad and structural engineers, the men who have built the great transcontinentals, the skyscrapers and bridges, about the Bessemer process, and about the new process, the open hearth. They will point to the thousands of lives lost by broken rails, the numerous accidents and loss of property, and tell you that every rail and girder used to-day is of open hearth steel. Why? because first of all there is no haphazard guessing in the new process. The steel is made exactly to the desired analysis. Our open hearth steel is at once stronger, tougher, and purer, and the coat of galvanizing adheres to it more strongly than to the Bessemer.

But do you suppose these old Bessemer steel plants have been discarded? Not at all. The big railways and builders have their chemists, who demand open hearth steel; so the Bessemer steel makers are devoting their attention to wire, and other lines not subject to a strict analysis. What next? Why of course an overplus of cheap Bessemer steel "Skimpy" Galvanized wire. This cheap imported wire is used in many fence factories in Canada.

BEAR IN MIND:

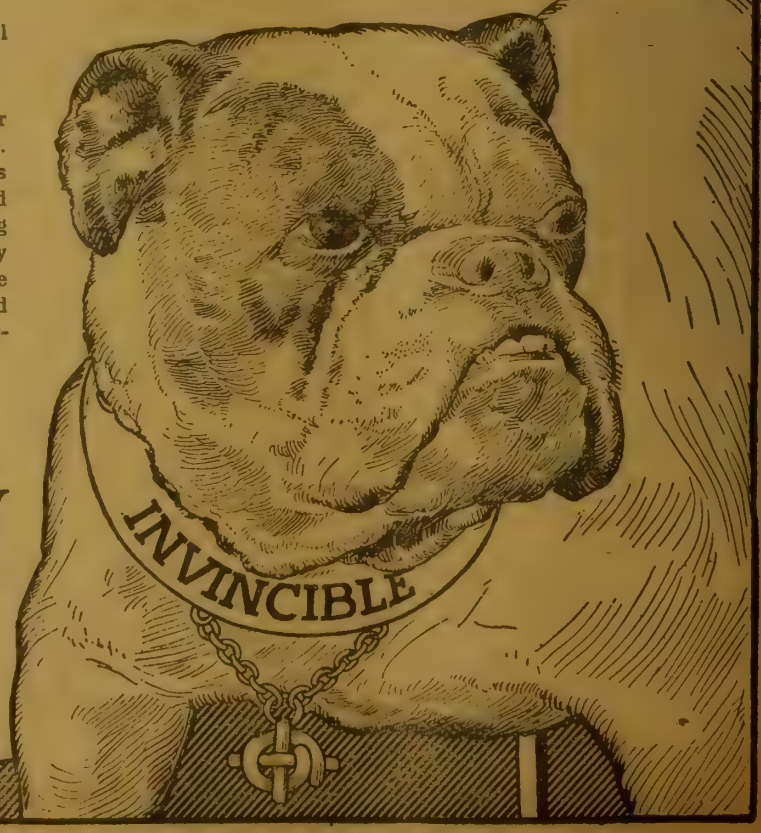
Invincible Fence is made only from the finest new process Open Hearth Steel, well and heavily galvanized. Canadian made, Canadian quality, with a grip and tenacity an invincible unrelaxing "hold fast" like that of a thoroughbred English Bulldog.

Invincible Hot Galvanized Gates are galvanized after made,—100% superior to those done by the cold or electroplating process. Every part is covered heavily. They will last a lifetime. We galvanize these right in our pipe mill which is equipped with an immense galvanizing tank such as no gate maker could afford to use for gates alone. We are large producers of steel pipe and make everything else composing Invincible gates even down to the bolts and nuts. We positively guarantee them superior to any other class of gates heretofore produced. The Fence agency of the Steel Company of Canada is by long odds the best and most desirable line in the Dominion. Fence dealers and those desiring a permanent paying line should write at once.

ADDRESS—THE FENCE DEPARTMENT
BOX 31

The Steel Company of Canada, Limited

MONTREAL,
CANADA



ormous crop of exceedingly clean and highly colored apples was gathered. Our success in raising apples may detract from other lines of farming, but we would urge farmers not to neglect the dairy and other live stock industries.

We are glad to know that a number of our young men are taking advantage of the courses at the Agricultural College at Truro.

Our annual meeting was held on the 3rd of January with largest attendance we have ever had. We secured a membership of sixty at that meeting.

We look forward to 1912 as a year of exceptional prosperity.

ANTIGONISH COUNTY

was reported for by Mr. Geo. Vinten, who said:—Although our 1911 crops, in some cases were not quite so good as in 1910, yet prices were good for almost every kind of farm produce, dairy products fetching record prices. On the whole we have nothing to complain of and we have come to the conclusion that there is only one Antigonish County and that a pretty good one.

We, again, held our Seed Fair last March and although we had not quite as many entries the exhibits showed a marked improvement when compared with previous years. The amount paid out in prizes amounting to $125.-50 being $4.25 more than in 1910. In fact we held what was considered by experts to be the best seed fair in the Province of Nova Scotia.

Our Horse Fair was held on the exhibition grounds in May. The entries were smaller than usual except in the class for Clydes.

A number of public meetings were held in different sections of the Country during the year and addresses delivered by C. F. Alward and G. Vinten in the interest of Farmers.

On October 2nd and 3rd we held our Fall Fair. The exhibits were good both as to quality and quantity, especially in the classes for fruit, vegetables and roots. Unfortunately the weather man was out of humor and our attendance was hardly as good as we hoped for, leaving us with a small deficit. We have however built a row of sheds fitted with coops for poultry and have finished our second Exhibition Building which was turned over to the ladies for the Domestic Department and, although, this was their first year, they had the building filled to the limit. I am not sure but we may have to build them a larger building.

CAPE BRETON COUNTY

conditions were reported by R. M. Jackson. They had held 12 institute meetings, during the year which were addressed by Prof. M. Cumming and Messrs. C. F. Alward, C. M. McRae and F. L. Fuller. The result of these meetings is a more general awakening of the farmers to the possibilities within their reach. Not a few of the farmers were getting interested in the question of underdrainage. Their exhibition was growing apace. The number of entries at their first exhibition was 900. Their second exhibition brought out 1400 entries and their third fair, held in the fall of 1911 reached the 2100 mark. Three large tents, costing in the vicinity of $800.00 had been purchased but still the balance was on the right side of the ledger. Prospects are bright for the future of the farming industry in Cape Breton.

CUMBERLAND COUNTY

M. Samuel Freeman, who reported for Cumberland County, said his Association had a membership of 150, had held 30 meetings with an aggregate attendance of 1018. The farmers of Cumberland County were beginning to evidence a lively interest in the work of the Association.

DIGBY COUNTY.

Mr. Seely reported that the Digby County Association has a membership of 60 and that the finances are on a substantial basis.

HANTS COUNTY.

The Hants County report was read by Mr. Merritt:—

Our membership now numbers 155. During the year we have held twenty public meetings, attended by a total of 1,000 people, an average attendance of 50.

The principal speakers have been Messrs. W. H. Hoodworth, Berwick, and C. F. Alward, of Havelock, N. B., one meeting each being given by Messrs. McRae, an Ontario man, Mr. Robinson, of Berwick, and J. P. Landry, of the Government farm, Truro.

The addresses have been excellent ones, and well received by those present. The attendance, while not as large as we could wish, has been fairly good, and will no doubt increase. Those who attend once, always want to come again. It is only those who never attend a farmers' meeting who consider them of no value. The subjects discussed at the meeting were:—spraying, pruning, cultivating of orchards, commercial fertilizers, soil cultivation, care of horses, dairying, seed selection, poultry, etc. The past has been a good year, shall we not make the next a better?

(Continued in next issue).

"EASTLAKE" METALLIC SHINGLES

will prevent such losses—they are LIGHTNING PROOF—an absolute protection for your crops and implements. "EASTLAKE" SHINGLES are the EASIEST to lay, and cost less than a wooden roof equipped with lightning rods. A Metallic Roof saves you money—it reduces your insurance rate and remains IN PERFECT CONDITION for a lifetime.

Manufacturers

The Metallic Roofing Co Limited
TORONTO & WINNIPEG

Can you afford to take these chances?

Read these clippings—all taken from the same paper—the result of an electrical storm.

LOSSES BY LIGHTNING.

BARNS BURNED IN DIFFERENT SECTIONS OF THE COUNTRY.

Farmers Lose Live Stock and Crops—Planing Mill at Niagara Falls and Large Stock of Lumber Destroyed—Other Fires

(Special Despatch to The Globe.)

Lindsay, Sept. 15.—A more than ordinary electric storm, doing considerable damage, passed over this section this morning at about 1 o'clock. In the rural districts several barns were destroyed by fire from lightning. Among others the following have been reported: The barn of Nicholas Dee, containing the season's crop, owned by Mrs. Shea, total loss. Two barns, crop and horses belonging to Wm. H. Skuce of Mount

The dwelling house and barns of Mr. Lamb of the township of Verulam are reported destroyed, but no particulars have been received. In the town of Lindsay the storm we

Another Barn Burned.

St. Catharines, Sept. 15.—(Special.)—Lightning struck and set fire to the barn of John Bertram on the townline between Louth and Clinton, about a mile north of Vineland, on Tuesday night. There was a heavy electrical storm in that vicinity and the barn was entirely destroyed, with its contents, including two valuable horses, hay, grain and some implements. Most of the implements happened to be outside the building. Mr. Bertram had recently completed a storage for crops and sheds for threshing, which had just been completed. The loss will be about $1,050 or $2,000. The barn was an old one, but answered the purpose of a storage for crops and sheds for horses.

Blaze at the Falls.

Niagara Falls, Sept. 15.—A barn and outbuildings owned by Mr. Thomas Petch were struck by lightning and consumed, with the season's crops. Loss $4,000, partially insurance.

FREE BOOKLET

Our interesting free booklet "Eastlake Metallic Shingles" gives valuable roofing information. Write for it.

1939

FREE
GIRLS
Girls, Here is Your Chance to Obtain FREE a Handsome Bisque DOLL
Do you want to receive Free a beautiful doll? We have them for you. Our large handsome doll will sit down, fold its arms, turn its head, shut its eyes and go to sleep like a real baby, the best kind of a doll, 18 inches tall, with long curly hair, real eye lashes, handsome turning Bisque head, full jointed body, pearly teeth, very stylishly dressed, fancy underwear, with hat, shoes, stockings, etc., dressed completely from head to shoes, free to you for selling only 15 packages of our famous Marvel Bluing at only 10c per package. We send a beautiful finished Turquoise Brooch to give to every customer who buys a package from you. This makes them sell quickly. Return the $1.50 when sold and we will promptly send you this handsome doll. Write to-day. Address Dept. 77
MARVEL BLUING CO., TORONTO, ONTARIO, CANADA

Judge

Quaker Oats by the flavor. Taste tells you the difference when you get the cream of the oats.

Choice Oats are sifted 62 times to pick out the rich, plump grains. We get but 10 pounds of Quaker Oats from a bushel.

These choice grains, when prepared by our process, supply the utmost in oatmeal.

The richness and flavor, found in no other brand, has made Quaker Oats the world's breakfast.

It is worth your getting. For Quaker Oats, despite this quality, costs but one-half cent per dish.

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c
Regular size for city trade, 10c
Except in Extreme West

The Quaker Oats Company
PETERBOROUGH, ONT.

Look for the Quaker trademark on every package.

FLORICULTURE.

A St. John correspondent writes:—Easter Lily has grown well until it has reached a height of three feet, when the lower leaves are turning yellow and falling off.

This may be caused by not giving the plant sufficient water. This plant should never be allowed to get dry, even for a day, as it means a serious check. It is also possible that the bulb may be afflicted with the so called Bermuda disease. In that case the leaves are all more or less effected, being spotted with light spots and ends curling and twisting with lower leaves falling as spoken of. If this should be the case there is little that can be hone. Unless the case is a very bad one, indeed, you will get a few small blooms, probably slightly deformed but better than none. I would not advise throwing it away, unless very badly affected. However if you should have other lillies of the same variety that are perfectly healthy it would be well to isolate the diseased plant as it is liable to spread the infection to the others.

A little care about the presence of earth-worms in the soil of potted plants may save many a fine plant; if exercised at this season of the year. If you see little round lumps of earth on top of the soil in a pot turn the ball carefully and nine times out of ten there will be one or more large worms that have made a comfortable home of your plant by boring the soil and roots full of corridors and chambers that allow the air directly at the roots and this seriously affects the health of the plant. In most cases these pests can readily be drawn out but when they are in the centre of the ball you can generally secure them by holding the ball in the hand and tapping gently on the soil with a stick. This will bring the worm to the outside when it should be seized firmly and slowly drawn from its lair. Slowness should be emphasized in this case as if the worm is broken the section remaining in the earth will soon become as troublesome as the whole worm was.

Many plants were frozen during the late cold snap and frozen wood should be carefully cut out as it is apt to rot back and kill the roots that otherwise might have life enough left to send forth new growth.

If A. B. would send a leaf of the plant that is apparently dying I will try to give the treatment to apply to the case, but I cannot identify the plant by the description given.

H. A. V., writes:—Tell me how to repot my Primroses?

In repotting Primroses and in dividing old plants of this family trim up the bottom leaves closely, if they are a little shaky in the pots. It will not hurt them as they will soon establish themselves. Water very moderately after repotting and keep well shaded for a few days.

Bessie, Oromocto, N. B., writes:—I have received seeds of the Castor Oil Bean. How should I plant them? Would they grow if planted in the ground this fall or should they be planted in the house? Is it better to sow Poppy seeds now or in spring? Would it be too late to sow Grass seed? If not where could good seed for a cemetery lot be procured next spring? I am promised a small root of the hardy Garden Hyderangea. Should it be potted in woods' earth, and how should it be treated during the winter? Can it be kept in the cellar, if a cool one? Carnations keep well in our cellar all winter.

The Castor Oil Bean may be planted in a small pot, well watered and placed in the warmest, sunniest window in the house. It should be repotted as soon as the pot becomes filled with roots and may be planted out of doors in rich soil as soon as all danger of spring frosts is over. They make a very handsome foliage plant if grown in a sunny spot, in very rich soil. Do not plant the beans in the ground in the fall. The middle of April is a good time to start them in the house in pots. By all means sow the Poppy seed early in the spring and have the ground well prepared. They are very apt to come uneven if planted—in the fall. It is too late now to sow Grass seed. Sow Grass seed early in the spring. Lawn Grass seed can be obtained from any seedsman. I am now using in preference to lawn Grass, Kentucky Blue Grass and White Clover, one quarter Clover to three quarters Blue Grass. It makes a fine lawn and winters well about St. John. If you get the hardy Hyderangea after the ground is frozen plant it in a pot, water well and place in cellar, in a dark corner. Get it out of doors early in the spring. Frost will not hurt it. Keep dry during the winter in fact treat as you do your Carnations.

Chemical Analysis of Soil

Extract from

"Artificial Fertilizers; Their Nature and Use"

By B. Leslie Emslie, F.C.S., P.A.S.I., C.D.A.

"At one time it was thought that a chemical analysis of the soil ought to indicate exactly the manurial requirements of that particular field but this theory was very soon upset, when it was observsd that certain rich clay soils, which on analysis showed a very high total potash content, were still benefited by an artificial application of Potash, as proved by the increase in crop production.

Some soils also which analysed high in phosphoric acid, were found to respond readily to an artificial application of an available phosphatic fertilizer.

Now, while a general chemical analysis will show the total amounts of plant food in the soil, it does not show what proportions are available to the plant, so that the quickest way to find out the manurial requirements of a soil is to conduct fertilizer tests on the farm."

Farmers, who have not already done so, should procure a copy of this important bulletin.

Copies of this and other bulletins, treating of the fertilization of various crops, may be had by writing direct to

GERMAN POTASH SYNDICATE,

1106 Temple Building, Toronto, Ont.

Makeup of the Soil.

Farm boys can do no better than to learn accurately just how soil is made and of what different soils is made. Below is a list of questions to answer. See how many of them you can get:

1. Of what is soil composed? What can you offer to support your answer? (Seek your answer in the vicinity of your home or schoolhouse).
2. What have acted upon rocks to reduce them to very fine particles? What evidence can you offer that rocks have been acted upon by what you have named?
3. Are there any gravel pits or banks in your county? What do these tell concerning soil formation?
4. What is humus? What agencies are soil mixers?
5. Try placing a bottle of water outdoors on a cold winter night. Is there any relation between what happens to the bottle and what takes place on the surface of exposed rocks?
6. Have you ever seen a tree growing in a crack in a rock? What effect did the roots of the tree have on the rock?
7. Perhaps you have found pieces of limestone with marks on them that look like roots. How did these markings come to be on the rock?
8. If there is a low, marshy spot on your farm, dig up some of the dirt and note how it differs from the soils on the higher lands. Why this difference? Is the marsh gradually filling up?
9. Notice the bed of a stream and see if you can explain why some soils are composed of large particles and some very fine particles.
10. What is meant by "available" plant food?
11. What part do carbonic acid gas and nitrogen play in making plant food?
12. What plan has Nature for transforming nitrogen into available plant food? Produce a specimen showing that Nature has made provision for such work to be done.
13. In what order have low forms of plants succeeded each other in the soil-forming process?
14. How is plant food removed from the soil? How can it be replac-
?
15. Careful observations will help one to see year by year soil formation processes. What ones can you cite that are not far from your home or school?

The management of the calf during the first year has much to do with its later usefulness. Plenty of water and salt should be given in clean vessels. Avoid sudden changes of diet and practice regularity in feeding. Provide warm, dry quarters in damp weather. Give plenty of roughage and not too much grain so as to develop a large capacity for handling food as is desirable in dairy animals. When the calf is six months to a year old milk may be omitted from its ration and a full roughage and grain diet substituted.—D. H. Otis.

New Brunswick Crop Yields.

Statistics of crop yields as gathered by the Provincial Department of Agriculture show larger yields in all crops but buckwheat. The figures for 1911 and 1910 are as follows:—

	Acres.	Bus.	Bus. per acre
Wheat.....1911	13,226	254,771	19.2
Wheat.....1910	13,988	265,848	19.
Oats.....1911	198,120	5,970,435	30.1
Oats.....1910	196,795	5,847,877	29.7
B. Wheat.1911	55,979	1,173,147	20.9
B. Wheat.1910	656,305	1,390,717	24.6
Potatoes.1911	47,304	3,493,212	179.5
Potatoes.1910	47,744	6,067,276	127.
Turnips...1911	6,473	3,326,793	513.9
Turnips...1910	6,310	3,160,158	500.8

The numbers of Live Stock show decided gains since 1909, though the number of horses for 1911 is slightly less than in 1910. The figures for the three years are as follows:—

	1911	1910	1909
Horses.....	60,329	61,042	57,713
Cattle.....	227,145	215,529	199,481
Sheep.....	150,760	137,489	143,274
Swine.....	91,363	80,022	70,010

The Agricultural Societies in the Province now number an even hundred there having been an increase of 12 during 1911. In 1908 these Societies numbered 58, the increase in the last three years has therefore been 42.

MAKES HENS LAY
MAKES HENS PAY

A CHALLENGE FROM NEBRASKA

D. M. Allan writes: "I am now feeding INTERNATIONAL POULTRY FOOD to my flock of Black Minorca, and I am open for competition against any flock in this or any other State."

1,500 EGGS FROM 30 HENS IN 60 DAYS

"I feed my hens INTERNATIONAL POULTRY FOOD and my 30 hens laid 1,500 eggs in sixty days," says Ira C. Eldridge.

How many eggs are you getting? Think of the money you can make by using INTERNATIONAL POULTRY FOOD. It doubles the number of eggs, by doubling the health of the hens. It keeps fowls in perfect condition—makes them lusty and vigorous—makes them scratch and eat—and lay all winter.

INTERNATIONAL POULTRY FOOD protects fowls against Cholera—in fact, many breeders say that it is the best Chicken Cholera Cure in existence. Price, 25c., 50c. and $1.00. Sold by dealers everywhere.

Write for free copy of our $3,000 Stock Book—of interest to every man who raises horses, cows, sheep, pigs and poultry.

64

INTERNATIONAL STOCK FOOD CO., Limited, TORONTO

Mr. Wise Grocer says:

The One Big Difference

between the Ordinary, Wooden, Wire-hooped Pail or Tub and the Pail or Tub made of EDDY'S FIBREWARE

is that the Former loses its Hoops and Goes Back into the Pieces which Formed it, while the Latter is a Solid, Hardened, Lasting Mass, without a Hoop or Seam.

And, besides, EDDY'S FIBRE PAILS AND TUBS have Many Features that you'd Never get the Good of if you Purchased the Inferior Wooden Articles Positively Persist in getting EDDY'S.

ALWAYS, EVERYWHERE, IN CANADA, ASK FOR EDDY'S MATCHES

CANCER

Old Sores, Lumps in Breast, Growths removed and healed by a simple Home Treatment

No pain. Describe the trouble, we will send book and testimonials free.

THE CANADA CANCER INSTITUTE, Limited
10 Churchill Ave., Toronto.

Questions and Anewers.

(Continued from page 255)

same as the electric strain in the cloud pushes toward earth, but the air beneath resists, and the house standing on the earth sticks up through the air, and thus becomes the discharging point for the earth, and in this way the house is charged.

This in your philosophies is called "induction."—the cloud inducing or coaxing a condition or charge into the house. And when the charge between earth and cloud becomes so great, the air can resist no longer, the conditions for lightning are ready and off she goes. Your electrified house flies to pieces, and terror and death is the sequel.

10.—Then before the home is struck are we to understand "the conditions that produced the flash existed already in the house and cloud?"

That is it exactly. As the electricity accumulates in the cloud, it induces an opposite condition of electrification in the house, producing an electric stress between cloud and house. When the charge is big enough it discharges between house and cloud, and the path through the air gets white hot, because the air resists it, and the timbers of the house also being poor conductors, are torn to pieces. But the stove, being a better conductor, and not in metallic connection with the earth, becomes a danger point; it is an easy "way" and your family might get the electric current through the stove if near it. The same is true of the water pipes and screen doors, and tin valleys on your home, and such places should be avoided. Remember, the charge does no harm, it is the discharge that does the mischief. But if there was no heavy charge, there could be no heavy discharge.

11.—Why is a railroad train or steam engine never struck by lightning?

They never get heavily charged with electricity and so the conditions are never right. You see the metal of the train is a good conductor of electricity, and when the cloud attempts to charge the train with electricity the entire electric stress is instantly delivered to the highest point, which is the sharp edges of the funnel, of the engine; there is a continuous silent discharge taking place from the sharp edges of the funnel, and in this way the accumulation is kept down and the conditions for lightning destroyed. This silent discharge is easily seen in the dark and nearly all engineers have seen it during thunder storms in the night time. This is why lightning will not strike a railroad train. If trains were disconnected from earth, as stoves and screen doors and tin valleys are, this would interrupt the silent discharge, and they would be dangerous to stand by.

12.—State again what is necessary to prevent a lightning stroke?

All right. Now listen this time. Lightning is the result of a class of conditions, and cannot possibly occur without these conditions. These conditions are the storage of electric force in the things that are to be struck. When the charge gets big enough, it all goes off at once, and anything that resists this discharge is torn to pieces. Now to prevent the lightning stroke you must not allow the electricity to store up. A railroad train destroys the conditions that cause lightning by discharging the electricity as it accumulates. A house if it is covered on roof and sides with metal, is safe, as it discharges the electricity silently, a little at a time, just as a railroad train does. But on a wooden house you must use good lightning rods, and have them intelligently put on. The rods act as a telegraph line for the electricity; As the rod is in the earth and extends above the house, the electricity finds an easy way through the rod, and instead of storing up in the house, it is telegraphed to the points of the rods and from the points escapes, thus preventing the conditions that otherwise would cause trouble. This discharge is easily seen in the dark. In a nutshell, lightning is caused by electricity storing up in quantity. To prevent it, don't let the electricity store up.

13.—Why are lightning rod points sometimes melted?

The electricity is all trying to escape from the sharp points. If the rod has poor earth connections or has joints, the electricity does not so easily reach the points, but is interrupted through poor conductivity; or if the points are not sharp, the discharge is greatly hindered. This allows too much accumulation in the rod and when the final discharge takes place, it might tear the rod loose from the building. Usually in such cases the ground around the place where the lightning rod enters is blown up, and at the point, the resistance of the air causes such intense heat that the point is melted, and a severe shock is liable to be given the people in the home. A correct lightning rod, correctly put on, properly grounded and sharp pointed, seldom suffers in this way.

The Winners

in 1911 Farmer's Contest, each of whom received

$100 in Cash.

ALBERTA

PRIZE A.—Hays Brothers, Carstairs.
" B.—Tomfohr Brothers, Milk River.
" C.—George Jackson, Cheadle.
" D.—Herbert Elwell, Blackfolds.

MANITOBA

PRIZE A—William Elliott, Silver Plains.
" B.—Mrs. Jonathan Blake, Bradwardine.
" C.—N. Harrap, Woodlands.
" D.—R. B. Chapman, Brandon, P. O.

NOVA SCOTIA

PRIZE A.—Edgar Fillmore, Amherst.
" B.—S. Terris, River Phillips.
" C.—Robert Malcom, Brule.
" D.—T. W. Kellior, West Amherst.

PRINCE EDWARD ISLAND

PRIZE A.—Charles Godfrey, North Wiltshire.
" B.—Richard Creed, Albion.
" C.—Frank C. Beaton, East Point.
" D.—J. H. Crasswell, Clyde Station.

BRITISH COLUMBIA

PRIZE C.—Seth Davidson, Peachland.
" D.—W. O. Walker, Chilliwack.

NEW BRUNSWICK

PRIZE A.—Sir Wm. Van Horne, St. Andrews
" B.—G. E. Steeves, Hillsboro.
" C.—Mrs. D. McQuarrie, Newcastle.
" D.—E. J. Sullivan, Grand Anse.

ONTARIO

PRIZE A—[illegible]
" B.—W. P. [illegible]
" C—[illegible]
" D—Herbert [illegible]

QUEBEC

PRIZE A.—[illegible]
" B.—[illegible]
" C—[illegible]
" D.—[illegible]

SASKATCHEWAN

PRIZE A—[illegible]
" B—[illegible]
" C.—D. A. Purdy, Lumsden.
" D—[illegible]

What the Prizes Were.

PRIZE "A." $100 given to the farmer in each Province who used during 1911 the greatest number of bags of "CANADA" Cement for actual work done on his farm.

PRIZE "B." $100 given to the farmer in each Province who used "CANADA" Cement on his farm in 1911 for the greatest number of purposes.

PRIZE "C." $100 given to the farmer in each Province who furnished us with a photograph showing best of any particular kind of work done on his farm during 1911 with "CANADA" Cement.

PRIZE "D." $100 given to the farmer in each Province who furnished the best and most complete description of how any particular piece of work shown by photograph sent in was done.

THE contest was successful beyond all expectations. Hundreds of entries were received from all parts of Canada, and their excellence proved beyond question that Canadian farmers are fully aware of concrete's advantages. Arrangements are now being made for the

1912 Contest.

Have you received your free copy of the handsome book,

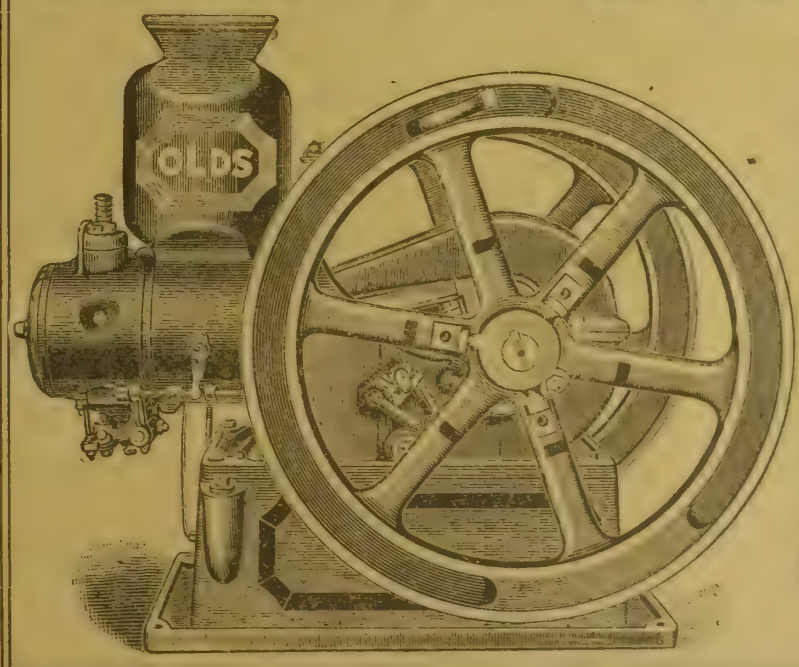
"What The Farmer Can Do With Concrete?"

If not send your name and address to-day. It will cost you nothing, not even postage.

CANADA CEMENT CO., Limited.

National Bank Building, - - - - - - MONTREAL.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Load This Wagon To the Fullest Capacity

Every dollar invested in a T-K Handy Farm Wagon will be repaid over and over again in saving work loading and unloading besides this wagon will carry as heavy a load as any pair of horses can draw without tireng them, It earns money for you and makes farm work easier.

T-K Wide Tire, Steel Wheels and Handy Farm Wagons

The success of our Wide-Tire Steel Wheels has been unprecedented in the history of wheel manufacturers. They solve the problem of getting over the worst roads without lightening the load or tiring the horses. Mud won't clog them, bad roads won't injure them. yet they are cheaper than wooden wheels.

Write for literature.

Tudhope-Anderson Co., Ltd, Orillia, Ontario.
Successors to
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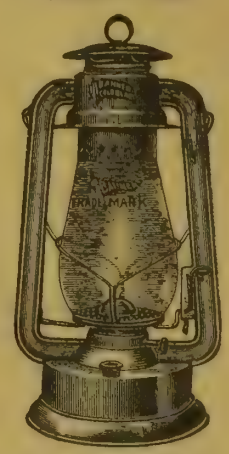
"BANNER" Cold Blast Lantern

Double Seamed Well Cannot Leak.



A Calendar With Every Lantern.

Costs no more than inferior Lanterns ! !

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W. J. OSBORNE PRINCIPAL.

is just what every PROGRESSIVE YOUNG FARMER needs

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W. J. OSBORNE - Principal, Fredericton, N. B.

FALLING SICKNESS

Fits, Epilepsy, St. Vitus' Dance, Nervous Troubles, Etc., positively cured by LIEBIG'S FIT CURE. We will send trial bottle FREE if you will mention this paper. Write the LIEBIG CO., Spadina Avenue, Toronto.

14.—Do lightning flashes vary in intensity?

Very much indeed. An electric discharge through a very dry atmosphere is exceedingly bright and hot. An electric discharge through an atmosphere with a little humidity is not so hot and varies in color from red to pale. And in very moist atmosphere, such as a fog, there is no lightning at all. So it often occurs, during a storm that lightning will cease after the rain has fallen for an hour or so, and in such cases the air is getting too moist and becomes so good a conductor of electricity that lightning ceases. In a dry climate like Colorado, lightning is terrific, while on the coast, where it rains much, the air gets so damp lightning is rare and mild.

15.—Are all metals equally good for lightning rod purposes?

No; silver is best, but copper is most available. The relative conductivity of metals is as follows: Silver, 136; Copper, 100; Gold, 74; Zinc, 28; Iron and Steel, 16; Tin, 15; Lead, 8. From which it appears that copper is more than six times better than iron as a conductor of electricity.

16.—Why are wire fences so dangerous to stock during a thunderstorm?

Wire fences are not in metallic connection with the earth and cannot well receive and discharge the stored electricity. Animals standing by such fences become the means of connecting the fence to earth electrically, as the posts are poorer conductors than animals. But if the ground wire was put on every fifth post no animals would be killed, as the wire is a better conductor than the animals. To put on this wire you can use a wagon rod to punch a hole two feet deep, stapling the wire to the post so it touches the fence wires. This wire may stick an inch or two above the post. You can protect a pasture of 160 acres for seventy-five cents if you throw in one-half day of your time to do it. Telegraph lines have now such a wire on every fifth pole and damage has almost ceased. Telephone companies as a rule, don't yet know enough and lightning works fearful havoc with their lines.

17.—Where are the most dangerous places in a house without a rod during a thunderstorm?

Near the stove, or the water pipes, or screen doors. If the stove pipe is tall, the stove is probably the most dangerous place, as the pipe will try to be a lightning rod and discharge the electricity through that part of the house. If however, the stove pipe is not tall, other places may be more dangerous; perhaps where the water pipe comes into the cistern. If your house has a wing, look out for the tin valley, in the angles of the roof. If a screen door is beneath the tin valley, it is a very dangerous point to stand in times of severe lightning. In 1882 the writer came within fifteen seconds of eternity while standing in a screen door beneath a tin valley, but left just in time to see the door posts, against which he had been leaning, torn out by lightning; that incident inspired this work.

18.—Where is the safest place in the house during a thunderstorm?

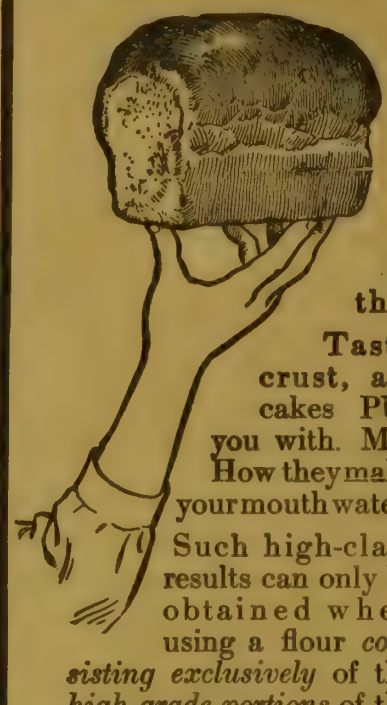
This may surprise you, but at night the safest place is sleeping in an iron or brass bed. To stand by the metal bed is very dangerous, for you are taller than the bed, but lying in it is safe, as the bed extends above and below you, and the current will not leave the bed to pass through you, but the walls above the bed and the floor beneath, would be ripped to pieces. Contrary to popular opinion, feather beds are not safe to sleep on, unless they are in a metal bed. If you are sleeping on steel springs in a wooden bed, the springs would save you if you are in the center of the bed, while the bed posts would be split to pieces, and possibly the bed would be set on fire. During the day the safest place is in the center of the room if away from the stove. Open doors and windows cut no figure as lightning does not come in at opeh doors as many people imagine.

19.—How should a house be rodded?

This is a very important matter and should be done only by a man who understands the system. But the essential things are good ground connections and sharp points. Ground connections should be made where water pipes come down, and be deep enough to be in permanent moisture. Do not bury them in charcoal or gravel or in cisterns as some pretended philosophers suggest, but in the pure, damp earth and at opposite parts of the house as much as possible. But this must be modified by the locations of the water pipe, as water pipes are rival conductors and would try to take part of the electric

Be Fair. Buy a sack or barrel before judging PURITY FLOUR

SOME people have attempted to judge PURITY FLOUR before knowing the facts about it—before using it. So we ask you to be fair and to buy a sack or barrel of PURITY FLOUR and give it a thorough try-out before attempting to arrive at a judgment.



Look at the beauty and loftiness of the golden-crusted, snowy-crumbed loaves, fit for a king. Count them and see how many more of them PURITY yields to the barrel than ordinary flour does.

Taste the creamy, flaky pie crust, and the deliciously light cakes PURITY FLOUR rewards you with. My! How they make your mouth water!

Such high-class results can only be obtained when using a flour *consisting exclusively* of the *high-grade portions* of the *best Western hard wheat berries*.

And remember, that, on account of its *extra* strength and *extra* quality, PURITY FLOUR requires *more* water when making bread and *more* shortening when making pastry, than you are accustomed to use with ordinary flour.

PURITY FLOUR

"More bread and better bread"

Buy a bag or barrel of PURITY FLOUR. Test it for a week. Then pass judgment.

Add PURITY FLOUR to the grocery list right now.

1115

discharge. For that reason the pipes and the rod should act in harmony, in which case the pipes assist the rod. Sharp points should be placed at the gable ends, and all should be connected together, and also to the tin valleys and water troughs and other metal parts. The rods should be nailed tightly to the building, and not put through glass insulators. Insulators are a damage to a rod as they cause it to be torn off, and have not one redeeming quality in them.

20.—What proportion of insurance losses are caused by lightning?

One hundred and eleven companies report that fully three-fourths of all their losses are caused by lightning. These losses are paid for buildings not rodded and for cattle near wire fences without ground wires. This information was collected by the president of the National Mutual Insurance Association in 1902 and read before the Iowa State Insurance Conventions in November, 1902, and published in the Mutual Insurance Journal at Lincoln, Neb., in December, 1902, and is destined to be the basis of one of the greatest reforms in insurance ever known.

21.—What proportion of lightning losses can be saved to insurance companies by a skillful system of rodding?

In 1905 fifty-three insurance companies of Iowa reported $34,386.48 losses on buildings not rodded, and only $1.00 loss on buildings that were rodded.

An Artificial Thunder Storm.

The people of the Maritime Provinces are being educated in the laws and nature of lightning and how to protect life and property, through the Dodd and Struthers Maritime representative, Mr. Armitage, 25 Peel St., St. John, N. B. with their wonderful artificial Thunderstorm. He

E. M. Armitage,
25 Peel Street, St. John. N. B.
Maritime Representative for Dodd & Struthers, Lightning Rod Manufacturers, Sherbrook, Que.

has given demonstrations at the Amherst Winter Fair and several other public gatherings throughout the Provinces.

The Dodd Thunderstorm is a most ingenious piece of electrical apparatus with which Mr. Armitage convinces the skeptical. It is Professor Dodd's invention, a thing which he worked out with infinite pains and by the expenditure of no small sum of money. Seeing is believing.

It is an impossibility for any man to witness Mr. Armitage's demonstration with this Thunderstorm Machine without being convinced of his power over lightning.

The actual conditions of a thunderstorm are reproduced on a small scale. You are made to see and understand how a building becomes "charged" with electricity, and why

THE HOME OF TRUE ECONOMY

Special! VALUES THAT TALK Special!

$7.95

Z. S. 2.
WOMEN'S WAISTS of good quality crisp white lawn. A very pretty style. Diamond shape neck edged with very fine lace insertion, three pin tucks on each side of front, also down back. Sizes 32 to 42. Price ..... 59¢

Z. S. 1
WOMEN'S SKIRTS of good wearing, basket weave cheviot, splendid style, seven gores with four rows of stitching around bottom, inverted pleat in back. Colors, black and navy. Sizes, waist 22 to 28, length 37 to 42 inches. Wonderful value. Price $1.59

S. S. 5
The regular price of this suit is $10.00 and it cannot be duplicated elsewhere for less. The materials are serviceable English tweeds, firmly woven and will give excellent wear and satisfaction. Colors, dark grey, olive and brown mixed grounds. Cut in the latest three button, single breasted sack style, lined with a fine mohair lining and interlined with shrunk canvas and hair cloth, carefully tailored. Sizes 34 to 42. Our special price $7.95

59¢

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We pay transportation charges on all merchandise to any part of Canada. All goods are sold subject to our binding guarantee of "Satisfaction or Money Refunded." This announcement will interest mail order buyers throughout the entire country.

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SPRING AND SUMMER CATALOGUE 1912

will shortly be ready for mailing. Write to-day for your free copy. Greater values, better assortments, more inducements than ever.

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J. S. 1—Men's Heavy Waterproof Boots, in Black or Tan, Goodyear welt soles, sizes 5½ to 10. Price $3.89

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J. S. 3—Boys' Box Calf Boots, heavy soles, solid throughout, sizes 1 to 5. Price $2.25

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J. S. 3—Women's Tan button and lace boots, plain toe, short vamp and high Cuban heel, sizes 3½ to 8. Special Price $2.49

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J. S. 4—Women's Patent Colt Blucher lace or button boot, short vamp, Goodyear welt soles and high Cuban heel. Sizes 1½ to 8. Price $2.49

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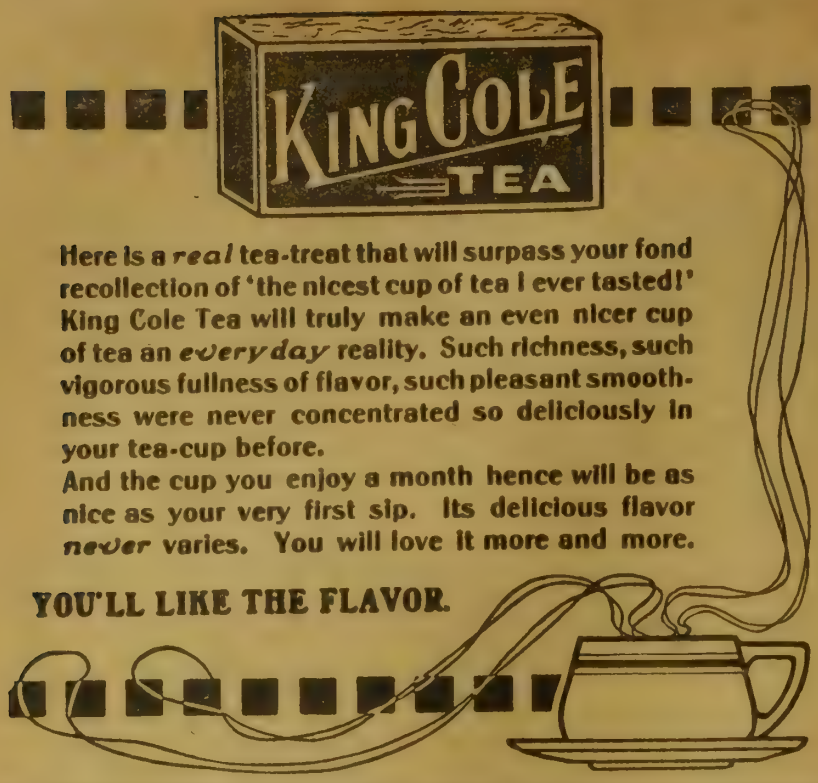
KING COLE
TEA
Here is a real tea-treat that will surpass your fond recollection of 'the nicest cup of tea I ever tasted!' King Cole Tea will truly make an even nicer cup of tea an everyday reality. Such richness, such vigorous fullness of flavor, such pleasant smoothness were never concentrated so deliciously in your tea-cup before.
And the cup you enjoy a month hence will be as nice as your very first sip. Its delicious flavor never varies. You will love it more and more.
YOU'LL LIKE THE FLAVOR.

the lightning must "strike" under certain conditions.

You are bound to be convinced when you see the actual lightning flash.

And you are made to see how true lightning rods, properly erected, destroy the conditions which produce lightning and how impossible they make it for a building to become "charged" or that there should be a lightning "stroke."

The Dodd & Struthers Lightning Rod System, advertised on another page of this issue, has been highly recommended by the New Brunswick Board of Fire Underwriters and many other Fire Insurance Companies in Canada.

This Company is wiring several large buildings in the Maritime Provinces such as the Christ Church Cathedral of Fredericton, N. B., which was damaged by lightning in July 1911 to the extent of $70,000.

Each building, however, is a separate problem. Failure to rod right is total failure. You have absolute protection, or you have no protection at all.

Do you not believe it is the wisest plan to entrust this delicate matter to the firm which you know combines the right theory with the right practice and is known to erect the kind of rods that give protection in a way that absolutely protects?

Charlottetown Markets.

GRAIN—Oats, White 44 to 46c.; Black, 46 to 48c.

FEEDSTUFFS—Bran, Retail, $1.40 to $1.45; Shorts, $1.50; Middlings, $1.50; Oil Cakes, $2.50 to $2.75' Corn Meal, $1.85.

LIVE STOCK—Butcher's Cattle, 3¾ to 5c.; Stockers, $18 to $30.00; Milch Cows, $25 to $40.00; Sheep, 3¼ to 3¾c.

DRESSED MEATS—Beef (carcass), 6½ to 7½c.; Beef (retail), 8 to 14c.; Mutton (carcass), 7 to 8c.; Lamb (ex cold storage), 9½c.; Pork, 6½ to 7½c.

HORSES—Drafters, $125 to $225; Roadsters, $150 to $250; Carriage, $160 to $225.

DAIRY PRODUCTS—Creamery Butter, 25 to 28c.; Dairy Butter, 22 to 25c.; Cheese, 15 to 15½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 24 to 28c.; Fowl, 10 to 11c.; Chickens, 10 to 14c.; Ducks, 15 to 18c.; Geese, 14 to 16c.; Turkeys, 20 to 25c.

FRUIT—Apples, $1.75 to $4.00.

VEGETABLES—Turnips, 37 to 40c.

MISCELLANEOUS—Hay (pressed), $12.58 to $14.50; Hay (loose), 70 to to 75c.; Straw (loose), 30 to 35c. per cwt.; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 70 to 90c.; Lamb Skins, 70 to 90c.

Since last report market has remained firm and prices are about as before. There is no vegetables being offered at present consequently no price to quote. An odd small lot of potatoes comes and sells for local use at about 37 to 40cts. Dressed poultry is also scarce and very little of any thing offered except a few fowls. Oats and hay is also scarce and there is little or no oats stored in the city this winter. Pressed hay is also scarce farmers being inclined to hold for higher prices. Considerable loose hay has been offered lately at prices 73 to 78cts. Beef is plentiful but quality is poor and first class stock almost impossible to get and if obtainable would command higher prices than our quotations. Pork is plentiful considering time of year and demand is good. Select hogs selling at outside price 7⅞cts. and light and heavy according to quality down to 6½cts. Feeds of all kinds are scarce and hard to secure and stocks will be exhausted long before opening of summer navigation and prices therefore are likely to go higher. Trade in general has been quiet since the New Year as may be expected at this season of the year.

Every Farmer Keeps House

and he uses every sort of housekeeping convenience used by his city cousin. Moreover, he generally owns his house and so equips it permanently. He can and does buy better grades of merchandise for this very reason. When he buys a piece of furniture there is no thought of buying cheap "because it may not fit in the next flat."

When he buys a stove, he does not want one that will do for a year or two only "because the next house may have one installed," or have no room for a range of good size.

He wants a stove that will last him for years and which will not keep him sending to town everyfew months for repairs. He wants one that is modern and up-to-date—and yet a reliable range, not a faddy one. In short, he wants an—

ENTERPRISE MONARCH STEEL RANGE

because he has the makers' guarantee that it will do the work required of it and stand the wear and tear of daily use in a farm kitchen.

If you keep house you need a MONARCH in your business. Send for circular.

The Enterprise Foundry Co., - - Sackville, N. B.

Nova Scotia Fruit Growers' Convention.

(Continued from page 260).

iff, etc., and further said that apples sent to that market must be packed in boxes and be extra fine in quality and appearance.

The western market came in for a fair share of attention. Mr. Moore regretted that some lots shipped there were not properly packed. It will take many years to eliminate this impression. Our apples are not as well packed as in Ontario, and not as carefully graded. The barrel used here is not as attractive as the one used in Ontario, and many figures were quoted to substantiate this. Box packing is highly recommended, especially for gravensteins. They were too fine apples for barrels, as they could not be packed tight enough to stand a long journey. The barrel he considered the best package for the majority of apples, but for the finest apples he considered the box the best.

NOVA SCOTIA BARREL.

Mr. Innis, in the discussion which followed, protested that the barrel used in Nova Scotia was all right, and was established on a scientific basis. He proposed that the delegates to Ottawa report that the N. S. F. G. A. are satisfied with the present 96 quart barrel. The motion was carried.

Mr. P. U. Parker, of the D. A. R. office, Kentville, spoke briefly of a suggestion made by a C. P. R. official in Montreal recently. The Valley shippers should have a special brand, and it was proposed, "The Land of Evangeline Brand," and bearing the motto, "Grown for the taste." Each barrel to bear a guarantee or certificate of honest packing, and marked with a brand, so that the packer might be easily traced. If this guarantee was not fulfilled, the packer would lose his certificate and mark. This was made as a suggestion, and was to be independent of Government inspection.

FIGHTING THE PEST.

Mr. Payne, who has charge of the party in search of the brown-tail moth, spoke for a few moments, asking for co-operation in their work.

Prof. Cumming further emphasized the remarks made by Mr. Payne, and spoke of the difficulty in getting the co-operation of the people in the districts most infected. He cited the case of the New England States where the people were driven to work by the terrible depredations of the pest. "Face the situation squarely and recommend a policy whereby we can fight it," he said, "for it needs more than Government aid. The section west of Bridgetown is, perhaps, the worst in the Province, and here the people practically reluse to give aid, and offer ridicule instead." These were very plain statements, but Prof. Cumming said that if we were beaten out, the brown-tail moth would have possession of the Provinces.

CONSUMPTION OF APPLES.6

Mr. W. T. Macoun, Ottawa, gave a paper on the subject: "Is Apple-Growing being overdone?" He did not enter into figures largely, but gave his own ideas on the subject. Probably 50 years ago, growers began to talk on this subject, and it was still talked of, but not taken seriously. He caused some laughs as he pictured how the people of Canada could alone use 42,000,000 barrels per year. Better and quicker distribution of fruit was what was needed—and with this the growing could not be overdone.

One of the pioneers of co-operation in the Valley, Mr. J. N. Chute, gave a good address on "The Progress of co-operation." In 1907 the first co-operative society was formed, and now there are 21 in the County of Kings alone. He dealt with the uniform packing and grading of fruit, and so showed the value of the co-operative society as an educator in the business of apple packing. In connection with the co-operative society in Berwick, they ran an evaporator, which was a very paying proposition.

WANT DUTY INCREASED.

The discussion which next engaged the meeting was on the resolution "That the Dominion Government is requested to raise the duty on apples coming into Canada to equal that levied on Canadian apples going into the United States.

Mr. S. C. Parker moved that the delegates to Ottawa be instructed to oppose this resolution. Mr. W. W. Pineo spoke against the motion and the discussion grew general and most heated.

Mr. Robert Starr brought out the point that we were all Canadians that what we might do would seriously affect all the Dominion, and asked that the question be carefully considered before it was voted on. Mr. E. E. Archibald introduced the amendment to increase the duty in Canada to equal the duty in the United States. The amendment was carried.

OFFICERS FOR 1912-13.

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Vice President—A. C. Starr, Port Williams.
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"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man

See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man on his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good $100,000 of produce in your barn in 100 years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods.

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn [illegible] whether you use my 100-year roof or not."

"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."

G. K. Pedlar

The PEDLAR PEOPLE Limited, of Oshawa

Established 1861

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Executive Board—The President, Vice President, Secretary, Wm. O'Brien, Windsor Forks, Hants Co., R. J. Messenger, Bridgetown; C. O. Allen, Kentville; S. B. Chute, Berwick.

Publication Committee—The President, Secretaty, A. C. Starr, Port Williams.

Delegates to Farmers' Association—E. H. Johnson, Wolfville; R. J. Messenger, Bridgetown. @ ...

Delegates to the Ottawa Fruit Conference—R. J. Messenger, Bridgetown; John Chute, Berwick; F. A. Chipman, Round Hill; A. C. Starr, Port Williams.

At the closing session, the newly elected president, Mr. S. C. Parker, gave a brief review of the work of the Association during the twenty years he had been identified with it and promised a review of the Association's work since its inception at the next meeting.

RESOLUTIONS.

"Whereas, the system of inspecting apples in the Province of Nova Scotia which has been the practice the past few years, mainly at the port of shipment is not entirely satisfactory, inasmuch as it is only possible to inspect a very small percentage of the apples at the ship and then many shipments made through other channels, where they escape inspection;

"And whereas under the present Fruit Marks Act, the Inspectors are not authorized to inspect open package.

"Therefore, resolved, that the Nova Scotia Fruit Growers' Association now in session respectfully request that the Dominion Government to have made such changes in the 'Fruit Marks Act' as well as provide for a more thorough system of inspection at the packing houses, ports of shipment and elsewhere including open packages, when or where advisable and also to issue certificate of inspection when circumstances and conditions warrant doing so."

This resolution was moved by Col. S. Spurr, seconded by Miles Chipman.

Different speakers on this important issue were: R. S. Eaton, C. O. Allen, M. K. Ells, A. H. Starr, R. E. Harris, A. S. Banks and J. N. Chute.

In the course of his remarks Capt. C. O. Allen gave some interesting information. He said that at the evening meeting Tuesday, there was a decided feeling that the complaints concerning apples that went West were all directed against Co-operative Companies. In talking with Mr. Moore, Capt. Allen learned that this was not so. Not one of the twenty-five recommendations for fines, etc., were directed against co-operative companies, but in every case against private individuals. This explanation caused a feeling of satisfaction, as a large number of men prominent in Co-operative movements were present and resented the imputation put on this good name. Resolution carried unanimously.

The second resolution was: "Whereas, the Dominion Act regulating the size of apple barrels is not being complied with in the fruit districts of the Province,

And, whereas, it is important that all barrels containing apples should be fully up to the standard required by the Act.

"Therefore, be it resolved that the department to which it may belong be requested to add to the duties of the Apple Inspector, the inspection of the barrel as well in which the apples are packed,

"And also that the Act be so amended as will require all coopers who manufacture barrels in which apples are packed and offered for sale to brand their name and address on the side of each barrel made by them, and also making such manufacture of barrels subject to a fine of twenty-five cents for each barrel so made by them not complying with the Act."

The third resolution affected the College of Agriculture, and asked that the Government build a suitable dormitory for the students in attenddance.

Another resolution referred to the District Horticultural Exhibition. It is claimed that the influence is not as wide as a more extensive exhibition held in Halifax and it was asked that the Fruit Growers' Association express itself in favor of a larger and more comprehensive exhibition to be held in the capital city similar to Horticultural Exhibitions held in Vancouver, Toronto, etc.

A resolution regarding the growing of tobacco for experimental purposes on the Government Farm was introduced at the instance of the W. C. T. U., and some lively discussions ensued. A large number of members expressed their views that such an action would be detrimental to the youth of Nova Scotia, and the resolution carried.

The definition of No. 3 apples was discussed, and it seemed to be the general opinion of the Association that the shipping of No. 3 was detrimental to the apple trade. The definite size for grading apples was thoroughly discussed and a motion requesting the Government to define the size of the different apples, No. 1 and No. 2.

Votes of thanks were tendered to the Mayor of the Town and the people of Wolfville also to Mr. Black for the use of the opera house, and to the C. P. R. for their very courteous treatment to all delegates. The meeting then closed and the Association regard it as one of the most important in its history.

Save Money on Fruit Plants.

Healthy Northern Grown Stock that will produce big crops of Good Fruit.

Read Our Guarantee.

All plants guaranteed to be first-class and true-to-name, packed to reach you in good growing condition, or **Your Money Back.** Fruit and Ornamental trees and Small Fruit plants in many varieties. Strawberry plants a specialty. Lowest prices. Write us to-day concerning your needs inNursery Stock, also Price Lists and Free Delivery offer.

E. L. COLPITTS, - Petitcodiac, N. B.

HILLSIDE STOCK FARM.

During the past season our Ayrshires won male championship at Halifax and Chatham, Female championship at Fredericton and first for herd at both Chatham and Fredericton. Only two young bulls left ; inquire at once of

PRESCOTT BLANCHARD,
Truro, N. S.

S. C. White Leghorns.

We offer for sale 1st Amherst Cockerel, 3rd Amherst Pullet, 12 pullets of same breeding and 7 Hens, S. C. White Leghorns, also 6 S. C. Rhode Island Red pullets.

ORCHARD HILL FARM,
Brown's Flats, N. B.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 30 to 40 tons of hay, lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2, Amherst, P. O., N. S.

ONE CENT A WORD.

(Too Late for Classification).

WANTED—Position as Foreman or Manager of Stock or Dairy Farm, by experienced Farmer. Address Box 28, Great Village, N. S.

25 FANCY EASTER POST CARDS, Birthday, Lovers, Views, St. Patrick, etc., in gold and colors, 25 cents. Also 100 extra free. All postpaid. FARMER EMPORIUM, BEEBE, QUE.

GASOLINE ENGINE BARGAINS. 2 to 16 H. P., Farm, Shop and Boat use, second hand, also free catalogue. GUARANTEE MOTER CO. 74 Bay St. North, Hamilton, Ont.

LOCAL TREATMENT FOR WOMEN'S DISORDERS

The health we enjoy depends very largely upon how the blood circulates in our bodies; in other words, if we have perfect circulation we will have perfect health.

There is a constant wearing out of the tissues in every part of the body. The blood flowing through the veins carries off this waste or dead matter, while the blood coming from the heart through the arteries brings the fresh new living tissue, the essence of the food we have digested, to replace what has been carried off. This constant wearing out and expelling of the dead matter and the replacing of it with new matter, atom by atom, goes on day and night, until in about 7 years a complete change has been effected. Thus every man and woman has an entirely different body in every particle of it from what he or she had 7 years before.

It sometimes happens, however, from a variety of causes, that the blood becomes congested in certain portions of the body. This means that the blood vessels in these parts become weakened, and the circulation in that section of the body becomes sluggish and stagnant. The consequence is that the dead matter in that part of the body is only partially carried away, and that but little of the new, vital matter is introduced there to build up and strengthen the tissues and nerves.

This condition invariably exists in all cases of female disorders. The dead matter retained in the circulation, which should have been expelled, causes irritation and inflammation of the delicate memberane, and oppresses the nerve centres. This condition is the cause of the grievous physical and mental suffering which accompanies female troubles.

To obtain relief it is evident that the first thing to be done is to get rid of the dead matter which is being held in the circulation. If this dead matter is allowed to remain there a species of blood poisoning will result and nature will endeavor to get rid of it by forming ulcers, tumors, etc.

The above explanation will also show why **ORANGE LILY** is so successful in curing this condition. It is a local treatment, and is applied direct to the affected organs. Its curative elements are absorbed into the congested tissue, and from the very start the dead matter begins to be discharged. A feeling of immense relief, both mental and physical, accompanies it, and the improvement is constant and positive. This feature of the expelling of the dead matter is always present to a greater or less extent, and in some cases it is so marked as to be amazing. The case described in the following letter is not exceptional:

Dr. Cooney—I am thankful to Mrs. F. E. Currah, your Canadian representative, for my health restored by your wonderful remedy. I have suffered for 17 years, but not so bad until 3 years ago. Then I had a doctor, who told me I had a tumor, and could live no more than a year. If I went through an operation I would not live through it. A year later I sent for him again, and he gave me up to die. My husband then sent for another doctor, who performed an operation, and it did me much good. I doctored with him 3 or 4 months, but became so bad again that I thought I could live no longer, and I began to long to die. One day my husband came home and threw a slip of paper to me with Mrs. Currah's address and told me a lady had advised him to write to her for a treatment that would cure me. I said it was too late, that I would die anyway. I could not lift a teacup without hurting me. Then the first doctor told me I was worse than ever. However, my husband sent for **ORANGE LILY**, and the third treatment brought away one tumor. Others followed, until 7 tumors had been expelled, 3 large ones and 4 small ones. I know if it had not been for **ORANGE LILY** I would have died, for I could not live much longer. I would have thought it cheap at one hundred dollars for a month's treatment, instead of one dollar. It is worth its weight in gold.—MRS. GEO. LEWIS, Huntsville, Ont.

The above letter is published with Mrs. Lewis' permission. All letters received are treated as being sacredly confidential, but occasionally some patient feels so grateful for being cured that she is willing to make the matter known for the benefit and encouragement of her suffering sisters.

ORANGE LILY is a positive, scientific remedy for all disorders of the female functions. As explained above these troubles are of local origin, and require local treatment. It is just as sensible to take medicine internally for female troubles as it would be to take medicine internally for a bruise, a boil or an ulcerated tooth. In all these cases some dead matter is being retained, and the cure is effected by employing local methods for expelling the dead matter. **ORANGE LILY** has antiseptic, soothing and healing properties, and also tones up and invigorates blood vessels and nerves. I am so anxious that every suffering woman may satisfy herself, without cost to her, that **ORANGE LILY** will cure her, that I hereby make the following

FREE TRIAL OFFER

I will send, without charge, to every reader of this notice who suffers in any way from any of the troubles peculiar to women, if she will send me her address, enough of the **ORANGE LILY** treatment to last her ten days. In many cases this trial treatment is all that is necessary to effect a complete cure, and in every instance it will give very noticeable relief. If you are a sufferer, you owe it to yourself, to your family and to your friends to take advantage of this offer and get cured in the privacy of your home, without doctors' bills or expense of any kind. Address MRS. FRANCES E. CURRAH, Windsor, Ont.

SUNNY SIDE STOCK FARM.

The Ayrshire herd now headed by "Greenslack Great Fortune" (imported), his dam had a record of 12840 lbs. of milk 3.9 fat in 45 weeks. At present I am offering for sale in Ayrshires, one bull 18 months, one 12 months, two 5 months and two young calves. Females any age. In Guerneseys, one bull 12 months, one young heifer calf. In Chester White Swine, young sows 3 months old and am booking orders for March litters from two aged brood sows. Inspection invited. Intending purchasers met at I. C. R. Station.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

GLEN VIEW POULTRY YARDS.

Only ten birds left for sale.—Three cocks and three cockerels, Barred Plymouth Rocks; two S. C. Rhode Island Red cockerels ; one cock and one cockerel, S. C. Brown Leghorns. Nearly all these birds were prize winners at Amherst and Moncton, 1911-12.

HUGH McMONAGLE, - SUSSEX, N. B.

Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. LEA & CLARK, Victoria, P. E. I

The Seed Commissoner's Report.

We have recently received a copy of the report of the Seed Commissioner from January, 1905, to March, 1911. The work of this Branch is such that the results scarcely warrant the publication of an annual report, supplementary to the report of the Minister of Agriculture. In lieu of such report, it has been the practice of the Seed Branch to issue bulletins dealing with particular phases of the work.

The purpose of this report is partly to provide a record of the work done and partly to explain the meaning and the application of the new Seed Control Act. The Commissioner has endeavored to illustrate the relative qualities of the different grades of timothy, alsike, red clover and alfalfa seed and to describe noxious weeds and other useless or harmful plants.

We would strongly advise each and every one of our farmer readers to procure a copy. The Seed Commissioner, Department of Agriculture, Ottawa, will gladly forward you one without money and without price. Send for it to-day. It will be a valuable addition to your library.

The Sheep Industry Commissioner's Report.

We have received a copy of the Report of the Commissioners upon the Sheep Industry in Canada, Great Britain and United States. Our readers will remember that, in July 1910, Messrs. Dryden and Ritch were appointed, as a special Commission, to investigate the conditions affecting sheep raising in this and other countries. It is believed that the Report in which the Commissioners have embodied the results of their investigations is by far the most exhaustive treatise which has yet appeared in Canada, relative to the raising of sheep and the production of wool. In view of the indifferent attitude, with respect to the keeping of sheep, manifested by too many Canadian farmers, this Report appears at a very opportune time. The Commissioners, at the end of the Report, have made a number of recommendations the adoption of which would, in their opinion, lead to the encouragement and development of the whole industry.

We are pleased to announce that the Report is now available for distribution and that a copy may be obtained, by any interested party, upon addressing the Live Stock Commissioner, Department of Agriculture, Ottawa.

The Horse a Man's Companion.

No foot, no horse, is as true today as when the old aphorism first fell from the lips of man. Domestication of the ancient "companion of the wind," has caused him to be put to many uses, and the constant reproduction of hereditary defects has changed him into a very short lived piece of machinery, which is often out of repair.

A horse as a domestic animal is, of all the animal tribe the largest sharer with his master in his liability to accidents and dangers which are among the incidents of civilized life. While travelling he may pick up a nail from the road, or slip upon an icy street. No matter where this faithful animal is there is no hour when he is not in danger of incurring injuries which may demand the best skill to repair.

This is a good time to organize an agricultural club in your neighborhood.

The cow that is allowed to fall off in her milk flow is seldom made to regain it at a profit.

IT MAKES LIVE MEN OUT OF WRECKS

Many people would give all they possess to regain the health they have lost. Many have spent their last cent in its pursuit—and thrown their money away.

Such people are misled by custom and the well-meant advice of friends. They take every new drug under the sun and find them useless.

Yet here is a simple, natural remedy, Dr. McLaughlin's Electric Belt, that does what other things fail to do. It does not poison the system nor depress the spirits. On the contrary, it starts the life current anew and produces health. It invigorates the mind. Without knowing how, the patient jumps from despondency to health and ambition.

There is nothing wonderful in this change. It is all so natural. Think what the effect would be if you were suddenly deprived of all the electricity in your body. You could not live an instant. No mental or physical life could exist without Electricity. Naturally, when the amount is below normal, you are less vigorous, less ambitious.

Then is the time my Belt does great things for you. It recharges your nerves with life-giving currents. Soon strength and vitality are restored. You feel the old, stimulating glow of health. You now have the right amount of Electricity, and you feel "equal to anything."

What is my Belt? It is a body battery, made for the purpose of applying Electricity to the human system in the most scientific and effective way. It is made on an entirely different plan from the worthless devices known by "Electric Belt." Its current is of guaranteed strength and constancy. It is provided with a regulator. This enables you to change the current to suit varying needs. You wear it at night. Its soothing currents send you to sleep. You wake up refreshed and invigorated. Before long you feel like a different person—and you are different. Your friends tell you so.

The benefits of my Belt are being daily demonstrated by thousands of patients, and it is heartily endorsed by those who have been cured.

If you are sick or weak, and your doctor isn't helping you much, you ought to try my Belt. It's a grand remedy. All such troubles as Indigestion, Constipation, Torpid Liver, Tired Feeling, Weak Kidneys, Rheumatism, Neuralgia, Lame Back, Lumbago, Sciatica, Sleeplessness, Nervousness and Headaches are cured completely with Electricity applied with my Belt; it overcomes all signs of weakness or breakdown in men and women. My Belt not only cures the sick, but gives the well a greater zest in life.

If you haven't confidence in Electricity, let me treat you at my risk. I will give you the Belt on trial, without one cent of risk to yourself. Give me reasonable security, and I will take your case, and

WHEN YOU ARE CURED PAY ME

Hurt Back — Caused Partial Paralysis.

Box 497, Nelson, B.C.

Dear Sir, — I have much pleasure in telling you that I am much improved by using your Electric Belt. As you know, I got my back hurt, and it produced partial paralysis of the lower extremities. I have now used your Belt continuously every night for three months and have almost regained my usual strength. I can now lift one hundred pounds, whereas three months ago I could not lift twenty. You are at liberty to use this letter in any manner you wish. I am, sir,

Yours faithfully, Charles Smith.

Now Able to Win Races.

Little Current, Ont.

Dear Sir, — Your Belt has given me great satisfaction. I won a Marathon race to-day and never felt any trouble of being tired nor any more pains in the back. I never was known to be a good runner before. I thank you very much for your Belt as it is well worth a hundred dollars. I will advertise it whenever I can to let people know how good your treatment is.

Yours sincerely, Mike Lewis.

Cure of Chronic Constipation and Dyspepsia.

North Nation Mills, Que.

Dear Sir, — I write to let you know that I am highly pleased with the work your Belt has done for me. It has done what no medicine would do. For years I have had to take medicine every night for constipation, and now your Belt has completely cured that trouble, also dyspepsia. I cannot thank you too highly for what you have done for me. I am recommending your Belt to all troubled with similar ailments, and no doubt you will hear from some of them soon.

Yours truly, J. Allan.

Kidney Trouble and Weak Back.

Morrisdale, King's Co., N.B.

Dear Sir, — Just a few lines to let you know that I am a well man now, where before I was a sick one, thanks to your Belt. I think it is the best in America or in the world. You may publish this letter anywhere you want to, and I will be pleased to tell anyone of your Belt who may come or write to me. I remain,

Yours truly, Jas. A. Ross.

FREE BOOK.

If you cannot call and see me personally, you can write for my book. It will cost you nothing, and will tell you lots of things you ought to know. Send coupon for this beautifully illustrated 84-page Free Book to-day "Electricity is Life." I know best how to apply the remedy, and thousands of men owe their health and happiness to-day — their success in life — to DR. McLAUGHLIN'S ELECTRIC BELT.

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M. K McLAUGHLIN,
214 St. James St., Montreal, Can.

Gentlemen.—Please send me, prepaid, your Free Book.

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ADDRESS .....

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During 1911 we have placed all our Graduates in good paying positions and among the number was a young man from Kent County who got **A Good Position**

Mr. Oswald R. McAuley, of Main River, Kent County, attended this School five (5) months when he was selected and recommended, by THIS SCHOOL'S Employment Department, to fill the position as Assistant Agent and Operator, at Wynyard Station, Sask., on the Canadian Pacific Railway. The Grand Trunk Pacific will need a large number of Telegraph Operators, early next summer. Prepare this winter and remember, what we have done for him, WE can do for YOU. Our Winter Term begins Tuesday, Jan. 23rd, 1912. Up-to-date equipment. Residential School. Positions secured for Graduates. Write for Free Catalog, Rates and full particulars to

W. T. LITTLE, Principal, - - - - - Fredericton, N. B.

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are everything that plaster, wood and wall paper are not.

Metallic Ceilings are fireproof, absolutely.

Metallic Ceilings don't crack or crumble—don't get damp or mouldy—don't need repairs.

Metallic Ceilings are far-and-away the most economical building material you can put in a house.

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We will send free to every trapper who sends us furs, our book "The Trapper's Loyal Companion".

FURS Trappers, Hunters and Dealers in any kind of Raw Furs, cannot afford to dispose of their collections without first obtaining our quotations, which we cheerfully furnish upon request, we specialize in the following:—RIGHT PRICES. LIBERAL ASSORTMENT. A remittance forwarded same day goods received, express and mail charges on shipments paid by us, no shipment too large or too small. Canada's Largest Fur Operator "There's a Reason" your business and correspondence solicited.

John Hallam - Toronto

A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Here is a remedy that will cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all Dealers.

Judging Cows.

Judges and experts have realized the importance of ceratin points and have fixed a set scale for judging dairy cows.

Since the flow of milk depends primarily upon the number, activity and efficiency of the milk glands; and secondly, upon the flow of blood to the udder and the nutrients contained in the blood, it is clear that the stomach and udder deserve the importance attached to them; and since the nervous system is closely co-ordinate to the digestive system and directly controls to a considerable degree, the flow of blood to the udder, it also deserves attention.

Since the abdomen and udder are the chief manufacturing points, it is but natural that extreme development in these parts should be sought for, and inasmuch as meat carrying capacity and inclinations are not considered essential in highly specialized dairy cows these have been neglected. This has resulted in a general type, that has been found to be good in milk production.

There is no reason why a dairy cow must be narrow in front or wedge-shaped, but because of the extreme development of certain portions of the body and neglect of the other portions, such a wedge-shaped type has resulted, and is considered desirable by dairymen.

The refinement about the head and neck and the lightness of the fore-quarters indicates that the animal is not disposed to lay on flesh, but rather devotes her food to milk making.

A strong constitution is necessary, and this is secured in the dairy cow by a deep chest with good width, particularly on the floor of the chest rather than by great spring of rib. Thus, in the beef animal the strength of constitution is secured by a deeper chest, egg-shaped with end down.

As the supply of nutrients furnished through the blood to the mamary glands is governed by the efficiency of the digestive organs, a large barrel is very desirable, and is insured by long, well sprung ribs, set wide apart. The open jointedness of the black is merely an indication of the general openess of the skelton which, as it gives a large roomy body, large for weight, is considered desirable.

The broad loin accompanied by width of hind quarters and roomy barrel. The young animal is nourished before birth, by blood vessels passing through the navel, and if large, it is considered to indicate that the foetus was well nourished before birth and as an animal born strong and vigorous invariably makes a better animal than one born weak, there is some reason back of the demand for a large navel.

The width of hips, length and width of rump, and width between the pin bones are all indicative of a large roomy pelvic region, well adapted to sustain the udder and to the demands upon the female in giving birth to young.

Viewing the cow from behind and on the inside of the thighs, it will be noted that the hair is inclined to grow in an opposite direction from that on other parts of thebody. The portion so noted is known as the escutcheon, and its importance is due to the fact that it is to some extent indicative of flow of blood to the udder. It is believed that a well developed escutcheon is only found in connection with large arteries.

Knowing the structure of the milk secretion it is clear that a long udder containing a great number of glandular structures which make up milk glands, is favorable to a large secretion of milk; and this length of udder is secured by an high attachment behind and by an extension well forward on belly of the udder.

Inasmuch as there should be in the udder only glandular structures, connection tissue, blood vessels, nerves

Don't Dally with a Cold!

It's a dangerous visitor—show it the door. The quicker you get rid of it, the less likely it will be to return.

NA-DRU-CO Syrup of Linseed, Licorice and Chlorodyne

offers probably the quickest, most effective means of doing this. It promptly relieves that stuffed-up feeling, soothes the irritation that causes the cough, loosens the phlegm, promotes expectoration, and drives out the cold completely.

It contains nothing injurious—in fact, we'll gladly give your physician or druggist, on request, a full list of its ingredients.

In 25c. and 50c. bottles. 114

National Drug and Chemical Co. of Canada, Limited.

NA-DRU-CO N D & C Co TRADE MARK

FOR EVERY AILMENT THERE'S A NA-DRU-CO SPECIFIC BEARING THIS TRADE MARK. SEE THAT YOU GET IT.

Stammerers and Stutterers

are cured at the Arnott Institute, to stay cured. We show you why you stammered, and how to speak naturally, without any marking time with hands or feet or head. Our methods are scientific, sensible, and therefore successful. Write for information and proofs of success to 8

ARNOTT INSTITUTE
Berlin, Ont., Canada.

FREE

Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 58 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set, exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address,

THE DR. BURDICK MEDICINE CO., Dept. 109 Toronto, Ont.

Burdock Blood Bitters

CURES ALL

SKIN DISEASES

Any one troubled with any itching, burning, irritating skin disease can place full reliance on Burdock Blood Bitters to effect a cure, no matter what other remedies have failed.

It always builds up the health and strength on the foundation of pure, rich blood, and in consequence the cures it makes are of a permanent and lasting nature.

Mrs. Richard Coutine, White Head, Que., writes:—"I have been bothered with salt rheum on my hands for two years, and it itched so I did not know what to do. I tried three doctors and even went to Montreal to the hospital without getting any relief. I was advised to try Burdock Blood Bitters, so I got three bottles, and before I had the second used I found a big change; now to-day I am cured."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

LUMBERSOLE BOOTS

Our Lumbersole Boots are made of fine Grain Kip uppers, lined with thick brown felt about 1-4 inch thick, as the name suggests the soles are made of specially selected wood which resists the water, and keeps feet warm.

For Farmers, Drivers, Fishermen, Builders, Sailors and all outdoor workmen they are worth four times the price.

Send for Catalogue of bargains in Shoes and Clothing and Free Premium Lists.

C. B. PIDGEON, CORNER MAIN AND BRIDGE STREETS

ST. JOHN, - N. B.

FREE
Here is Your Chance to Obtain FREE a High-grade RING
Our Magnificent Genuine 14K Solid Gold Shell Rings are in the very latest solid gold patterns. We absolutely guarantee these beautiful rings to give satisfaction, and you will be surprised at their great beauty for the small amount of work you have to do to obtain them.
Just send us your name and address and we will send you postpaid 15 packages of our Marvel Bluing to sell at only 10c per package. We send a beautiful gold finished Turquoise Brooch to give to every customer who buys a package from you. When sold send us the money, only $1.50, and we will send you absolutely free, one of these beautiful gold shell rings. Address Dept. 125
MARVEL BLUING CO., Toronto, Ontario

When you want a reliable medicine for a cough or cold take Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all Dealers.

and such fibrous tissue as is necessary to sustain the udder, no fleshiness should be apparent; if present, it indicates the presence of an unnecessary amount of tissue and which can be of no use, which may interfere with the working of the milk-secreting glands.

The teats merely, serve to draw the milk from the udder, and the only necessary requirements are that they shall permit of the passage of a good stream of milk, and shall be of a size easily grasped by the hand. The milk veins discharge most of the blood which passes through the udder, and hence, are useful in determining the blood flow.

Large, long, tortuous milk veins, branching and entering the body by large milk wells almost invariably characterize heavy milkers.—G. L. McKay.

Canadian Pulpwood in the United States

In a Pulpwood Forest Products Bulletin shortly to be published by the Dominion Forestry Branch, statistics are given of the amount of pulpwood exported from Canada into the United States during 1910. Nine hundred and forty-three thousand cords of pulpwood (sixty percent of the total Canadian pulp-log cut) worth six million, two hundred and ten thousand dollars, were shipped across the border in a raw state, without undergoing any form of manufacture. This pulpwood export was cut from the various provinces in the following amounts and values: 779,000 cords worth $5,090,000 from the timber limits of Quebec; 90,000 cords worth $647,000 from New Brunswick and 74,000 cords worth $473,000 from Ontario. It is interesting to note to what extent provincial industry would have been increased if the pulpwood exported to the United States had been converted into woodpulp on Canadian soil. The seven hundred and seventy-nine thousand cords exported from Quebec would have supplied material for a year to fifty-six pulpmills of the average size operating in Quebec. In Ontario, five mills of the average size could have been kept running with the pulp logs exported from this province. The ninety thousand cords shipped from the ports of New Brunswick would have produced the most startling results if the amount had been domestically manufactured into pulp. The amount exported was sufficient to supply with wood twenty-four mills of the average size, with the result that five times the number of mills operating, would have been at work if Canadians in New Brunswick had been farseeing enough to manufacture their own raw products.

When Fire Breaks Out.

Before the flames that consumed a $2500 farmhouse had finished their costly work, a neighbor said to me, "I have one good fire extinguisher now and I'm going to get some more right away." And he will. A few disastrous fires in the same community show how inadequate is the fire protection and means of fighting a fire on the average farm. On every farm some preparation against a like calamity should be made.

I was at this fire in less than 15 minutes from time it was discovered, and I know that the building could have been saved had there been a good ladder and some pails to carry water to the blaze, but there were none to be had. As for ourselves, we have a supply of ladders always on hand, being interested along fruit growing lines, but the average farmer falls short when in need of a good, strong, long ladder. When it comes to fire protection, our city brethren have an advantage over us. Yet all of us could be better prepared for this unannounced visitor with mighty little expense to us.

Whatever ladder we may have should have its nook for holding it in place and in the dry. We have a shed midway between house and barns, where we keep a 12-foot and a 16-foot ladder, and it is well worth while to have them in the dry, as well as knowing where they are when wanted.

Still another thing. More than one-half of our farms have a supply water tank, located high enough to force a stream of water over the average building, but so few have any means of getting that water where wanted, as could be done by a hose; and that hose ought, by right, to be 30, 40 or 50 feet long. And say! could you put your hand on a pail if you wanted one for any reason whatever?

We also all know the value of fire chemicals, fire extinguishers, etc., and possibly one-fifth of the farmhouses are thus equipped. However, the loss in money is not all that a fire means; far too often the deeds or the farm home abstracts, receipts, certificates and so on are destroyed and these in a great many cases cannot be replaced. Two mighty safe and easy ways to protect such documents, of course, are available: one the safety deposit vault in the local bank, and the other a small, but fireproof safe of sufficient size to hold such papers of immeasurable value. To the farmer and his children, the vault can usually be rented for $5 or less a year, and a safe may be purchased at from $15 to $25 that will last almost forever. These may seem extravagant, but fires come unannounced usually, and every farmer that has lost such articles would gladly give three or four times the cost of a safe for the original documents.—R. E. Rogers in N. E. Homestead.

SPREADING THE GOOD NEWS

Prominent Ontario Man Recommends Gin Pills For The Kidneys

Found at last—a genuine cure for Kidney and Bladder Troubles. Mr. Bauer knows about it. Mr. Simpson knows about it. And they are telling all their friends and neighbors what Gin Pills did for them. Here is Mr. Bauer's letter. Study it.

DAVISVILLE, ONT.

"I had trouble with my Kidneys and Bladder so I got a sample of GIN PILLS and followed directions. I felt better after the first dose and I kept taking them for a month.

One day, Mr. Simpson of this town told me about the trouble he had with his kidneys, and I recommended him to try GIN PILLS, and gave him one to take. The next day, he bought some for himself, and both he and his wife have derived great benefit from them."

HERBERT H. BAUER.

Every man who has any Kidney Trouble or suffers with Rheumatism should do just as MR. BAUER did—take GIN PILLS—and cure himself, as MR. BAUER did.

You see, GIN PILLS do cure Kidney and Bladder Troubles. Gin Pills ease the pain in the back and stop those sharp, shooting pains. Gin Pills give strength to weak kidneys, soothe the irritated bladder and correct incontinence and suppression of urine. You don't have to take our word for all this, or even buy Gin Pills before trying them. Write for free sample—try them—see how good they are—and then buy the regular size boxes at your dealer's—50c, or six boxes for $2.50. Write for the free sample. National Drug and Chemical Co. of Canada Limited, Dept. M F Toronto.

A FRIEND IN NEED.

NATIONAL LAZY LIVER PILLS sweeten the stomach, help digestion, regulate the bowels and stir up the liver. 25c. a box. 114

1912 CONTEST

COUNT THE Xs AND Ts

$100.00

GIVEN AWAY

And many other prizes according to the Simple Conditions of the Contest (which will be sent).

This is a chance for clever persons to win Cash and other Prizes with a little effort. Count the Xs and Ts in the Square, and write the number of each that you count neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. Try at once.

SPEARMINT GUM & PREMIUM CO., Montreal, P.Q. Dept. 19a

"Best for Baby—best for you."
Baby's Own Soap
Made of specially purified and refined vegetables oils. It will not hurt the most delicate skin.
Refuse all substitutes.
Albert Soaps Limited
Mfrs.,
Montreal. D511
Baby's Own Soap

A SPEEDY CURE

Kentville, N. S., January 1st, 1910.

Messrs. C. Gates, Son & Co.,

Gentlemen,—This is to inform you that I have been a sufferer for the last fourteen years from kidney and stomach trouble, brought on by severe colds. Having been laid up every winter during that time. Last year I was laid up for seven months, so that I could not go out of the house. Dropsy set in, and my stomach swelled so that I was six inches larger than my usual size, had two doctors in attendance, but I grew worse and they were going to tap me—my friends despaired of my life. At this time I was recommended to use

Gates' Life of Man Bitters and Invigorating Syrup No. 1.

and in one week after commencing their use, my size was reduced two inches, and in four weeks was reduced to my usual size, so that I went to work in my mills, and have been able to continue it ever since. By continuing the use of your BITTERS and SYRUP, I hope to get a cure of the kidney and stomach trouble so far as it is possible, as it always helps me when I take it. You may make these truths known for the benefit of sufferers.

Yours very gratefully,
John W. Margeson.

Factors Affecting the Percentage of Fat in Cream.

One of the constant sources of friction between creameries and their patrons is the variations in the richness of cream. In order to arrive at a better knowledge of the factors affecting the percentage of fat in cream, experiments were conducted by O. F. Hunziker, of the Indiana station, and C. H. Eckles and H. S. Wayman, of the Missouri station.

In testing the effect of speed with five different makes of hand separators on richness of cream, the Missouri station found that with one exception, set for thin cream, the greater the speed of the machine the higher the percentage of fat in the cream, and this effect was much more marked when the cream screw was set for thick cream. Within ordinary limits the greater the speed the less the amount of fat remaining in the skim milk. This did not vary to any marked extent whether the separator was set for thin or thick cream. The rate of inflow was uniformly increased by the speed. The explanation given for this is not that the greater the speed of the separator the more milk will run through it in a given time, but that it is due to suction caused by the flow of air through the machine. The capacity of the separators did not vary to any extent whether set for thick or thin cream. By varying the speed of the separator the Indiana station found the cream to vary in fat content from 10 to 65.5 per cent. The work of both stations proved that, contrary to the general assumption, the higher the temperature of the milk separated the thinner the cream. This was found to be more marked when the separator was set for thick cream than for thin cream. The colder the milk separated the greater the loss of fat in the skim milk. That the percentage of fat in cream varies practically in direct proportion with the percentage of fat in the milk separated, or, in other words, that the ratio of cream to skim milk is not changed by the variation in the richness of the milk separated, was demonstrated by both stations. Prof. Hunziker found that by varying the rate of inflow the percentage of fat in cream varied from 23.5 to 70, the greater the rate of inflow the thinner the cream. This was substantiated by Profs. Eckles and Wayman, who found that even the height of milk in the feed can affected the fat content of the cream to some extent. Acidity had but little effect according to the Missouri station, except that with sour milk there is a tendency for the percentage of fat in the cream to be increased, especially when the cream screw is set for thick cream. A small obstruction in the skim-milk tube, due to dirt or some other foreign substance, does not as a rule make any marked change in the operation of the machine. If the cream opening is partly closed, however, the cream becomes smaller in quantity and richer. The accumulation of separator slime sometimes results in a larger quantity and thinner cream due to a partial obstruction of the skim-milk tube. To show definitely the effect of the amount of water used to flush the bowl on the richness of cream, Prof. Hunziker conducted experiments with the following results. When no water was used the average percentage of fat in the cream was 37.8; with water equal in amount to the capacity of the bowl, 37.3; with sufficient water to cause the cream discharged to appear watery, 35; and when twice the amount of water needed was used the percentage of fat in the cream was 33.5.

These experiments prove conclusively that, even though there is a wide variation from day to day in the cream tests, it does not necessarily follow that the creamery is dealing dishonestly with its patrons. They also show the necessity for uniformity in the care of milk on the farm, especially as regards separation, and in the sampling and testing of cream at the creameries.

If cream is tested correctly and if the tests of different lots of cream from the same patron vary, then these variations must be due to variations in the richness of the cream. It is impossible to procure cream of exactly the same richness from different skimmings from the gravity can. The richness of cream from a farm separator is primarily determined and regulated by the cream screw. The richer the milk the richer the cream if all conditions remain the same, for the ratio of skim milk to cream remains constant. During early summer months the milk is usually comparatively low in fat. Advance in lactation period and change from succulent to dry feed cause milk to become richer in fat. The first drawn milk is much poorer in fat than the strippings. The greater the amount of milk running into a separator of a definite capacity per hour the thinner will be the cream. The greater the speed of the separator the richer the cream. If the speed is too low a large amount of the fat is lost in the skim milk. Warm milk produces more and thinner cream than cold milk. The proper temperature to separate milk on the farm is from 90 to 95 degrees F. and immediately after it is drawn. The more water or skim milk used to flush the bowl of the separator the thinner will be the cream. The most satisfactory cream for the creamery is that which tests about 35 to 40 per cent fat.

If the tests are to be uniform and accurate, the cream must be in such condition, when sampled that a fair and representative sample can be taken. If, at the time of sampling, the cream is too thick, is tough, dry and leathery on the surface, is partly churned or curdy, it is very difficult to secure a fair sample, and tests of such cream are likely to be irregular as well as inaccurate.

In order that the cream may be in proper condition for sampling and testing upon delivery to creamery, the farm separator should be thoroughly cleaned and scalded after each separation; after separation, the cream should be immediately cooled and kept cool by setting in cold water; the cream should be stirred occasionally; the cream should be delivered in clean cans not less than twice per week in winter and three times per week in summer; in transit the cans should be covered with a dry blanket or jacket in winter, and with a wet blanket or jacket in summer; cans should be reasonably full of cream in transit to prevent churning.

"Bissell" rollers are a specialty

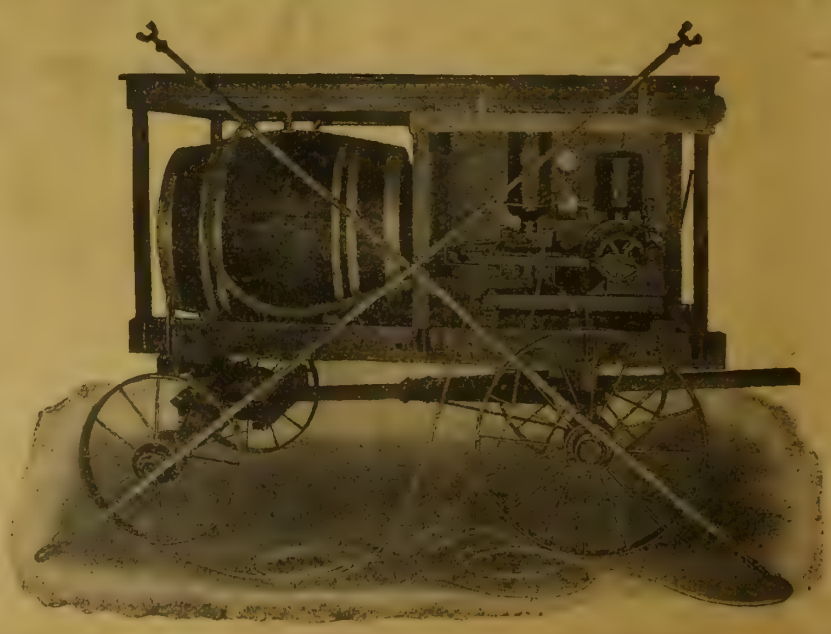
The "Bissell" Rollers are built by men who have made a life study of this work, and are SPECIALISTS IN THE BUSINESS. Search as you may, there are no such perfect Land Rollers on the Continent as the "Bissell." Make a note of these points and compare the "Bissell" Rollers with any other Land Roller in America. If the "Bissell" does not convince you that it is the best Roller, then don't buy, but you ought to know the facts, and it will do any person good to make the comparison. No need to send special travellers to sell "Bissell" Rollers. Practical farmers see the difference and prefer the "Bissell."

The 18 cold rolled anti-friction Bearings ½ inch thick with lathe cut ends, held in the one piece Malleable Iron Cage, is a single point placing the "Bissell" Roller away ahead.

Look for the name "Bissell" on every Roller. No other is genuine. Ask Dept. M for free catalogue. 51

T. E. BISSELL CO., ELORA, ONT.

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,
Limited
Port Williams, N. S.

Catalogue Sent on Application.

IF THE LIVER IS LAZY

STIR IT UP BY THE USE OF

MILBURN'S LAXA-LIVER PILLS.

They stimulate the sluggish liver, clean the coated tongue, sweeten the breath, clean away all waste and poisonous matter from the system, and prevent as well as cure all sickness arising from a disordered condition of the stomach, liver and bowels.

Mrs. Matthew Sullivan, Pine Ridge, N.B., writes:—"I had been troubled with liver complaint for a long time. I tried most everything I could think of, but none of them seemed to do me any good, but when I at last tried Milburn's Laxa-Liver Pills I soon began to get well again; thanks to The T. Milburn Co. I would not be without them if they cost twice as much."

Milburn's Laxa-Liver Pills are 25 cents per vial, or 5 vials for $1.00, for sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

PILES CURED at HOME by NEW Absorption Method.

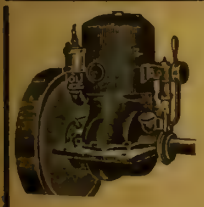
If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

TO HUNTERS AND TRAPPERS

Having large orders to fill and considering the advance in market prices, we are now paying from 20 per cent. to 25 per cent. above the quotations given in our November Price List for Raccoon, Skunk and Rats. Ship your furs to us and get the full benefit of the advance.

A. & E. PIERCE & CO.,
500 St. Paul St., Montreal
The Largest Raw Fur Dealers in Canada

MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.
Personal attention given to sales of utter, Eggs, Hogs, Beef, Poultry, Fruit. Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 1905.



Farm and Boat Engines

Pumping Water, Saw Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $135 Complete, 12 Sizes. Write for Catalogue.

GUARANTEE MOTOR CO. 70 Bay St., North Hamilton, Ont.

Persons troubled with partial paralysis are often very much benefited by massaging the affected parts thoroughly when applying Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all Dealers.

Lubricating Domestic Machines and Tools.

A wise and busy housewife will realise the importance of keeping a lubricant in a handy place, so that all kinds of household machinery, vehicles, and garden tools, shears and scissors that need oiling may be attended to at least once a month. It saves time and temper if a machine or implement works easily. Little oil is required for the bearings of small machines, such as wringers, washers, sewing-machines, perambulators, if the oil holes are kept free from stale oil and dust. It spells trouble in the laundry should this sticky mess get on linen or clothes of any kind—the stains are not easily got rid of. Door-hinges, locks, knobs, latches, window fastenings, roller-blind brackets, and a multitude of other home contrivances need cleaning and oiling. Window fastenings and doors that are difficult and noisy to move at nights, the wheels on which the sash lines run, will repay the few moments' attention given regularly. Although oil is necessary in most cases it may be made into a paste with blacklead for large machines, and is also a capital thing for the bicycle chain. Blacklead alone is an excellent substitute for the oil-can—in fact, it is the only lubricant that can be used with safety on the runners of drawers; it makes them glide out quite smoothly and without jarring. Any wooden article that has to be drawn out on a groove is easier to pull out if only a blacklead pencil is rubbed on the runners.—M. M.

Apply Potash Salts Early.

The application of potash salts does not always produce the anticipated good results, and a German professor has conducted trials to asceratin the causes of such failures. His experiments have led him to the conclusion that the potash in the fertiliser is absorbed by the plant more quickly than the acids with which the potash is combined in the fertiliser. The acids are left in the soil and make it sour. He found that the use of lime with kainit and other potash salts was very beneficial. Potash salts do best in soils plentifully supplied with lime, and should be applied—kainit especially—in the autumn so that the lime may have time during the winter to combine with the acids in the fertiliser, and carry them down out of the reach of the plants.

Sweetening the Meat Barrel.

Before butchering time, look well to your meat barrels, if you would have success with your winter supply of pickled meats. Here is one method of sweetening the barrels that is recommended by one who has tried it: After washing and scalding and rinsing until you think the barrel is perfectly sweet, fill the barrel half full of sweet, clean hay, pour boiling water on it, covering the barrel at once to keep in the steam. The water must be boiling, and there must be plenty of it. Let it stand covered until cold, and you will find it will not taint the meat.

It is a matter of note that can be easily verified, ride through the country as you will, whenever you pass a live stock farm, it looks better, has better improvements, the soil conditions are better and in every way appears more prosperous than the farms that are given over wholly to the production of grain and other products that are sold off the farm in the raw state.

A cow's pedigree is proof that she ought to be a good cow, not an absolute proof that she is one.

PEERLESS - PERFECTION

Real Fence Service Guaranteed

Peerless Wire Fence is built to give absolute fence satisfaction and makes good. Best quality wire galvanized to prevent rust and securely held at each intersection by the Peerless Lock combined with fence experience compose the Peerless Fence.

PEERLESS WIRE FENCE

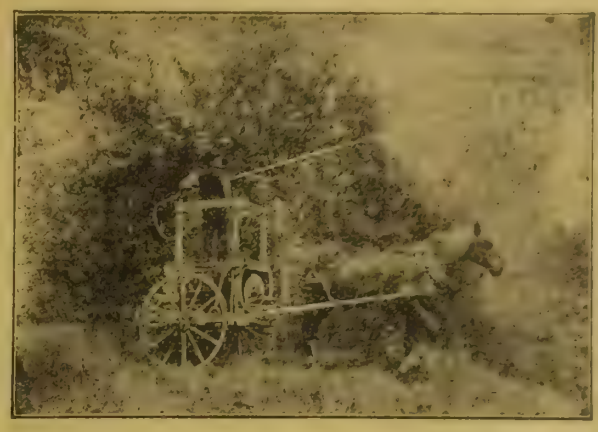
That is the kind you should use on your farm and save expense and worry.

Write for Our Catalog Today Peerless Poultry fencing and Farm Gates are unequaled. Try them.

Agencies almost everywhere. Agents wanted in unassigned territory.

Banwell Hoxie Wire Fence Co., Ltd., , Winnipeg, Man., Hamilton, Ont.

SPRAYING TREES



with the H. P. SPRAMOTOR means that the trees will be adequately protected. The Horse does not spray but directs the nozzle and that you will agree to do well. The operator can be operated by hand where preferred. Has 8 nozzles and 175 pounds pressure. The number of nozzles can be arranged to suit size of trees. No tree too large. The Spramotor is equally efficient for vineyard row crops or grain, and the nozzles will not clog.

Get our free treatise on crop diseases.

AGENTS WANTED.

W. C. HEARD, 1377 KING STREET, LONDON, CANADA

MAXWELL'S HIGH SPEED CHAMPION

See How the Whole Top Opens Up

The Wringer Board extends from the side, out of the way of the cover. This allows the entire top to open—makes it easy for you to put in and take out clothes—gives you plenty of room to work.

MAXWELL'S HIGH SPEED CHAMPION is the only washer with this big opening. It is also the only washer that can be worked with a Crank Handle at the side as well as with the Top Lever.

The Tub is RED CYPRESS—the wood that grows in water and is unaffected by water. Red Cypress will last a lifetime.

Maxwell's High Speed Champion is the best constructed, the easiest running, the handsomest finished washer on the market.

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The kind of Butter you make, depends much on the churn you use. If you want rich, delicious, quality butter, get a Maxwell's "Favourite" Churn.

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One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

FOR SALE—Clydesdale Stallion, Kings College, 8 years old, imported from Scotland in 1907. Apply to R. M. MENZIE, Midland, N. B.

FOR SALE—Pure Bred Clydesdale Stallion, rising 3 years, great grandson of "Baron's Pride." Apply to F. E. SHARP, Midland, Kings Co., N. B.

FOR SALE, going out of business. 25 registered Cotswold ewes, all served with a first class ram. Aso a few rams. Prices right. DONALD INNES, Tobique River, Victorir Co., N. B.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; good pay; work sent any distance, charges prepaid; send stamp for particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

FOR SALE—1 Holstein Bull, four years; 1 Holstein Bull Calf, seven months; 1 Holstein Bull Calf, eight months. Dams records 13000 pounds. No better stock. Write for prices.—D. R. NICHOLSON, Coxheath, N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

PRIZE POULTRY FOR SALE.—Buckeye cock, won 4 firsts including first A. O. V., Maritime Winter fare, $3.00. 3 Buckeye Cockerels, including prize winners $1.50 and $2.00. 4 Columbian Wyandotte Cockerels, good ones, $2.00 each. Write C. R. MACKAY, Box 239, Pictou, N. S.

FOR SALE AT ONCE

75 Barred Plymouth Rock, Cockerels and Pullets; two yearling pens, cockerel and pullet matings, also a few Light Brahmas.

Cockerels, $2.00 to $3.00 each; Pullets, $3.00 per pair.

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Kentville, N. S.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

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Forest Glen Stock Farm.

Pure Bred Ayrshire Cattle.

Nine Cows. four to eight years. Five Bull Calves, six to eighteen months. Seven Heifer Calves, eight months to two and a half years. Price and full particulars on application to

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Biggest Bargain in the Province

228 acres in rich hay and famous apple section; only 3-4 mile to P. O., near store, school and advantages; 50 acres machine-worked fields; brook-watered pasture for 30 head; 50 acres heavy wood and timber; 8-room painted house, nearly new, commodious barn, maple shade, good view; 300 bushels potatoes and 2 1-2 tons hay have been harvested per acre; $1900 is the remarkably low price, a tremendous sacrifice for quick sale.—E A. STROUT FRAM AGENCY, Wolfville, N. S.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all Dealers.

Winnipeg Show.

The Winnipeg Exhibition of 1911 was favoured by good weather and an attendance that gave receipts of $16,000 more than last year. Hackneys were few. Whitedale Swell, owned by Mr. Neil A. Love-Carman, was first. For best Mare Mr. J. A. Knott won with Lady Cleidere, a dark bay, almost black, a seven-year-old, and a good square mover. Magnetic by Caxton won for Brood Mare. A good pair of Yearling Fillies by Inverness Royalist were shown by Mr. Alex. Steele. Ponies were a good class, Shetland and Welsh being favourites. The Harness classes were better filled.

The Clydesdales were a great class. Sir Wm. Van Horne, from his East Selkirk farm, sent many winners. Lord Ardwell by Barron's Pride was his champion stallion, and his big roan mare Lady's Pride by Baron o' Buchlyvie was the champion mare, and with her mate, another roan by Sylvander, made the best heavy draught pair an the ground. The Shires were few, seven stallions and two mares. Six of the stallions were shown by Messrs. F. Schroeder and Son. They were by Quania, Harold, Grand Chief, Bodenham King, and Childwick Champion. Percherons, where competing for Heavy Draught classes, were beaten by the Clydesdales. For best five Heavy Horses, Any Breed, Age or Sex, Sir Wm. Van Horne won with Clydesdales against George Lane with Percherons; and in the Province contest for best ten, Manitoba with Clydesdales beat Alberta with Percherons.

Spraying Potatoes.

As the result of an experiment carried out by the Agricultural College at Wye and the University College at Reading, with the main object of deciding—

(1) Whether early or late spraying is the more profitable,

(2) Whether spraying twice is more profitable than spraying once,

The following conclusions have been arrived at:—

1. That spraying late in the season is more profitable than that which is carried out at an earlier date.

2. That spraying once has given better financial results than spraying twice.

3. That Scotch seed potatoes have given better results as regards yield and disease resisting powers than Irish seed of the same variety.

Flues Should be Kept Cleaned Out.

In most cases where we read of a house being burned down in the country "a defective flue" or "a burned-out stovepipe" is given for the cause of the fire, and if the truth were known in many instances the collection of soot in the smoke passage is the direct cause. Sometimes this catches fire and so heats the pipe or flue that it sets fire to the surrounding shingles of the roof or leaks through some small aperture in the pipe or flue. At other times it burns so intensely that the flames leap out at the top of the chimney, the sparks falling on the roof and setting fire to the building.

Most of these costly accidents could be easily avoided by keeping the flues and pipes well cleaned out, especially during that part of the year in which so much fire is needed. Some set the soot on fire and watch it to prevent its setting the house on fire, but this method is too dangerous, as the wind is liable to rise or a spark be overlooked on the shingles. As winter approaches all pipes should be taken down, unjointed and thoroughly cleaned out, a small brush on the end of a light stick serving the purpose very well. Great care should be taken when putting the pipe back up, that every joint is so put together that not the slightest spark can creep through.

In cleaning out chimneys the best method is that of securing a small rope or strong cord, twice the length of the flue, and tying a piece of cloth in the middle of it. This cloth should be of such a size that it will brush against the sides of the flue when drawn through the smoke passage. Arrange a large box or a tub just under the stovepipe hole in the ground floor room to catch the soot. One person should be situated at the top of the flue on the roof, another in the room containing the stovepipe hole. Drop one end of the rope from the top of the chimney, letting the person below secure it and pull the rag down the smoke passage. This will loosen and brush down the soot. The operator at the chimney's top then may draw the cloth back up the passage, which further loosens the soot, when the person in the lower room again draws it down the chimney, continuing thus till it is brushed out clean. The cavity just below the point where the stovepipe enters the chimney also must be kept well cleaned out; if it is not it will be but a very short time till the accumulation of soot in it will begin to pile up and roll back down the pipe, blocking the draught and causing the stove to smoke and not draw as it should.—M. A. Coverdell.

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(It is on view any business day from 9 to 5 at our factory.)

2nd Prize	$25.00 In Cash
3rd Prize	15.00 In Cash
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5th to 9th, 5 Prizes of $5 each	25.00 In Cash
and 25 prizes of of $1.00 each,	25.00 In Cash
TOTAL CASH PRIZES	$100.00

CONDITIONS

1. This contest is absolutely free. No one is asked to spend a cent to enter.
2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in this contest are awarded according to handwriting and general neatness. Be neat and you may win a good prize.
5. Judging will be done by three gentlemen having absolutely no connection with this firm. Their decision is to be acceptd as final.
6. There is a simple condition to be fulfilled which we ask of all contestants. As soon as your answeris received we will write advising you if it is correct and telling you of this condition.

THE PUZZLE

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The jumbled letters given above represent the names of 4 well-known Canadian cities. To help you solve them we have underlined the first letter in each name. The first is Winnipeg, now guess the rest and send us in your solution of all four name in your very neatest and best handwriting.

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

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Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Boyd A. Wetmore, Harvey, Albert Co., N. B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

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Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

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MEADOW BROOK STOCK FARM
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Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

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Superintendent.

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FOR SALE—4 Bulls and some choice Heifers with calf. Colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best dairy herds in the country. Inspection and enquiry solicited. Address W. T. WOOD,
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FOR SALE.

Columbian Wyandotte, cock and hen, both prize winners, the pair $5.00. S. C. White Leghorn, cock and hen, both winners, $3.00.

200 egg, Peerless Incubator used two hatches, too large for us, will sell cheap.

120 egg, Chatham Incubator, good hatcher, $10.00.

ORCHARD HILL FARM,
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Plants that Grow.

Strawberries, Raspberries and Blackberries in many varieties. Apple. Pear, Plum, Cherry and all Nursery Stock.

Prices Low. Quality Best.

Also Bees and Bee-keepers' Supplies. Price List Free.

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Young Bulls for sale by the imported bulls, Pogis 40th of Hood Farm and Foxhall's St. John O'Dreamwold Champion bull at Halifax and Chatham also headed 1st prize herd on the circuit. JOSSELYN & YOUNG
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I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
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Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
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For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 1 Cockerel and 2 Pullets. $4.00 per Trio.

S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 K. C. R. I. Red Cockerels. $2.00 each.

These must be sold to make room for Breeding Pens.

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Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

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FOR SALE!

We are offering at a very low figure the Holstein Bull (Victor of Fairmead) rising four years old, weight over 1800, Sire Jacob Van Voran, (twice Grand Champion, Charlottetown, over all Dairy Breeds), Dam Beauty of Fairmead, a Show Cow. "Official" record made five days after calving, 455 lbs. 14 oz. milk and 171.2 lbs. of butter in seven days—gave 12000 lbs. of milk this year on ordinary feed.

This bull won 2nd in class of five at Charlottetown this fall, and is an exceptionally fine animal in every way. Write for particulars to

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We are now preparing copy for Farm catalogue No 3. If you wish to sell this is your opportunity. Listing will cost you nothing. Correspondence invited.

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Cocks, hens, cockerels, and pullets of high quality for sale. Look up our winnings at Fredericton and Chatham. For prices address

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Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 4bs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

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Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.

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Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

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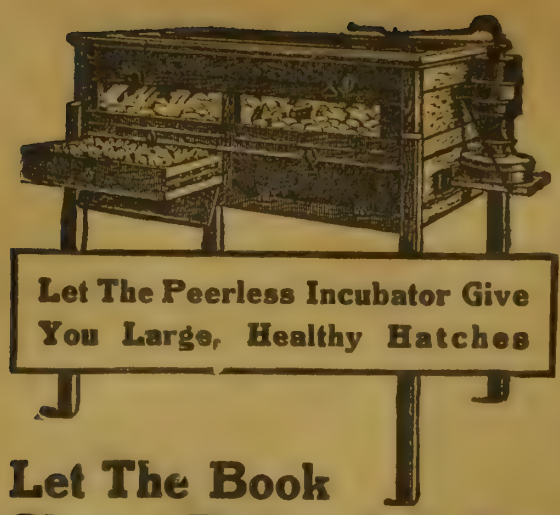

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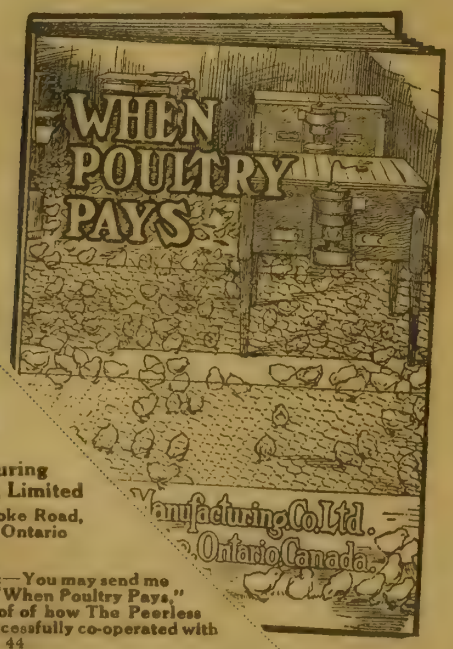

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YOU can do it—can do just what 20,846 other farmers and poultrymen have done and are doing in Canada to-day. You can adopt The Peerless Way, take the Peerless Incubator and Brooder and with the experience that we have spent years in acquiring and which we offer you freely, double or treble your poultry-profits. Per head of population, the United States produces three dollars of poultry products to every dollar's worth produced in Canada. That means Canada should produce $75,000,000 worth instead of $25,000,000 worth. Canada is an under-supplied poultry market with rising prices—for example, seven years has seen the price of eggs alone just doubled. We have been so blinded with big things in Canada, that we have overlooked how really immense some of the smaller things are. The Peerless Way affords a real way to increase poultry-profits.

Let The Peerless Way Teach You Exactly What Profitable Poultrying Really Means

THE profits in any enterprise don't come from the amount of capital invested; profits come from knowledge of what to do—and, even more important—what not to do. As operators of the Poultry Yards of Canada, Limited, the largest and most successful poultry farm in the Dominion, we are prepared to teach you how to make money in poultry. You can either come to Pembroke and take a course at our poultry farm here by paying a small fee for the course—or we will teach you through the mail free all about the methods we have made so successful.

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OVER half the failures in poultrying in Canada are due to improper methods. Incubators, brooders, poultry-houses, etc., built for warm climates, never have and never will give, in the cold winters of the Dominion, the full possible results. The Peerless Way is the only system of poultry raising that gives recognition to this important fact. The Peerless Incubator and Brooder has been specially designed and built for Canadian use and the blue-prints and working-drawings furnished for the erection of poultry houses, are made from houses that have actually been used and proven successful on our own poultry farm at Pembroke.

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Published Twice-a-month in the Interests of the Farmers Provinces of Canada.

Vol. 17. ST. JOHN, N. B., FEBRUAR No. 9

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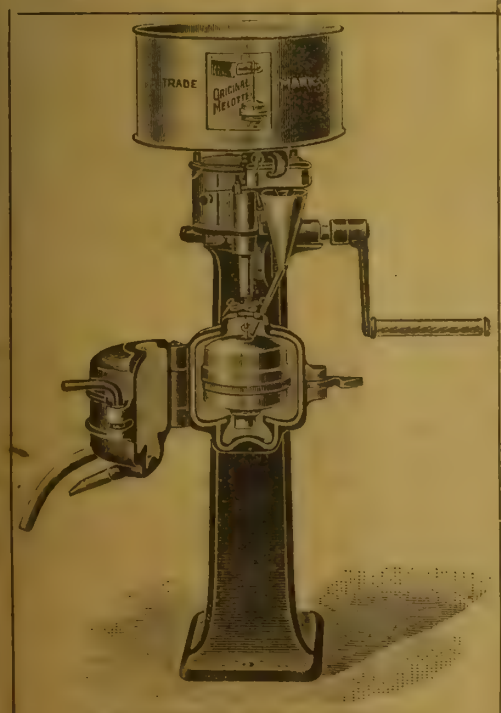
CREAM SEPARATOR ever constructed



Cap. 280-720 lbs. per hour

The "Melotte" pays its original cost within 12 months from date of purchase in EXTRA CREAM alone and there is NO COST for repairs.

The "Melotte" skims more milk with LESS POWER in LESS TIME, and, under all conditions MORE EFFECTIVELY than other Cream Separators.

"MELOTTES" are ALWAYS READY to separate. Ask your neighbor to prove this statement.

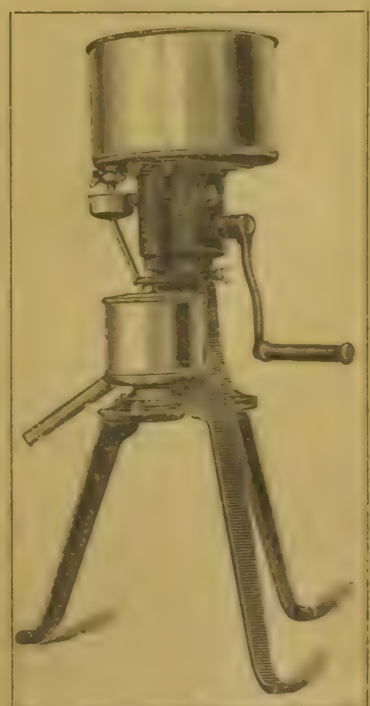
If you want a Cream Separator, TRY A MELOTTE, then you'll buy it and be a SATISFIED USER.

It's a Time-Saver, Money-Earner, Satisfaction-Giver, all the year round

MELOTTES are all GUARANTEED to give entire satisfaction, and every machine can be operated before being purchased when in doubt.

Write for New Recommendation Booklet which is All Truth

Address "Sales Manager"

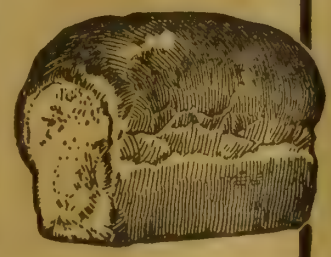


Cap.400-1300 lbs.per hour

R. A. LISTER & COMPANY, LIMITED,

82 Water St., ST. JOHN, N. B., or 62 Stewart St., TORONTO

You will be proud of the bread you'll make with PURITY FLOUR



AFTER seeing a batch of big, golden-crusted, snowy-white loaves, that you have baked from PURITY FLOUR, you will, indeed, be proud of your cooking-ability—and proud of your wisdom in deciding to pay the little extra it costs to procure such high-class flour. You will admit, too, that we are justified in the pride we take in milling this superb flour.

PURITY FLOUR

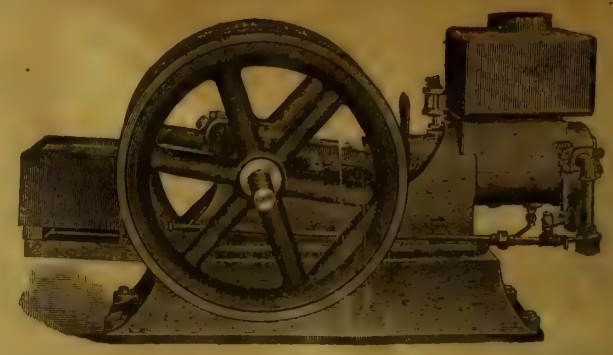
"More bread and better bread"

PURITY FLOUR is milled exclusively from the best Western hard wheat—the world's finest. More than that, PURITY FLOUR consists *entirely of the high-grade portions of the wheat.* The low-grade portions are separated and excluded during the PURITY process of milling. Such high-class flour, of course, expands more in the baking. It makes "*more bread and better bread.*"

It makes lighter, flakier pastry, too, if you just take the precaution to add *more* shortening. On account of its unusual strength PURITY FLOUR, for best results, requires more shortening than ordinary flour.

Progressive dealers, everywhere, sell PURITY FLOUR and take pride in recommending it.

Add PURITY FLOUR to your grocery list right now. 106



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof. Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Make the Wind Work For You.

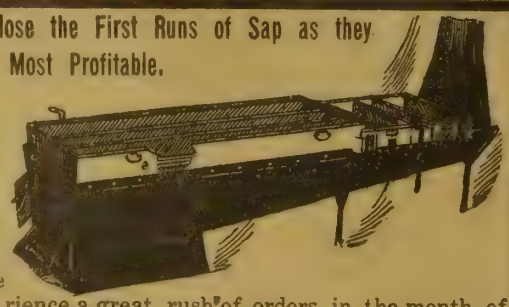
You get all the power you need without cost when you have a

Canadian Airmotor.

The more you know about wind mills the more you realize the superiority of the Canadian Airmotor. Our free book tells WHY it is better than ANY other. Write for it.

Ontario Wind Engine & Pump Co., Ltd.
Winnipeg. TORONTO. Calgary.

Maple Sprup Makers do not lose the First Runs of Sap as they are the Most Profitable.



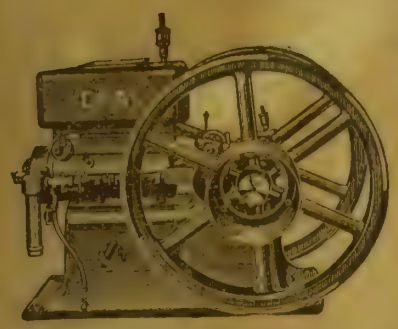
As we make 22 different sizes of Evaporators, and they are both made right and left handed, it is impossible for us to carry a complete line of all sizes in stock, so orders are filled in rotation as received. If your order comes in first, you will get your machine first. Each season we experience a great rush of orders in the month of March. Don't put off placing your order until that time. Write us to-day for our free booklet giving you all information in regard to Sugar and Syrup making

The GRIMM MFG. CO., Limited, 58 Wellington St., MONTREAL, Que.

If Your Advertisement was in this space just for one issue it would be read by over 50,000 Farmers.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

WEAR TAYLOR'S

Anti-Rheumatic Shoe For Men and Women

And get Rid of Your Rheumatism.

MADE BY

The Robert Taylor Co. Limited

HALIFAX, Nova Scotia

Why Asepto Products Sell

Because every article carries with it a Premium Coupon.

Not the old time worn premium that was given with a pound of tea.
The Premiums we give will satisfy the most exacting buyer.
We have many, many beautiful and valuable articles to give you.

In fact we can help you to furnish your home.
Remember this, you pay less for superior products than for other makes.
Here are some of the articles that carry Asepto Soap Coupons.

Asepto Soaps

Asepto Soap
Asepto Soap Powder
Asepto Woollen Soap
Asepto Carbolic Soap
Asepto Hand Cleaner
Asepto Potash or Lye
Asepto Ironing Wax
Asepto Bluing
Asepto Gloss Starch
Asepto Scouring Soap
Asepto Black Harness Soap
Naptho Soap
Venus Floating Soap, toilet
Scott's Scouring Powder

Specialties

Bay Rum
Bees Honey
Turpentine
Salts
Talcum Powder
Banner Cocoa
Senna
Household Ammonia
Sulphur
Banner Sweet Chocolate
Banner Bitter Chocolate
Banner Soda or Saleratus

Ebony Shoe Polishes

Ebony Lustre.....$0.25
Success Lustre.....10
Ebony Combination in Black, Tan or Oxblood, 19c. and 25c, sizes
White Canvas Polish
Ebony Paste Polish
Little Coon Stove Polish

Oils

Banner Axle Oil
Camphorated Oil
Cod Liver Oil
Heavy Machine Oil
Oil of Tar
Fish Oil
Carbolated Oil
Castor Oil
Harness Oil
Sweet Oil
Neatsfoot Oil
Olive Oil
Sewing Machine Oil

Veterinary Dept.

Pendleton's Colic Cure
" Condition Powders
" Gall Cure
" Hoof Grower
" Horse Liniment

Banner Spices

Cream Tartar
Ground Cloves
Whole Cloves
Allspice
Nutmegs
Mustard
Ginger
Pepper
Cinnamon
Mixed Spice
Cassia

Banner Fruit Syrups

Strawberry
Lemon
Orange
Raspberry
Pineapple
Cherry
Lime Juice

Banner Extracts

Lemon
Peppermint
Strawberry
Wintergreen
Vanilla
Pineapple
Almond
Cinnamon
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Patent Medicines

Beef Wine and Iron
Carbolic Salve
Corn Cure
Cure-a-Cold Tablets
Dr. Eric's Dyspepsia Tablets
Herner's Dysppesia Cure
Emulsion Cod Liver Oil
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Pansy Healing Cream
Pendleton's Curative Bitter
Pendleton's Panacea
Scott's Quinine Pills
Dr. Scott's White Liniment
Dr. Scott's Pills
Dr. Scott's Honey Balm
Scott's Worm Syrup
White Pine and Tar
Scott's Witchazel Cream
Scott's Pure Extract Witchazel
Friar's Balsam
Glycerine
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Carbolic Acid
Scott's T. A. Gum

SEND FOR PREMIUM BOOK

ASEPTO SOAPS, Limited, ST. JOHN, N. B.

DE LAVAL
CREAM SEPARATOR

NEW AUTOMATIC OILING

The most important Cream Separator improvement since the introduction of the present type of De Laval machines.

The new automatic oiling De Laval Cream Separators are now being supplied in all sizes, and this improvement constitutes another great step forward in cream separator construction — the one thing possible in betterment of the previous De Laval machines of the present type.

The new system of De Laval automatic oiling is distinctively different from any other splash or spray system in that there is a constant regulated feed of fresh oil and discharge of used oil. Other splash systems use the same oil over and over, until it soon does more harm than good.

In the new automatically oiled De Laval machines all gears, shafts and bearings practically float in a mist-like spray of oil and literally never touch each other during their operation.

De Laval agents will be glad to exhibit the new machines and demonstrate the working of the new automatic oiling system, which more than ever enhances De Laval superiority in every feature of cream separator practicability.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.

Farmers Ought to Know

That

MOLASSINE MEAL

Is the only Stock Food Containing Molasses that can be fed freely to horses, cattle, sheep and pigs without fear of injury.

IT IS NOT A MEDICINE, REMEMBER, BUT A PERFECT FOOD made from an English moss, to which has been added the STRONGEST and BEST that the VEGETABLE KINGDOM HAS TO GIVE for producing in cattle more and better beef and larger quantities of richer, creamier milk. Fed to sheep, it makes better mutton and a higher grade of wool, while in hogs, it ensures choicer pork and more of it. Horses fed on MOLASSINE MEAL are stronger, healthier, stand more hard work and their coats are always fine, soft and glossy.

IT IS CHEAPER to feed your live stock on MOLASSINE MEAL, because THEY BRING THE BEST PRICES, and are READY FOR MARKET SOONER.

We Stand Behind Every Claim with Living Proofs

The L. C. Prime Co., Ltd.,

Sales Agents
St. John, N.B.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, FEBRUARY 13, 1912. Number 9.

HORSE BREEDING LEGISLATION.

Shall We Label Our Stallions?

An Address by Prof. M. Cumming Before the Recent Nova Scotia Farmers' Association at Yarmouth, N. S.

A Prize Winning Clydesdale Stallion

Showing Quality of Bone and "Feather" and Sloping Pasterms Typical of the Scotch Breed of Draft Horses.

I DOUBT if there is a single person in Nova Scotia who is satisfied with the present status of horse breeding in the province. Those who have money to buy good horses, cannot get them and those who are producing and selling horses, realize that they could make much greater profits if they could only breed the right sort. What can be done to improve the present state of affairs ?

Unquestionably, there is more private enterprise directed towards horse improvement in this province than ever before. Besides, the Government has accomplished a good deal by importing high class stallions and mares, which have been distributed through the province, as well as by maintaining a first-class stud at the Agricultural College, Truro. Can anything more be done ?

Whatever is done must be done by either private enterprise or the State. Moreover, everyone agrees that, no matter whether the state interferes or not, private enterprise must be relied upon if great results are to be achieved. It may be, however, that just as, in the control of society, the State passes laws which make it necessary for everyone to live up to a certain legal standard, so, in the realm of horse breeding, the state should pass laws to compel each individual to do that which is in the highest interest of the horse breeders as a whole. It is in this connection that many countries and provinces and states have passed Legislation aiming at the compelling of all horse raisers to breed to approved pure bred sires. Should any such Legislation be passed in Nova Scotia ?

A Grade Hambletonian Stallion.

Shown at his home and hitched back of the cart in which he "Travelled for Service," is 13.3 hands in height and weighs 650 pounds. The owner says "Billy is not for sale at any price"

There are those, who would unhesitatingly answer the question in the affirmative and there are those who would, with equal promptness, say No ! The latter would say : You can educate us, you can show us how to feed and care for our horses, you can so demonstrate the value of the pure bred sires that we cannot fail to be impressed with the lesson ; but you have no right to compell us to follow your example. If we are determined to produce ordinary horses or even bad horses, it is none of your business. This is a free country and we will do our own will.

Those who favor remedial Legislation say : The prosperity of the country, and so the good of the people as a whole, demands a better class of horses ; the mass of the people will not improve their horses unless they are practically compelled to ; besides, the State owes it to protect the interests of those who have invested their money in high class stallions. This latter point may require elucidation.

A private citizen, actuated partly by personal and partly by altruistic motives, invests his money in a high class pure bred stallion, calculated to improve the stock of the country. In order to reimburse himself, he has to charge a higher stud fee than ordinarily prevails. But he is able to say to his clients : The stock from this horse will generally be so much better than from those cheaper horses that you will be paid back many times for your small extra fee. The best breeders of the country appreciate his enterprise and patronize him. But the majority (we have to say it) will consider the little extra present outlay and will patronize the cheaper horse. The result is that the owner of the pure bred horse does not get enough patronage to pay him for his investment and unless he is a very keen horseman and can afford to lose money, may cease from his efforts to improve the stock of his country. And more follows for, if this horse is a good sire, colts of his, the progeny of grade mares, will succeed him in the country and his pure blood will become diluted until it loses almost all its impressiveness. Then everybody suffers. Those, who want good horses, cannot get them and those, who need remunerative prices for the horses they raise, cannot get them. The stock is too inferior. We can think of instance after instance where such has been the history of the efforts that have been made by private citizens to improve the stock of the country.

Three-Year-Old Percheon Stallion "Shoking".

Winner of Breed Championship at Wisconsin State Fair.

Now I realize that there may be readers of this article who will seek to off-set the very essence of the argument by stating that grade sires are just as good and oft times better than pure bred sires. By way of anticipation of any such criticism, let me only remind such readers that in those countries of the world where horse breeding is carried on extensively on a paying basis, the pure bred sires is "King". Consider, if you will Kentucky in the United States. LaPerche in France, the Clydesdale, Shire, and Thorobred breeding countries of England and Scotland, in fact all those countries of the world where horses of uniform excellence are bred. No other argument is required. The facts of

An Unsound Stallion "Retired from Service."

Note Ringbone on Left Hind Pastern

An Unsound Stallion "Retired from Service."

Note [illegible]

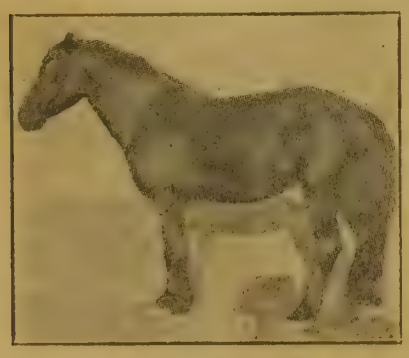
An Unsound Stallion.
Note crooked, unsound hock joint.

history, past and current, point in no uncertain way to the paramount importance of the pure-bred sire, free from hereditary unsoundness.

We have, thus, briefly indicated the problem and will proceed to discuss Legislation. Let it be understood, however, that we are not, at this stage, pretending to advise the Government to Legislate. Rather, we aim to provoke discussion and perhaps interest people in the matter. For, no matter what Legislation the Government may pass, if there is not public sentiment behind it, it cannot be made effective. Do the people of Nova Scotia want such Legislation passed in the interests of horse improvement? Or, do they believe that the end can and will be accomplished by other means—education for example. What think you horse breeders of Nova Scotia?

In considering the problem, it will assist to learn what is being done in other countries of the world. In France, in addition to establishing studs, the Government carries on a system of public Veterinary Inspection. Government Veterinarians examine stallions for unsoundness and classify them according to merit into different classes. If the horses prove unsound they are excluded from public service. If they are up to a certain standard they are designated as "Subsidized" and a cash bonus, ranging from $60 to $100 per year is paid the owner for keeping them in the country available for public service. Horses of not quite so good grade are designated "Authorized," and the owners are given a card which is a Government recommendation of the sires to farmers. A third class is designated "Approved," of which there are but few. They are permitted to be in service, but neither bonus nor special certificate is given to them. Since 1885, the Government has excluded from public service all stallions not coming within these classes. Somewhat similar Government control exists in several other European countries.

In America a large number of the States of the Union have passed laws with a view to controlling the stallions of the country and in Canada, similar legislation is enforced in Manitoba, Saskatchewan and Alberta. The most complete system of Legislation and that from which other States and Provinces in America are more or less patterning their systems of Legislation, exists in the State of Wisconsin. As the Wisconsin Legislation is considered one of the standard systems of America, we herewith submit it too. For the benefit however, of those who do not care to read the full law, we preface a brief abstract of it.



A Mistake.
A certain Stallion owners idea of the qualities and characteristics entitling a grade Shire to be returned and used for public service, note that the characteristic feather of the Shire breed is missing from this horse's legs.

ABSTRACT OF THE WISCONSIN STALLION LAW.

No person shall offer for public service any stallion unless his name is enrolled by the Department of Horse Breeding, of the College of Agriculture, University of Wisconsin. This certificate of enrollment must be prominently printed in every bill or poster used for advertising such horse. Such certificates of enrollment make provision of enrolling stallions in four classes: 1,—Pure-Bred; 2,—Grade; 3,—Cross-Bred; 4,—Non-standard. In accordance with this law a man advertising, for example, a grade stallion would have to put, as the very first words, on his poster, the words, in large type—"The Grade Stallion; etc."

In order to obtain such license, the owner must either swear or obtain a Veterinary certificate that his horse is free from hereditary unsoundness. The presence of such unsoundness disqualifies him for public service.

Following is the law in full:

Unsound Stallion.
Unsound from Side-Bones said to be caused by "wire cuts."

THE WISCONSIN STALLION LAW WITH AMENDMENTS AND ADDITIONS.

"Original Act, approved April 22, 1905, Chap. 116, Laws of 1905; Amendment approved June 27, 1907, Chap-437, Laws of 1907; Amendment, approved June 9, 1909, Chap. 317, Laws of 1909.

Section 1494-31. No person, firm or company shall use or offer for use for public service in this state any stallion or jack unless and until he shall have caused the name, description and pedigree of such stallion or jack to be enrolled by the department of horse breeding, of the college of agriculture, University of Wisconsin, and shall have procured a certificate of such enrollment from said department and shall have recorded the same in the office of the register of deeds of the county in which such stallion or jack is to be used for public service.

Section 1494-32. 1. In order to obtain the license certificate herein provided for, the owner of each stallion or jack shall make oath before a notary public or any officer duly authorized to administer oaths that such stallion or jack is, to the best of his knowledge, free from hereditary, contagious or transmissible unsoundness or disease, or in lieu thereof, may file a certificate of soundness, signed by a duly qualified veterinarian, who shall be a regular graduate of a recognized veterinary college, or by a registered veterinarian who shows proof that he was in practice in this state for a period of five years prior to the year 1887, and shall make oath to said certificate before a notary public, or an officer duly authorized to administer oaths, and shall forward this affidavit or veterinarian's certificate, together with the stud book certificate or registry of the pedigree of the said stallion or jack and other necessary papers relating to his breeding and ownership to the department of horse breeding of the college of agriculture.

2. The presence of any one of the following named diseases shall disqualify a stallion or jack for public service:

Cataract; amaurosis (glass eye); periodic ophthalmia (moon blindness).

Laryngeal hemiplegia (roaring or whistling).

Pulmonary emphysema (heaves, broken wind).

Chorea (St. Vitus' dance, crampiness, shivering, string-halt.

Bone spavin; ringbone; sidebone; navicular disease.

Bog spavin; burb, with curby formation of hock.

Glanders, farcy; maladie du coit; urethral gleet; mange; melanosis; and the department of horse breeding is hereby authorized to refuse its certificate of enrollment to any stallion or jack affected with any one of the diseases hereby specified and to revoke the previously issued enrollment certificate of any stallion or jack found on investigation by the department to be so affected.

Unsound Hock Joint.
This stallion was patronized last seas on.

Section 1494—32m. When a complaint is made to the department of horse breeding that a stallion or jack is unsound and, an investigation and examination is by the department deemed necessary, such examination shall be made by the graduate veterinarian in charge of the department, or his accredited graduate veterinary deputy; but the owner of the stallion or jack shall have the right to select some recognized graduate veterinarian to act with the veterinarian representing the department, and the said recognized graduate veterinarian, on receipt of such notice, shall so act jointly with the veterinarian representing the department, and in case these two shall fail to agree they shall appoint a third graduate veterinarian to act as referee, and his decision shall be final.

Section 1494—33. The officers of the department of horse breeding of the said college of agriculture, whose duty it shall be to examine and pass upon the merits of each pedigree submitted, shall use as their standard of action the stud books and signatures of the duly authorized officers or the various horse or jack pedigree registry associations, societies or companies recognized by the department of agriculture, Washington, D. C., and shall accept as pure-bred and entitled to a license certificate as such, each stallion or jack for which a pedigree registry certificate is furnished bearing the signature of the duly authorized officers of a government recognized and approved stud book.

A Grade Stallion.
Note lack of proportion and symmetry.

Section 1494—34. The owner ol any stallion or jack used for public service in this state, shall post and keep affixed during the entire breeding seasons, copies of the license certificate of such stallion or jack, issued under the provisions of the next succeeding section, in a conspicuous place both within and upon the outside of every stable and building where the stallion or jack is used for public service at his home or elsewhere.

Section 1494—35. The license certificate issued for a stallion or jack whose sire and dam are pure breeding and the pedigree of which is registered in a stud book recognized by the government department of agriculture, shall be in the following form:

University of Wisconsin,
College of Agriculture,
Department of Horse Breeding.

CERTIFICATE OF PURE BRED STALLION OR JACK.

No .....

The pedigree of the stallion or jack (name .....
Owned by .....
Described as follows:
(Color) .....(Breed).....
Foaled in the year.....has been examined at the college of agriculture, and is hereby certified that the said stallion or jack is of pure breeding and is registered in a stud book recognized by the department of agriculture, Washington, D. C.

(Signature) _____
Dean of the College of Agriculture.

2. The license certificate issued for a stallion or jack whose sire or dam is not of pure breeding shall be in the following form:

Neither Useful nor Ornamental.
A mongrel bred, unsound, unsuitable stallion used for public service, considerably patronized on account of his cheap fee, despite the fact that pure bred stallions also are maintained in his district.

A Misfit.

Grade Percheron Stallion patronized last season by the owners of 80 mares. His head does not seem to "favor" the breed he is alleged to represent.

University of Wisconsin,
Department of Horse Breeding,
College of Agriculture.

CERTIFICATE OF GRADE STALLION OR JACK.

No .....
The pedigree of the stallion or jack (name) .....
Owned by .....
Described as follows:
(Color) .....
Foaled in the year.....has been examined at the College of agriculture and it is found that the said stallion or jack is not of pure breeding and is, therefore, not eligible for registration in any stud book recognized by the department of agriculture, Washington, D. C.
(Signature) .....
Dean of the College of Agriculture.

3. The license certificate issued for a stallion whose sire and dam are pure bred, but not of the same breed, shall be in the following form:

University of Wisconsin,
Department of Horse Breeding,
College of Agriculture.

CERTIFICATE OF CROSS-BRED STALLION.

No. .....
The pedigree of the stallion (name) .....
Owned by .....
Described as follows:
(Color) .....
Foaled in the year.....has been examined at the College of agriculture and is found that his sire is registered in the .....and his dam in the .....
Such being the case, the said stallion is not eligible for registration in any stud book recognized by the department of agriculture, Washington, D. C.
(Signature) .....
Dean of the College of Agriculture.

4. The license certificate issued for a "Non-Standard Bred" stallion shall be in the following form:

CERTIFICATE OF NON-STANDARD BRED STALLION.

No. .....
The pedigree of the stallion (name) .....
Owned by .....
Described as follows:
(Color) .....
Foaled in the year.....has been examined at the College of agriculture and it is found that the said stallion is not eligible to registration as Standard Bred, and for the purpose of this license is not pure bred, although recorded in the Non-Standard department of the American Trotting Register.
(Signature) .....
Dean of the College of Agriculture.

5. The license certificate for a stallion that has neither sire nor dam of pure breeding shall be in the following form:

Two Splendid Prize Offers

One for Shepherds and One for Potato Growers

Do You Keep Sheep at a Profit?

Here is $50.00 to Tell What You Do.
To the Shepherds we are offering $50.00 for articles telling *How I make a profit with Sheep.*

THIS is an opportunity for shepherds who have been successful in starting and operating a flock of sheep on a commercial basis. There are men with capital living in cities who have expressed a desire to engage in sheep raising on a commercial basis and for their information as well as that of our farmer readers who are planning to engage in sheep raising more extensively, the articles we want must deal with the cost of land, fencing, pasture and forage crops, buildings, cost of help, farm equipment, management, marketing and alll other incidentals leading up to a well equipped sheep farm.

We want you to tell the MARITIME FARMER *readers how you do it.* Give the number of sheep in your flock, breed, percentage of lamb crop, feeding methods and general care and management of the flock. We want the accounts clear, interesting and helpful. You do not have to confine yourself to the questions suggested, you are at liberty to give any information that you think would be helpful to other sheep breeders. No story is to contain more than 5000 words.

The Prizes Will Be Awarded as Follows:

$25.00 for the Best Story	3.00 for the Fourth Best Story
15.00 for the Second Best Story	2.00 for the Fifth Best Story
5.00 for the Third Best Story	$50.00 in All for the Contest

To facilitate reading, all manuscripts should be typewritten if possible. If this is out of the question they should be written in ink, clearly and neatly. They should be written on only one side of the paper. Postage need not be enclosed, as manuscripts will not be returned under any circumstances.

We hope to receive a great deal of valuable and interesting material in response to our offer. And we must reserve the right to withold any or all of the prizes if we do not feel that the contestants have succeeded in reaching the standard of excellence that we require. However, we expect excellent material that will be well worth our offer. This contest will be open till March 20th, 1912. No stories received after that date can be considered.

Address all manuscripts to

THE SHEEP EDITOR
THE MARITIME FARMER
ST. JOHN, N. B.

Do You Grow Potatoes Successfully?

Here is $50.00 If You Tell How.

THE most vital potato growing question today is how to grow the largest crop for the least money. Some farmers have made a study of this question and have learned by practical experience. THE MARITIME FARMER wants to hear from these men. So it offers $50.00 for the best five articles which wlll tell

How I Grow Potatoes on a Business Basis.

Each article must not exceed 5000 words. The story must be a real one of actual achievement explaining the various details in connection with the practical work involved in securing the best results.

We Want you to tell the MARITIME FARMER *readers how you do it.* Give a statement of the value of the land, how the land is prepared and fertilized, kind and quantity of fertilizer used, methods of planting, cultivating, spraying, harvesting, marketing, and the place the potato crop occupies in your system of crop rotation. We want the accounts clear, interesting and helpful.

The Prizes Will be Awarded as Follows:

$25.00 for the Best Story	3.00 for the Fourth Best Story
15.00 for the Second Best Story	2.00 for the Fifth Best Story
5.00 for the Third Best Story	$50.00 in All the Contest

To facilitate reading, all manuscripts should be typewritten if possible. If this is out of the question they should be written in ink, clearly and neatly. They should be written on only one side of the paper. Postage need not be enclosed, as manuscripts will not be returned under any circumstances.

We hope to receive a great deal of valuable and interesting material in response to our offer. But we must reserve the right to withold any or all of the prizes if we do not feel that the contestants have succeeded in reaching the standard of excellence that we require. Howover, we expect excellent material that will be well worth our offer. This contest will be open till March 20th, 1912. No stories received after that date can be considered.

Address all manuscripts to

THE POTATO CONTEST EDITOR
THE MARITIME FARMER
ST. JOHN, N. B.

CERTIFICATE OF "MONGREL OR SCRUB" STALLION.

No. .....
The breeding of the stallion (name) .....
Owned by .....
Described as follows:
(Color) .....
Foaled in the year.....has been examined at the College of agriculture and it is found that the said stallion is of mongrel breeding and is therefore not eligible for registration in any stud book recognized by the department of agricultdre, Washington, D. C.
(Signature) .....
Dean of the College of Agriculture.

Section 1494-36. Each bill and poster issued by the owner of any stallion enrolled under this act, or used by him or his agent, for advertising such stallion shall contain a copy of the stallion's Certificate of enrollment printed in bold face type not smaller than long primer on said bill or poster and the first mention theron of the name of the stallion shall be preceded by the words "pure-bred", "grade", "cross-bred", "non-standard bred", or "mongrel or scrub," in accordance with the wording of the certificate of enrollment; and it shall be illegal to print upon the poster any misleading reference to the breeding of the stallion his sire or his dam or to use upon such bill or poster the portrait of a stallion in a misleading way; and each newspaper advertisement printed to advertise any stallion for public service shall show the enrollment certificate number and state whether it reads "pure-bred", "grade", "cross-bred", "non-standard bred", or "mongrel or scrub".

Section 1494—37. A fee of two dollars shall be paid to the horse breeding department of the college of agriculture, University of Wisconsin, for the examination and enrollment of each pedigree and for the issuance of a license certificate, in accordance with the breeding of the stallion or jack as above provided; and a renewal license fee of one dollar shall be paid to the department of horse breeding every other year from the date of the issuance of the original license certificate.

Section 1494—38. Upon a transfer of the ownership of any stallion or jack enrolled under the provision of this act, the certificate of this enrollment may be transferred to the transferee by the department of horse breeding of the college of agriculture upon submittal of satisfactory proof of such transfer and upon payment of the fee of fifty cents; and a fee of fifty cents shall be paid for a duplicate license certificate issued where proof is given of loss or destruction of the original certificate.

Section 1494—38m. The department of horse breeding shall keep an account of all moneys received and disbursed and shall make an annual report thereof, said report shall be published with and as a part of the annual report of the Agricultural Experiment Station, college of agriculture.

Section 1494—39. Violation of any of the provisions of this act is hereby made a misdemeanor and shall be punished by a fine not less than ten dollars nor more than fifty dollars or by imprisonment in the county jail not more than sixty days or by both such fine and imprisonment; and it is hereby made the duty of the district attorney of the county in which the violation takes place to prosecute the action."

In reviewing this law, the reader will note that the Wisconsin Government does not make it illegal to travel a grade stallion. It does make it illegal to keep for public service a stallion that has certain unsoundnesses (see Sect. 2), that are recognized to be hereditary. But under this law the man who keeps a grade stallion

(Continued on page 322).

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

Subscription Price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate when subscribing are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definite order for discontinuance is given.

The date after your name on the little green label on front page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

RATES FOR CASUAL ADVERTISEMENTS.

1 inch—First insertion 75 cents; 2 inches—First insertion $1.50; 3 inches—First insertion $2.25.

Contract rates on application.

Address all letters and make all checks, money orders, postal notes, etc., payable to

THE MARITIME FARMER, or

R. D. Robinson Publishers, Limited,

Cor. Clarence and St. David Sts., ST. JOHN, N. B.

NOTICE TO ADVERTISERS—Changes for ads. should reach this office one week before date of issue, in order to insure insertion.

FEBRUARY 13, 1912.

DATES OF ISSUE.

February 27
March ..... 12—26

ORDER YOUR SEEDS EARLY.

The excessive heat of last summer injured to a very large extent many of the seed crops, particularly, Beet, Carrot, Sugar Beets, Mangels, Parsnips and Peas. Planters should exercise the greatest care in ordering their supply of seeds this year, as many low-grade, old stocks will be offered. It's a good plan to send to reputable seed houses for their catalogues and then order your seed early in the year. As their stocks run down the seedmen will naturally fill orders with whatever they have on hand and it is safe to assume that the best seeds will be the first to go out. Another advantage in ordering seeds early is the opportunity it affords of testing their germinating qualities. If they do not test satisfactorily they can be exchanged and other seeds can be obtained in time for early planting. Still another consideration is the danger from delays in transit. This is particularly true in sections where the transportation facilities in many of the communities are rather slow. It is a safe plan for the farmer to make up his seed order right away. He can plan his spring work with profit in advance and thus get a good start. Many men are apt to put off ordering seed until the last minute with the result that they get the culls and have to plant without testing, besides running the risk of their seeds arriving too late or not arriving at all.

A CONTEST FOR THE BOYS IN THE GROWING OF FARM CROPS.

Prof. M. Cumming informs us that a former Nova Scotian, now living in New York, seeking to lend his aid to the improvement of agriculture in his native province, has made arrangements with the Department of Agriculture at Truro for two contests in the growing of Turnips ; one in Colchester County and the other in Cumberland County. The complete details have not yet been drawn up, but we are in a position to announce the general features.

Briefly, any boy between 14 and 20 years may enter, provided the assessed value of his guardian's property does not exceed a certain amount (probably $3,000). Prizes will be given for the best crop of turnips that can be grown on one acre of land, and the prizes are substantial ones. 1st $100 ; 2nd, $50 ; 3rd $25. The donor has wisely provided that the prize money must be spent in some definite way, to be agreed upon by the Committee placed in charge of the contest, who are to be Charles Hill, Central Onslow; F. L. Fuller, Truro; M. Cumming, Truro. When the judges, who will be appointed by the Local Department of Agriculture, announce their decision, this Committee will confer with the prize winners and arrange that the money be spent in one or the other of the following lines : 1st, In pursuit of an agricultural education. 2nd, In purchase of improved stock. 3rd, In under drainage. Probably other options will be added.

The full particulars of this contest will be available shortly but, in the meantime, any one who is interested should write Mr. F. L. Fuller, Agricultural College, Truro, N. S.

To properly plow the land, cultivate and harvest an acre of turnips will cost from $45 to $70. The crop will brobably average 900 bushels and for stock feeding purposes will be worth, at least, $90, and will oftimes realize more when disposed of in the local market. The boys will, therefore, be amply repaid, even if they do not gain a prize. But the fortunate ones who win a prize will certainly have a most substantial profit for their year's work.

Come on boys of Colchester and Cumberland and get ready for the contest.

SHALL WE LABEL OUR STALLIONS ?

At the Nova Scotia Farmers' Association held in Yarmouth, January 23rd to 25th last, Prof. Cumming, Secretary for Agriculture, discussed Horse Breeding Legislation. He showed that in nearly all the European countries and in 18 States of the U. S. A., and in Manitoba, Saskatchewan and Alberta, in Canada, there are in force more or less drastic systems of legislation aiming at the improvement of the horse breeding business. He quoted as the pattern legislation for America that which is in operation in the State of Wisconsin. According to this Wisconsin Legislation, all stallions used for public service must be enrolled in the Agricultural Department of the University of Wisconsin. They are to be enrolled in one or other of the following five classes : 1, Pure Bred. 2, Grade. 3. Cross Bred. 4, Non-Standard Bred. 5, Mongrel or scrub. And to quote exactly, "no person, firm or company shall use or offer for use for puplic service in this State any stallion until he shall have caused the name, description and pedigree of such stallion to be enrolled," etc., and further "each bill and poster issued by the owner of any stallion enrolled under this act or used by him or his agent for advertising such stallion shall contain a copy of the stallion's certificate of enrollment, printed in bold face type, not smaller than long primer, on said bill or poster, and the first mention thereon of the name of the stallion shall be preceded by the words "pure bred" or "mongrel or scrub," etc."

According to this law, it is further declared illegal to travel a stallion that has any of the hereditary unconsciousness, such as spavin, etc.

In other States of the Union and in Canada the Legislation is sometimes more and sometimes less drastic than the foregoing, but the essential feature which the Nova Scotia Farmers' Parliament unanimously agreed should be put in force in this province is that all stallions should be labeled as to whether they are pure bred, mongrel, etc., and also as to what unsoundness they possess. According to this it would be legal to travel any stallion, but the owner is compelled to let the public know exactly what he is.

When this law was put in force in Wisconsin in 1905, there were enrolled 35 p. c. pure bred stallions and 65 p. c. grade or mongrel. Last year there were 52 p. c. pure bred and 48 p. c. mongrel or grade. The result has been to enlist public sentiment to gradually drive out these scrub stallions. The ultimate result will be to prepare the way for more drastic Legislation.

Prof. Cumming's address on this subject appears in this issue. We trust the horse breeders of Nova Scotia will openly come forward and express their view on this matter.

Now that the Nova Scotia Farmers' Parliament has declared itself so unanimously in favor of such Legislation, we seek to ascertain the feeling of the rank and file of the horse breeders of the Province. Shall we label stallions ? What say you, horse breeders of Nova Scotia ?

BOOM THE MARITIME PROVINCES.

S. S. "Ula,"
Singapore, India,
Dec. 18th, 1911.

The Secretary,
St. John River Valley Farm & Fruit Land Co., Ltd.

Dear Sir :

Having seen your advertisement in the Colonizer, and being desirous of obtaining further information regarding the fruit and farm lands you have for sale ; I shall be much obliged if you will forward me full particulars. Will you also inform me the capital required to start on a good basis ; kindly address care of B. I. M. S. Club, Post Box 35, Calcutta, India.

I am, Yours sincerely
(Sgd) W. S. Broome.

When people in foreign claims are beginning to sit up and take notice of the possibilities in Maritime Canada is it not high time for the fathers of our land to do their usmost to keep their boys on the farm? Take the boys into your confidence ; give them a share in your business ; you will be more successful ; the boys will be better contented and very soon the strangers without our gates will hear more of the East and will be induced to come and cast their lot in Maritime Canada.

Nova Scotia Farmers' Annual Convention

(Continued from last issue).

COUNTY ASSOCIATION REPORTS.

KINGS COUNTY.

Mr. W. H. Woodworth reported for Kings County as follows:—

In making our report, for the year 1911, we can again report progress. County Farmers' meetings have been held in Kings County for the past eight years, and from their inception the farmers have taken a great interest in them.

To one living in the country, very many improvements can be noticed, and farmers, in large numbers, are ready to bear testimony to the usefulness of the Institute Meetings.

Among the things learned by farmers are: More thorough cultivation of the soil, The economic use of fertilizers, Sowing of cover crops, Growing larger crops of roots, Maintaining the humus in the soil and the rearing and caring for a much better class of dairy cows and draft horses. Large numbers from the county attend the Short Course at Truro and several young men are taking the full course. We held a seed fair and conducted an excursion to Truro. Our membership is large and we try to secure the best men as lecturers.

We are not satisfied yet with what we have accomplished and we are anxious to see more practical work done. Our farmers, in several localities, are asking for a monthly meeting. Ladies' institute meetings are talked of, and we hope the day is not far distant when steps will be taken to enlarge the work.

LUNENBURG COUNTY.

was reported for by M. B. DeLong:—

1911 has been the most successful year since our Association was formed. Our membership, 164, was the largest in our history. This number entitles us to four delegates. We held eleven meetings including 'our Annual Meeting, with an attendance of 445. These meetings were addressed by W. H. Woodworth and L. D. Robinson of Berwick, and some of our local men.

At all of these meetings we had lively discussions along the lines of farming in all its phases. The effects can be seen all through the country in the raising of better vegetables, grain and fruit.

Some years ago the dairy school visited our country, and we have seen a marked change in the butter making. The people would like to have it come around again next Summer.

Our Farmers' Association is being more appreciated every year. Over one hundred and thirty of our members subscribed for the Maritime Farmer last year, and we expect to have more subscribers for this year.

PICTOU COUNTY.

Mr. Howard Kennedy reported for Pictou County. Eighteen meetings with an average attendance of thirty-three had been held. The large mining and manufacturing interests in Pictou County were problems that Pictou County farmers had to contend with as the greater majority of the young men were drawn away from the farms. The County Association was, however, taking steps to interest the boys in the possibilities of the farm and he hoped for good results.

QUEENS COUNTY.

Mr. Hunt, of Queens County said the County Association had purchased a Babcock Milk Tester and some of the members were availing themselves of the opportunity of testing their cows. They were planning for monthly meetings in the various districts of the County and a qiarterly meeting of the County Association.

YARMOUTH COUNTY.

Mr. S. P. Goudey, gave the following report of the year's work in Yarmouth County:—

During the year just closed, we have held 15 meetings, with a total attendance of 1463. Three of these were addressed by Harvey Mitchell, New Brunswick. Eleven regular and one special meetings were entertained by local talent.

Our membership for the year was 251.

Our regular picnic was held in August. About 2000 attended. Professor Cumming was the principal speaker. The proceeds from the last four picnics have been applied to purchase land and erect sheds thereon, at Dayton. We have had 12 splendid sheds and land enough to build twelve more upon and are free from debt.

We feel that we are doing good work, with the milk testing department of our Association. About 200 samples are tested annually, which shows that our people are keeping an eye out, for the cow that does not pay her board.

Our Association imported its usual quantity of seeds. Owing to the very dry season, some of these did not give as large returns in crops as might have been hoped for. The members are persistent, however, and have ordered another supply for 1912.

Twelve good men and true have been selected to entertain the members, at their regular monthly meetings during the year, and their subjects have already been assigned to them. These men are expected to open the questions and also to provide some entertainment of a social nature.

We are hoping for splendid results during the year upon which we have entered. If all who are interested in Agriculture will become members of our Association and render us what assistance they can, the success of our institution will certainly be assured.

NOVA SCOTIA AGRICULTURAL SOCIETIES.

Mr. F. L. Fuller reported the standing of the Agricultural Societies by Counties. There are two hundred Agricultural Societies in the Province an increase of thirteen during the year. The total membership is 8576 an increase of 261. The total amount subscribed is $13,137.45 an increase of $405.00. The Government aid to these Societies amounts to $10,000.00.

THE PARLIAMENTARY COMMITTEE'S REPORT.

The Committee appointed at the 1911 Annual Meeting to interview the Government re the resolutions passed by the Nova Scotia Farmers in Annual Convention last year reported:

The Government will give assistance to any man or company of men, to introduce a ditching machine in any county in the Province.

The Government did not feel inclined to take any action re the extermination of the Ragwort in Eastern Nova Scotia.

Owing to the shortage of revenue caused by the strikes in some of the Collieries, the Government is unable to increase the Grant to Agricultural Societies.

The Government agreed to render assistance re the Exchange System of Sires and the Superintendent of Agriculture Societies is now in a position to take action in the matter.

The Government is convinced that a Dormitory for the N. S. A. C. is a necessity and is inclined to favor the building of one as soon as the finances of the Province will permit.

The Committee interviewed the Superintendent of Education and the School Inspectors, and they favored inaugurating a scheme by which the teachers in the rural schools would receive instructions in the teaching of Agriculture, and would receive an increased grant for doing so.

The Committee interviewed the Manager of the Provincial Exhibition and the Commission subsequently decided not to increase the entry fees.

Re Agricultural training in the rural schools, Prof. Cumming announced that as a result of this matter being brought to the notice of the Government by the farmers' representatives, thirty-seven teachers will this year receive an increased grant for teaching Agricultural Subjects in their schools.

Exercising The Bull.

The above system for exercising a bull is self explanatory. A stout post is driven in the centre of the yard and a long arm is then bolted across the top of the post, in such a way that it revolves readily as the bull who is attached to one of the ends of the arm walks around in a wide circle

HORSE BREEDING LEGISLATION

was the subject of an interesting paper read by Prof. Cumming on Wednesday afternoon. The substance of this paper is published in full on other pages of this issue.

After considerable discussion by Messrs. G. Nichols, A. S. McMillan, W. W. Black, F. W. Foster, R. J. Messenger, C. C. H. Eaton, Wm. O'Brien, Wm. Murray, J. R. Webster, Andrews and F. L. Fuller, whose general trend of opinion was that the time has come when the scrub and unsound sire should be legislated out of existence, a motion favoring such legislation was unanimously carried and a committee consisting of Messrs. A. S. McMillan, Wm. O'Brien, W. W. Black, D. R. Nicholson and F. L. Fuller was appointed to bring in a resolution re this matter for presentation to the Government.

THE VALUE OF THE PROVED SIRE.

Prof. J. H. Grisdale, Director of Dominion Experimental Farms, followed the discussion on Horse Breeding Legislation with an address on The Value of the Proved Sire. He linked his address with the Horse Breeding Legislation question which had just been discussed and congratulated the Association for the progressive steps they had assumed re this matter.

The Value of the Proved Sire was too often overlooked. The sire was half or more of the herd. The points to look for in the selection and retention of a sire were conformation, breed type, vitality, fertility, prepotency and impressiveness.

The performance of a sire's progeny was, however, the main proof of the value of a sire and the guage by which he must be measured when the time arrived for his retention or disposal.

It was a grave mistake to dispos? of young sires until they had been weighed in the balance of the performance of their offspring.

Mr. F. L. Fuller said a large percentage of the bulls owned by Agricultural Societies would be improved by having their keeping methods improved. Thr bull was more than half the herd. The 200 Agricultural Societies in Nova Scotia kept 350 bulls. The average age at which these bulls was bought was fifteen months and the price in the vicinity of $100.00. These bulls were rarely kept after they become four years old and the average price at which they sold was in the vicinity of $50.00.

Mr. R. J. Messenger thought one of the reasons why bulls were not kept until they were older was that very often they became vicious through confinement and lack of exercise. He had stretched a heavy wire between two trees. On fine days he was accustomed to attach the bull's tie chain to a sliding ring on this wire and as the bull walked back and forth from tree to tree he got ample exercise.

Mr. F. W. Foster said that the choice of a sire was either the making or the marring of a herd. He was a firm believer in giving a bull a lot of exercise. The method he followed was to make the bull pump the water, separate, churn, etc., by putting him on a one horse thread, the power by which his various machines are driven.

Discussions re Farmers' Banks and Rural Telephones occupied the remainder of the Wednesday afternoon session.

PROBLEMS CONNECTED WITH CREAM GATHERING CREAMERIES.

was the subject of an interesting address, on Wednesday evening by Mr. Geo. H. Barr, Chief of the Dairy Division, Ottawa.

The two main essentials for the successful operation of a Cream Gathering system of Dairying, the only ideal way, were honest makers and the co-operation of the patrons. The speaker showed up the advantages the Cream Gathering systems had over the Whole Milk gathering systems. He strongly advocated the delivery of a rich cream as by that system the amount of skimmilk lost to the farm was reduced to a minimum. He illustrated his address by the use of carefully prepared charts. One chart showed the value of butter fat lost in skimmilk from a herd of forty cows in one year:

Value of butter fat lost in one year when separator is carefully handled and in a normal condition, $24.45.

Value of butter fat lost in one year when separator is washed only once per day, $48.91.

Loss when milk is too cold when separated at say 60 degrees F., $58.69.

Loss when separator is run 20 revolutions too slow, $102.17.

He also showed the temperature and acidity of cream kept in water and ice at different periods.

He had visited the creamery that is in course of construction at Yarmouth and urged all the dairymen within its reach to patronize it. The creamery was being built and equipped along modern lines and the young men who were responsible for its erection deserved all the encouragement Yarmouth County farmers could give them.

Mr. Barr's lecture was followed by a selection rendered by the Yarmouth Male Quartette after which Mr. W. A. MacKay, Manager of the Scotsburn Creamery spoke of the natural facilities for dairying in Nova Scotia. Progress had been slow in the past but the future showed gleams of hope in the rapid development of this important industry. He gave a history of the manner in which dairying is progressing in Pictou County after which Prof. E. S. Archibald delivered an interesting talk on the

BUSINESS PRINCIPLES OF WINTER DAIRYING.

Suitable feeds for summer and winter feeding, breeding, testing, weighing, weeding and many other incidentals connected with the profitable management of a dairy herd producing milk under winter conditions were discussed. Much interest in Prof. Archibald's address was evidenced by the questions which came thick and fast from all parts of the hall and to which the Professor made instructive replies.

THURSDAY MORNING.

The election of officers for the ensuing year resulted as follows:—

President—R. M. Jackson, Jacksonville; Vice-President—H. W. Corning, Chegoggin; 2nd, Vice-President—Wm. O'Brien, Windsor Forks; Directors—R. J. Messenger, Bridgetown; A. S. McMillan, Upper South River; G. R. Nichols, Berwick; Daniel McDonald, Sylvester and Samuel Freeman, Amherst; Secretary-Treasurer—Mr. C. R. B. Bryan, Durham; Auditors—Profs. J. P. Landry anh E. S. Archibald, Truro; Exhibition Commissioners—Messrs. R. S. Starr and W. W. Black; Legislative Committee—Wm. O'Brien, C. H. Black and W. H. Woodworth.

RESOLUTIONS.

Whereas, in 1909 and 1910 there was a larger number of live stock imported into Nova Scotia, through the Port of Yarmouth than through the port of Halifax, and

Whereas, Western Nova Scotia is in serious need of a quarentien station, with suitable accomodation for all kinds of live stock,

Therefore resolved, that this Nova Scotia Farmers' Association request the Hon. Martin Burril, Minister of Agriculture, to provide such a station at Yarmouth, in the interest of the live stock men of Western Nova Scotia.

* * *

Whereas a number of our Nova Scotia Farmers are going to Ottawa to attend the Fruit Growers' and Live Stock Conventions from Feb. 12th to 16th,

Therefore resolved, that the N. S. F. A. empower these delegates to approach the proper authorities at Ottawa to press the claims of Nova Scotia for more aid in advertising and extension of her Immigration Policy.

* * *

Whereas, the Ragwort and other noxious weeds are alarmingly spreading in the eastern part of Nova Scotia, and it has been demonstrated by experiments made by the Department of Agriculture of the Dominion of Canada, that tne Ragwort has been the cause of the Cattle disease, and,

Whereas, it has been demonstrated that this noxious weed may be exterminated by sheep at the same time thriving thereon, and

Whereas, we believing sheep to be among the most profitable stock on a farm, and regarding with apprehension the diminution of the sheep raising industry in this province, and believing that the eastern part of Nova Scotia as a whole to be best adapted to sheep raising and being the area at present most infected with Ragwort. Therefore we, the Nova Scotia Farmers' Association, in session at Yarmouth, recommend that the Dominion Government, having already done considerable work along the line of investigating the noxious weed question, be memorialized through our federal representatives, requesting that body to establish an Experimental Sheep Station somewhere in Eastern Nova Scotia with a view to stimulating the sheep raising industry.

* * *

In the opinion of this Association the time has arrived when the Government of Nova Scotia should enact legislation making it compulsory for owners of Stallions, the service of which are offered to the public, to have said Stallions classified and enrolled.

* * *

Whereas, the production of beef in Nova Scotia has diminisned to such an extent, that our farmers are not producing sufficient to supply its own wants, and

Whereas, we believe that in the interests of both consumer and producer alike, some steps should be taken to impress upon our farmers the benefits to be derived by further development of this most important branch of Agriculture, and

Whereas, demonstrations stations for the purpose of fattening cattle, hogs, sheep and poultry are the order of the day in many parts of this Continent, and

Whereas, our Federal Government through its Premier, Hon. R. L. Borden, has placed itself on record as being convinced that the time has come when greater aid and encouragement should be given to the basic industry of agriculture, and that to this end a measure will be introduced, under which it is hoped that there may be co-operation between the Dominion and the various Provinces for the purpose of assisting and encouraging farmers to secure the best results in production, and at the same time preserve the fertility of the soil.

Therefore be it resolved, that in view of the suitability of the Province of Nova Scotia for fattening cattle by reason of its excellent pastures and the large production of hay, much of which is now exported, a practice much to be deplored, and against the principles of the maintenance of the soil fertility; that this Nova Scotia Farmers' Association desired to place itself on record as being in favor of the establishment of such Demonstration Station, and

Further resolved, that a copy of this resolution be sent to the Minister of Agriculture at Ottawa.

* * *

Whereas, considerable dissatisfaction obtains regarding the high tolls and curtailed advantages given the Subscribers by the Maritime Telephone Co.

Therefore resolved, that the Nova Scotia Farmers' Association ask the Provincial Government if possible to take over the telephone system of the Province, and operate the same for the betterment of the people.

* * *

Whereas, as compared with the financial aid given to other provinces of the Dominion for advertising and Immigration purposes, Nova Scotia is not receiving her proper proportion of money, and,

Whereas, the Immigration Department at Halifax is seriously handicapped in placing the advantages of our province before possible settlers because of the limited appropriations which the local government can afford,

Therefore resolved, that the Nova Scotia Farmers' Association do petition the Immigration Division of the Federal Department of the Interior to give more attention and larger appropriation to encourage immigration to our Province.

* * *

The Committee to whom Exhibition Commissioners' Report was referred for action reported as follows:

1st. We recommend that the commission use their own judgment with regard to the number of days that the general features, including horse racing, be carried on; but we strongly urge them to consider the advisability of limiting the number of days during which live stock be kept on the grounds from Saturday to Thursday.

2nd. We recommend that the Commission provide better accomodations for exhibitors and attendants of live stock; to be specific that a shed which need not cost more than $200 be erected and fitted with sleeping bunks, and with sufficient room for placing oil stoves, etc., for cooking.

3rd. As a means of increasing the attendance, we would recommend that the commission devote special attention to securing cheaper railway and lodging rates, the latter of which prominently advertised would undoubtedly bring a larger number of visitors.

4th. We recommend that the Government repeal the legislation prohibiting the use of the plant for purposes other than the Provincial Exhibition, and that the commission be enpowered to rent the grounds for any legitimate purpose with the understanding, however, that all proceedings be under the same control as now exists in connection with the exhibition.

SHEEP BREEDING IN THE DOMINION OF CANADA.

was discussed by Mr. W. T. Ritch, of the Sheep Commission. He gave an interesting account of the work done by the Commission and went into the details of sheep management in the various countries that had been visited by the commission. had been visited by the Commission. His talk on wool and cross breeding methods was much appreciated. He would have the practice of tub washing wool done away with as it was an antiquated system. Wool should be sold in the grease and care should be taken that every fleece was tied up properly and separately, so that the manufacturers could sort out the various grades, a matter which is impossible when wool is tub washed at home. When this system prevails in Canada better wool prices will be realized..

Considerable discussion on the value and profitableness of keeping sheep took place at the close of Mr. Ritch's address. Mr. C. C. H. Eaton contributing an interesting share by relating his own personal experience in the sheep raising industry. ...

At the close of the discussion on Sheep, the meeting adjourned to take advantage of a chance to visit some of the most important industries of the town and the Lawndale and Hillside Farms owned by Dr. Lovitt and H. W. Corning, M. P. P. respectively.

THE CLOSING SESSION

took place on Thursday evening. Past President Woodworth retired the various persons who had so ably the Association.

new President, R. M. Jackson.

An address by Prof. J. H. Grisdale on The Formation and Cultivation of the Soil and a Paper on Varieties of Fruit Suitable for Outside the Annapolis Valley interspersed with some solos by Mrs. D. R. Saunders were the concluding features of the programme.

Prof. Shaw's paper appears on another page of this issue. We hope to publish Prof. Grisdale's address at a later date.

Before adjournment was made hearty votes of thanks were tendered to the various persons who had so ably helped to entertain the members of the Association.

The Yarmouth County Farmers' Association did nobly and well. Everything that could possibly be done to make the delegates' stay in Yarmouth as profitable and pleasant as possible was attended to in a kingly manner. The unanimous verdict of each and every member of the Association as they returned to their homes was that the reception received was fully in accord with the hearty invitations that have gone fortn asking the Nova Scotia Farmers to make Yarmouth their next meeting place.

Canadian Guernsey Breeders in Annual Session.

The annual meeting of the Canadian Guernsey Breeders' Association was called to order by the President, Daniel G. McKay, in the Winter Fair Building, Amherst, N. S., on December 6th. Minutes of previous meeting were read and approved.

The minutes of an Executive meeting of Dec. 7th, 1910, were also read and by motion adopted.

The President made a short address much appreciated by all present.

Mr. E. J. Johnson, Vice-President, also gave a very encouraging address.

The Secretary-Treasurer, H. W. Corning, submitted his annual report and financial statement, which were by motion adopted and ordered placed on record.

SECRETARY'S REPORT.

Officers and Members Canadian Guernsey Breeders' Association:—

In looking over the past year your Secretary feels justified to state at this our eleventh annual meeting, that our Association has made healthy progress during the year ending Oct. 31st, 1911. Your Secretary, as per order of the executive committee, corresponded with the Minister of Agriculture and the Secretary of the A. G. C. C. seeking the equalization of the Canadian and American record books for Guernseys. This correspondence I will read later.

The tabulated pedigree has been arranged and is now in the hands of the breeders. A list of those recommended by the executive as being capable of judging Guernseys was sent to the different Canadain Fair Boards.

The Guernseys made a better show ing at the Maritime Province Fairs in fall of 1911 than ever before, and the demand for them is steadily increasing, which surely shows that they are gaining favor in the estimation of the Canadian dairymen.

Arrangements are being made to send an exhibit of Guernseys from the Maritime Provinces to the Ont. and Quebec Fairs in the fall of 1912.

The Canadian Record of Performance work is gradually being taken up by our breeders although there are others who should now be entering their cows.

We have had the privilege of publishing the records of the first seven cows that have qualified, and there are others that are under test from the herds of your President, D. G. McKay, Heath Bell; John N. Chute, Berwick, N. S.;Henry Cooper, Chilliwack, B. C. Experimental Farm, Ottawa, and H. W. Corning.

There are others who are about to enter cows. There, surely, is no better way to attract more of the attention of the Canadian dairymen than to show them by actual tests that our Guernseys can produce a greater quantity of higher quality dairy products, for the feed consumed, than any other dairy breed.

The Financial sheet which I will now submit also shows progress.

After reading of communications, Mr. J. F. Roach, of Sussex, N. B., spoke to the question sent to the meeting for a ruling by the Accoun-

tant of National Live Stock Records, concerning the fee for registering Canadian bred Guernseys, born since the opening of our Canadian Record for Guernseys that were recorded in the American Guernsey Cattle Club Records. Mr. Roach claimed that as he read "eligibility" in the constitution, all American registered Guernsey cattle should be admitted for the fee of fifty cents, but the Accountant had charged him $1.00 for recording a Canadian born, American registered animal, simply because the animal had been dropped since the admission of Guernsey cattle to the National Live Stock Record.

After considerable discussion by James F. Roper of Charlottetown, P. E. I.; R. Robertson, Nappan, N. S.; John McDonald, Shubenacadie, N. S.; E. J. Johnson, George's River, C. B.; J. F. Roach and Howard W. Corning, the following resolution was unanimously passed:—

Whereas, "eligibility" in constitution reads—"Animals recorded in the Herd Register of the American Guernsey Cattle Club may be re-registered in the Canadian Register at a nominal fee of fifty cents," and

Whereas, our constitution cannot be amended unless "at a meeting of the Association called for that purpose," and

Whereas, the Canadian National Live Stock Records commenced to register Guernsey Cattle about January 1st, 1906,

Therefore resolved, that the Secretary advise the Accountant to admit all American registered Guernseys to our Herd Book for the year 1912, "at the nominal fee of fifty cents per head."

Further resolved, that the Secretary prepare a clause to amend "Eligibility" in the constitution providing that all Canadian bred Guernsey cattle, born since January 1st, 1906 be required to pay a fee of $1.00 for registration in the Canadian Records, and that a notice of motion to so amend the constitution be sent each member with his notice of the next annual meeting.

Mr. D. Drummond of the Record of Performance, told of the very practical way that his department was about to adopt, to ascertain the exact amount of food fed the cows under test, and he hoped by carefully watching the feeders to be able to give the Canadian dairymen an idea as to what the average profit was over the feed cansumed by the cows under test. On being asked, if the strict enforcement of the rule, compelling all cows admitted to Record of Performance to produce a calf within fifteen months of the commencement of test, was not in his opinion apt to bar out some good cows, Mr. Drummond said, that while the rules in the Record of Performance for Canadian cows would not allow the making of such large records as were made by some American record associations, the Canadian Department of Agriculture could not encourage anything but regualr breeding for Canadian cows.

A resolution was passed instructing the Secretary to correspond with the Hon. George H. Murray, Premier of Nova Scotia, requesting that a herd of high class Guernsey cattle be added to the dairy stock of the Government Farm at Truro.

Moved and passed that Principal M. Cumming be requested to secure a number of Guernsey cattle to represent the Guernsey breed at the short course of 1912.

Moved, passed and ordered that the Secreatry supply stationery for use, to the officers and directors.

Election of officers resulted as follows:—

Hon. President—Sydney Fisher, Knowlton, Que.; President—D. G. McKay, Heathbell, N. S.; Vice-President—E. Jf Jahnson, George's River, C. B.; Directors—T. D. Bates, Middle Stewiacke, N. S.; J. F. Roper, Charlottetown, P. E. I.; R. M. Jackson, Jacksonville, C. B.; J. F. Roach, Sussex, N. B.; Hugh Dickson, Central Onslow, N. S.; Auditor—R. Robertson, Nappan, N. S. Mr. James F. Roper was elected Director to act with the President, Vice-President and Secretary on the executive qoard. Committee A—President, D. G. McKay; Secreatry, H. W. Corning.

Growing and Marketing Seed Potatoes

On Pioneer Farm, Upper Sackville, N. B.

C. Fred Fawcett.
Prop. Pioneer Farm, Upper Sackville, N. B.

Editor Maritime Farmer:—

In response to a large number of farmers and friends scattered throughout this country, I will endeavor in a short article to put into print some results we have obtained with our farming operations on "Pioneer Farm" last season.

First, we started to dig up an old orchard. This cost us $5.00 for the man and tools for pulling up the trees. There were about fifty fairly large trees. We accomplished this in one day. Another day was spent in hauling away the rubbish. The plough followed after; then the potato planter and this fall we dug sixty barrels of potatoes where the apple orchard stood last winter. The apples were of fairly good quality but we never got many of them, as hunters and boys helped themselves. This fall we got all the potatoes. This was of considerable satisfaction to us and we consider it a much more profitable use of the land.

We put about ten acres in potatoes this past year. Our hired help for the spring's work on our two farms of about forty acres cleared, amounted to about $100. A man was employed only a part of the summer, the wages amounting in all to about $75.00. Our paid help for the fall's work of taking out our crop and marketing same amounted to $185. Fertilizer on our potatoes cost us $350. This with the cost of sets, clover seed, etc., etc., amount to the total expenses of operation. Our crop consisted of nearly 1000 bushels of grains, about 15 tons of clover hay with one half acre of fodder corn, three-quarters of an acre of turnips and 1300 barrels of potatoes. Looking back over our season's operations we find good reason for satisfaction. Our catch of clover was the best ever seen in this vicinity. Many have spoken to me about this and by their interest they show their appreciation. Of course, as many know, we make a specialty of selected seed potatoes. Our special seed plots of this year gave us most splendid results. Many of these hills planted with one whole round potato gave us ten pounds of marketable tubers when dug. The best hill contained 34 tubers, 28 of which were marketable and weighed 11½ pounds at time of digging. We invited our friends in the forenoon we dug this plot and they did the actual work for us. We were successful in marketing two cars of our potatoes to an Ontario seed house at satisfactory figures. We secured first prize on a standing field crop of barley while our oats were lower down in the list owing to a very severe rain and wind storm just before judging. We used on one field of oats some Nitrate of Soda after the grain was up. This gave us very satisfactory returns. On another field as an experiment we used some potash. The difference between treated and untreated places was very marked. Another thing that is very apparent to a close observer in raising potatoes, with fertilizer especially, is that our outside rows and end hills are most often our best producers. The cause of this, we think, is more sunlight and we find by practice that potato rows should be fairly wide apart.

Our season's work makes it plain to us that more intensive methods, heavier fertilization with plenty and often crops of clover are good standards of farming to follow.

CAN ANY OF OUR READERS EXCEL THESE RECORDS?

In the late papers I notice quite a how-do-do is being made of the fact that Alfred Hutchinson, of Mount Forest, Ontario raised 200 bushels of potatoes per acre in his 1911 field work. This is shown up as being a very high and creditable average and no doubt, it is for that country. From what I have seen and heard in Ontario, it would be a good yield.

Now the point I wish to draw your attention to is that a good many who are supposed to have the good of the country at heart do not wish to recognize the fact that New Brunswick seed taken to Ontario and planted there gives about double the yield given by Ontario grown seed. But still, Ontario farmers keep their money for seed potatoes and continue to send us train loads of feeds, seeds, etc.

I have been and am working along the line of forcing their attention to this fact. Prof. Zavitz is intensely interested in this movement and has been getting his supply of seed for experimental purposes from me and some of my neighbors, for several years. He is going to make the results public when the proper time comes and I think it will make things interesting for some potato growers. The Vegetable Association of Ontario will not listen to me much.

I know Mr. Hutchinson by correspondence and we are both much interested in each other's work. We are going to exchange some seed this year so we can have the benefit of each other's work.

My best plot this year yielded 375 bushels per acre, in field work—quite a contrast to Mr. Hutchinson's yield.

I have been trying to get the Ontario seedsmen to handle my seed potatoes but they dislike to get out of the old rut of buying their supply in the United States, paying heavy duties and then charging about $2.00 to $2.50 per bushel. We can put first-class seed stock down in Toronto in the fall, for about 60 cents to 65 cents per bushel. The results already obtained with our seed show the wisdom of buying our seed. I have got so far as to have the preference of any grower in New Brunswick, from, at least, one seed house and, of course, I am anxious to get in on the ground floor as much as possible because it will make a fine thing for us here and we can co-operate in growing and we can supply No. 1 seed.—C. Fred Fawcett, Upper Sackville, N. B.

Editor's Note:—We have personally visited Mr. Fawcett's farm and were much impressed with the enthusiasm he displays in his work. He is conducting his farm on business principles. From a small beginning he is rapidly mounting the steps that lead to successful achievement. He is not afraid to invest money in any piece of machinery or scheme that will lighten his labors or advance his business along modern lines. Would that many more of our young men were so ready to boost their country and its resources as Mr. Fawcett is. What a change there would come over the Maritime Provinces during the next decade.

The "word of mouth" system of agreement is antiquated, not but people are just as truthful now as they ever were but word of mouth agreements are not business like.

POTATO SALE CONTRACT

MEMORANDUM OF AGREEMENT made between C. FRED FAWCETT of Upper Sackville, in the County of Westmorland in the Province of New Brunswick, hereinafter called the Vendor, of the one part, and ..... of ..... in the County of ..... in the Province of ....., hereinafter called the Purchaser, of the other part.

The Vendor agrees to sell to the Purchaser and the Purchaser agrees to buy from the Vendor the following goods, on the terms and conditions following, that is to say:

Following is the form of contract adopted by Mr. Fawcett for sale agreements.

POTATOES OF THE FOLLOWING VARIETIES:

Early Ohios

1. All goods sold in bulk unless otherwise specified, and quotations are on car lots.

2. The word "about" is to be construed as meaning at least four-fifths the quantity specified and not more than six-fifths of the quantity specified.

3. Carload lots are to be taken as meaning five hundred bushels or over to capacity of car.

(Continued on page 319)

HORTICULTURE.

The Best Varieties of Fruit for Outside the Annapolis Valley.

The best varieties of fruit for any locality depend on what succeeds there and what the fruit is intended for, whether for home use or the market. In selecting the trees for an apple orchard, where the fruit is to be sold, some six or seven of those varieties, which grow well in that locality and which are wanted in the market, should be taken. If the fruit is to be chiefly for home use, a larger number of varieties should be chosen and they should be of the quality which suits the tastes of the family. In the commercial apple orchard, it is well to have varieties which mature at different times and distributed from the first of the picking season to the last, so as to make the harvesting easier. In the home orchard, varieties should be chosen so as to give a succession of fruit throughout the year, from August around till June. Why should not this healthful article of diet, the apple, be present in every home eleven months in the year?

In the Annapolis Valley the leading commercial varieties include the Gravenstein, Ribston, Blenheim, Cox Orange, Baldwin, Rhode Island Greening, Stark, Northern Spy, Golden Russet, Fallawater, Nonpareil and Ben Davis. Other varieties grown in smaller quantities than most of these are: Astrachan, Yellow Transparent, Duchess of Oldenburg, Williams Favorite, Wealthy, Alexander, Dudley, McIntosh Red and Mann.

The demand in the markets of Great Britain has chiefly determined the varieties to be largely planted in the Annapolis Valley. Scarcely anyone would think of planting extensively in a commercial orchard more than six or eight of these varieties. In Western Nova Scotia, outside the Annapolis Valley, including the counties of Lunenburg, Queens, Shelburne, Yarmouth, Digby and parts of Annapolis, Kings and Hants, wherever apples can be grown, any of these varieties would likely be successful.

For a commercial orchard, a list like the following might be taken: Duchess or Gravenstein (a few) Blenheim or Ribston, King or Wagener, Baldwin or Stark, Northern Spy or Golden Russet, Nonpareil. For a home orchard, Astrachan, Duchess, Williams Favorite, Gravenstein, Chenango Strawberry, McIntosh Red, King, Wagner, Yellow Bellflower, Rhode Island Greening, Northern Spy, Golden Russet and Nonpareil.

For that part of Nova Scotia from Truro eastward, including the Island of Cape Breton, a good list either for home or for the market. is the following:—Crimson Beauty, Astra-Oldenburg, Wealthy, Alexander, Wolf Oldenburg, Wealthy, A,exander, Wo,f River, Dudley, McIntosh Red, and possibly, Baxter and Milwaukee. To this list might be added for some favored parts, like North Colchester and Pictou County, Ribston, King and Golden Russet. The King should be top-grafted onto hardy stock and so should any doubtful, tender variety. I would not advise the planting of Gravenstein or Baldwin from Truro east, although I have seen some fine Gravensteins grown in Inverness County. A few of these varieties might be top-worked onto hardy stock if the grower is anxious to have them. Of this list, the desert apples are: Wealthy, Dudley and McIntosh Red. Also the Ribston, King and Golden Russet. The Crimson Beauty is one of the earliest apples grown. This and also the Astrachan and Yellow Transparent are used as desert apples because of their earliness. The Duchess and Alexander are excellent cooking apples. The Northern Spy is a hardy variety, but requires a long season to reach its best quality, longer even than we sometimes have in the Annapolis Valley. Wherever there is difficulty in getting a variety to reach full maturity, the owner should plant on early ground and he should certainly keep this land cultivated, BEGINNING EARLY IN THE SEASON. This early cultivation causes the tree to start growth earlier, giving the fruit a longer season in which to grow.

Wherever apples of the best quality are grown and where the grower is catering to the high-class trade, the box is a package worth considering. Especially in parts of this Province where, as yet, only a few apples are grown and, consequently, where barrels are not easily obtainable, the box is to be recommended. Anyone can make the apple box, where it takes a cooper to make a barrel. Good desert apples, such as the Wealthy, Dudley and McIntosh Red, can be grown in almost any part of the Province, and they pack well in boxes. It only requires that the grower exercises care in the pruning, spraying, cultivating, thinning, etc., and he will have apples worth packing in boxes. Sich apples carry to market in better condition than in barrels and bring the highest prices.

Among plums, Moores Arctic, Lombard, Yellow Egg, Washington, Bradshaw, Shropshire, Damson, and Saunders are good varieties to plant. The Japanese varieties are not to be recommended. Even the Burbank is too tender, or does not yield well in eastern Nova Scotia.

Good cherries for eastern Nova Scotia are Montmorency, English Morello and Wragg. The Montmorency is the best. These are all sour cherries. The sweet varieeies do not seem to withstand the climate. Governor Wood and Windsor, of the sweet kinds, do fairly well in the western countries, but they are often short-lived and a disappointment there.

I do not pretend to have named all the varieties for the parts of the Province outside the Annapolis Valley. No doubt there are persons present who can name other varieties equally as good as some given above. If I have said enough to start a discussion on this subject, I shall be satisfied.—Paper prepared by Prof. P. J. Shaw and read before the recent N. S. Farmers' Association at Yarmouth, N. S.

Save Your Old Orchards.

Land owners are waking up to the fact that it is easier and wiser to protect the old trees than to wait the long years which must elapse before new ones can grow to take their place.

Tree surgery and tree doctors are with us and have come to stay. In Unites States alone there are some 20 men making the doctoring of individual trees their sole profession, but their terms are so high as to be prohibitive for the average farmer.

Dr. Frank Johnson, a village forester of Illinois, is one of the best-known tree surgeons in the middle west. The treatments and formulas given below are the result of Dr. Johnson's 20 years of experience with the diseases af trees:

The five most dangerous enemies to mature orchard trees are: Unhealed wounds, improper trimming, insects, rot of the heart and the freezing of water gathered in the trunk.

Make a careful inspection of your orchard at least once a month. Broken bark and broken limbs mean dangerous wounds. Trains of sawdust, cobwebs and drops of gum oozing from the bark are sure signs of bores and vicious insects. Hollow crotches or holes, where the water may gather and freeze, need attention before cold weather. Falling yellow leaves are also a danger signal.

Wherever the bark is knocked off or broken, the insects enter, which lay the eggs from which the borers and winged ants hatch. The leaves of your trees turn brown and the small branches die. The borers multiply rapidly and soon kill the entire tree. The winged ants hatch in colonies which are also fatal to the life of the tree. Their entrance can be prevented by sealing the wounds with a tar mixture made from the following formula:

Pitch tar, 5 pounds.
Pure beeswax, 1 pound.

When trimming your trees, you may unwittingly do the most harm. If it becomes necessary to remove a limb, cut it off so as to leave no projection from the trunk or main branch. Nature will heal a wound in a tree just as in a human being, but the new wood ring and bark cannot form over a projecting stump. Cut the limb off close and then chisel it out until the surface of the wood is below the plane of the bark. Seal the wound with the tar mixture to keep the insects out and the bark will grow entirely over the scar.

All of this seems troublesome perhaps. It is, but not half so much as losing your trees. Careless trimming and lack of sealing cause the death of 50 per cent. of our fruit and shade trees.

Wherever you find a cavity which holds water, you may know that rot will soon start and destroy the heart of your tree. Anotner danger from such an opening is illustrated by a fine old apple tree which decayed in the fork. Rot ate out the heart and water gathered in the hollow. Winter came on and the water froze, bursting the entire trunk. Thus a fine old tree whose Russets had been part of family tradition for three generations was lost, when half a day's work would have saved it for another decade.

In our mature orchards 75 per cent. of the trees are suffering from one or all of these evils. However, this is not so serious as it seems. For the growth of a tree is of such a nature that all of these evils can be overcome.

A tree grows only on the outside. The interior or heart strengthens it but contributes nothing to its life. If you find a hole, big or little, in your orchard trees, take a half day for tree surgery and save the years of waiting which a new tree necessitates.

The tools are simple—a sharp chisel, a brace and bit and a mallet are all you will require. Clean out the rotted wood, then bore diagonally into the wood in different directions from the bottom of the hole that the filling may hold. Fill the cavity with the following cement compound:

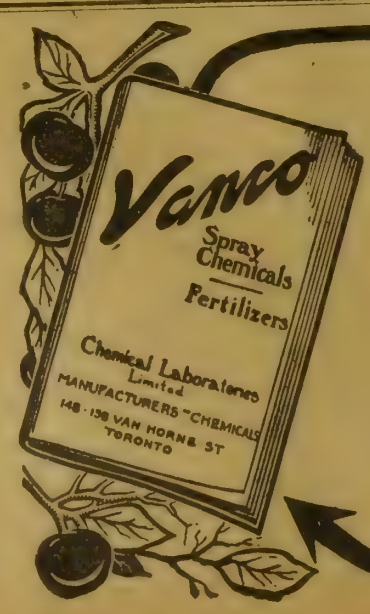
Portland cement, 1 pound.
Sand, 2 pounds.
Cinders, 2 pounds.

Pack the cement in well and seal all around the filling with the tar mixture. Leave no projections beyond the plane of the bark and immediately the wood ring and bark will begin to form over the patch and the tree will ultimately be as good as new. The entire heart of the tree may be cleaned out and filled in this way and the tree will continue to flourish.

This treatment really runs backward, for the best way to save your orchard is to protect the trees from wounds in the first place. Keep nails and spikes out of them. Do not tie ropes or wire about your young trees and do not burn the grass off from an orchard in which you have set out new trees. Three or four days of careful treatment a season will prolong the life of the old orchard indefinitely.—Farm and Home.

Renovating Old Orchards.

Much of the work, and indeed the hardest task connected with orchard renovation, may be done in the fall and on mild days during the winter. There are several reasons why the work should be commenced in the fall, chief of which is that there is more time at that season of the year and the work is likely to be done better than if left till spring, when there are so many other urgent dut-



THIS BOOK READ IN FEBRUARY MEANS PROFITS IN SEPTEMBER.

Vanco Spray Chemicals and Fertilizers.

Vanco Lead Arsenate will destroy all leaf-eating insects—never burns—sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Co., was for "Vanco" Lead Arsenate.

Vanco Lime Sulphur Solution is strong, uniform, clear, efficient — the strongest perfect solution that can be made. Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

Fertilizers Muriate of Potash — Sulphate of Potash — Acid Phosphate — Nitrate of Soda. We are the only house in Canada selling only straight chemical fertilizers —analysis guaranteed.

BUY WHERE YOU CAN BUY EVERYTHING AND SAVE FREIGHT.

SEND FOR THE "VANCO" BOOK NOW—study it at your leisure, and spray for future profits.

CHEMICAL LABORATORIES, LIMITED, Van Horne Street, TORONTO. 32

ies. Pruning at that time of year gives the large wounds an opportunity to dry out before spring, when they may be more effectively sealed up with paint.

The most important point in connection with the pruning of neglected apple trees is to know how much cutting to do—whether the tree needs dehorning or simply a rigorous pruning. The severity of the treatment will depend largely upon the rigor of the tree. As a general rule, the weaker the tree the more severe the treatment. Complete dehorning is the best treatment for a very weak tree, while the same kind of treatment would probably kill a strong-growing specimen. High-headed trees require more drastic methods than low, spreading individuals.

FORMING NEW HEADS.

With such trees the aim should be to form a new head as soon as possible. This is best accomplished by cutting off the main branches within 1 or 2 feet of the trunk and encouraging the growth of a watersprout or sucker to take its place. If there are no suitably situated sprouts their growth usually may be induced by severe pruning during the dormant season.

With trees that are already supplied with watersprouts, it is a simple matter to select a few of the most desirable ones to form the new head, but when the watersprouts must be produced, it is sometimes difficult to make the selection on account of the vast number to choose from. In either case, they should be chosen with reference to their position rather than their size. Those that are nearest the juncture of the trunk and main branches are most desirable.

With trees that are moderately vigorous some people prefer to encourage the formation of the new head on only one side of the tree at a time, leaving the other side until about two years later. The reason for such treatment is to avoid the severe shock to the tree following the removal of all its main branches. A more satisfactory way consists in giving the tree a very severe pruning and avoiding the dehorning process. The upright growing branches may be removed from the center of the tree and the remaining main branches thoroughly thinned out and moderately headed in. All diseased branches, of course, should be removed. Trees treated in this way will continue to bear fruit and the process of forming a new top is a slower one. The old branches may be removed a few at a time, whenever strong-growing and suitably situated watersprouts appear to take their places. This treatment does not apply to very weak trees, which should always be dehorned.

TRAINING THE WATERSPROUTS.

The work of training the individual water sprouts is very similar to training young trees. The greatest danger is in leaving too many. If a spreading habit is desired, it is necessary to give the young shoots plenty of room. The first year's treatment of the selected watersprouts consists in cutting them back to about four or five buds. Each of these buds may be expected to form side shoots, and these in turn should be cut back to about half their growth. Much may be done in the way of directing the growth of these young shoots by cutting back to a point just above a bud that points in the desired direction. In doing this, however, it is well to keep at least an inch from the selected bud, for the shoot is likely to be killed back for a short distance from the cut surface.

The growth of large branches may be influenced in much the same way, by cutting back to a side branch that points in the desired direction. Furthermore, when cutting back the larger branches it is necessary to cut back to a side branch to insure the healing of the wound. Most farmers nowadays realize the necessity of making close and smooth cuts and avoiding the familiar stubs of old-time practice. Even yet there are some who prefer to cut off a side branch at right angles to itself instead of parallel with the parent branch. The former method makes a smaller wound, but leaves an objectional shoulder that seriously interferes with the healing of the wound.

The smaller wounds, or those less than 2 inches in diameter, will usually heal over before there is any danger from decay and therefore, do not require any further treatment. The wounds over 2 inches in diameter should be protected by paint, but this should not be applied till spring. Ordinary white lead and raw linseed oil is very suitable for the purpose, although some prefer coal tar. On very large wounds it is advisable to tack on a zinc plate, which has been cut so as to cover the woody portion of the wound, leaving the bark exposed so that it will heal over the edge of the plate, making a permanently tight joint. The plate is usually tacked on while the paint is wet, and the tacks are placed near the edge of the plate. Large wounds that are not treated in this way will need to be repainted every year.

Hollow cavities may be treated in the same way by sawing off the surrounding wood, producing a freshly-cut, flat surface on which to nail the zinc. Trees that are badly hollowed out by decay are seldom worth attention, except where they are found around the home and when they possess more than commercial value. The lives of such trees may be greatly prolonged by cleaning out the decayed wood, sterilizing with a solution of copper sulphate, and filling with cement. Cement is necessary only when the tree needs support, for it furnishes no curative effects, as is sometimes supposed.

SPRAYING MAY BE DONE IN FALL

The control of San Jose scale on full grown apple trees is not such a difficult task as was once supposed. In cases of serious infestation, however, it is usually necessary to spray twice, once in the fall and again in the spring. For the spraying of old trees it is generally believed that miscible oil is more suitable than the lime-sulphur wash. By spraying with oil in the fall and the lime-sulphur wash in the spring, good results may be expected.

The former should be used at a strength not less than one to 15, and the latter (commercial brands) not less than one to eight. Either of these preparations may be safely and effectively applied any time while the trees are dormant, providing the temperature is above the freezing point. Thoroughness is the important point in the control of scale, and it should be the aim to completely cover every portion of bark on the whole structure.—Prof. C. D. Jarvis, Connecticut Agricultural College in N. E. Homestead.

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FERRY'S SEEDS

DAIRYING.

Factoay By-Products.

VARIOUS METHODS OF UTILIZING THE SKIMMILK, BUTTERMILK AND WHEY.

In the manufacture of butter, skimmed milk and buttermilk are the by-products and in cheesemaking, whey is the only remaining substance left. Progressive dairymen are learning to appreciate these useful materials and frequently one hears, that if it were not for the by-products there would be little money in dairying.

The question of the best means of utilizing these by-products must in many instances be governed by local conditions such as convenience to markets and by the market values of the products into which these by-products can be converted.

Skimmed milk is whole milk minus its fat and its greatest use undoubtedly is in the feeding of young animals, particularly calves and pigs and for hens. The value in cash of skimmed milk for this purpose, depends on the value of the animals to which it is fed. Fifteen cents per hundred pounds is probably the minimum value and twenty-five cents the maximum, the value always being increased when the milk is properly cared for. During recent years an outlet has been made for large quantities of skimmed milk in the manufacture of casein, but as yet it does not often yield the farmer as much as he can obtain by feeding the skimmed milk to good calves, hogs, chickens and laying hens. About fifteen cents per hundred pounds of skimmed milk, is as high as most buyers pay for casein above the cost of manufacturc. The time will soon come however, when more money may be realized from this source, as the industries employing and the number of articles made from casein are increasing rapidly.

Immense quantities of skimmed milk are annually made into cheese. A hundred pounds of good skimmed milk will yield about eight pounds of Cheddar cheese, which at times can be sold for as much as ten cents per pound, giving a profit of eighty cents per hundred for skimmed milk. As a general thing however, such cheese sell for about five cents per pound, depending, as with most things, on the quality. Creamerymen located within short distance of towns and cities can usually dispose of considerable skimmed milk in the form of cottage cheese and baker's cheese. One hundred pounds of good skimmed milk yields about fourteen pounds of cottage cheese which retails at from ten to twenty cents per pound when put up in neat packages weighing one-quarter pound each. The small paper pail seems to be a favorite form for carrying cottage cheese. It seems regrettable that a greater use of skimmed milk is not made for food purposes, especially amongst the poorer classes in cities. It is an excellent food for children over one year old and for adults, and if it were sold for one-half tne price of whole milk, many poor families would be greatly benefited and more money would be realized by farmers and creamerymen. The day is not far distant, when the scarcity of whole milk will make the sale of skimmed milk for food a necessity. Towns and cities are offering ever increasing outlets for sour milk drinks and skimmed milk can be profitably utilized for this purpose. In districts where the sale of spirituous liquors is prohibited, buttermilk makes a useful non-intoxicating substitute and the fact that the medicinal effects of buttermilk are so useful in clearing out the bad effects of "booze" makes it an ideal side line for bars and saloons. The greatest outlet for buttermilk is undoubtedly for feeding purposes to hogs and hens. For this purpose it is worth ten to fifteen cents per hundred pounds. Anyone who is fond of buttermilk hates to think of it going to the hogs at this price when it cannot be obtained in the city, frequently at any price. A hundred pounds of buttermilk makes over two hundred glasses, which at five cents per glass gives ten dollars per hundred pounds. A big profit indeed for the retailer.

A very nice grade of soft cheese can be made from buttermilk. It closely resembles cottage cheese but has some additional desirable characteristics and is a profitable side line as about fifteen pounds worth twenty cents a pound retail, can be obtained from a hundred pounds of good buttermilk. The methods of manufacturiog these cheeses and sour milk drinks can be ascertained through late dairy books and bulletins.

Whey is probably the least appreciated of the by-products and yet it represents a tremendous business in itself. The first thing for factorymen to consider in regard to the utilization of whey is the advisability of separating its fat content. This can be determined by testing the whey with a Babcock test and multiplying the fat test by nine-tenths the weight of the milk. This gives the pounds of fat available in the whey and one can easily figure whether this will be large enough to give a reasonable profitable on the money necessary to be invested in whey skimming and buttermaking machinery. Most of the fat from the whey yields greater profit in the form of butter than when fed direct to hogs. One thing is certain, that a pound of milk fat will not put a pound of fat on a hog. Therefore in feeding hogs unskimmed whey, fat worth twenty-five or more cents a pound is fed to produce less than five cents worth of hog meat.

In the average factory, the total cost of a pound of whey butter is about eight cents and in many places a larger profit can be realized by manufacturing whey cream into ice cream, or for regular cream purposes after it has been pasteurized. The great feeding value of whey lies in its sugar content which averages about five pounds in every hundred pounds of sweet whey. One pound of sugar in this form will put just as much or more meat on a hog as a pound of fat will, but the sugar in this form is of smaller commercial value owing to the difficulty of separating it from the other constituents. Pure milk-sugar which is manufactured from whey retails for some forty or fifty cents per pound but the cost of obtaining it is so great the condenseries seldom pay more than five cents per hundred for whey. It is worth at least seven cents per hundred for hog feeding. To obtain the greatest value from the whey however, it must have its sugar content preserved in the best possible condition. This can be accomplished only by pasteurization of the whey at the factory. This adds fully twenty per cent. to the feeding value of the whey and the cost of pasteurization seldom runs over three and one-half cents per thousand pounds. Whey and skimmed milk should always be pasteurized before being returned to the patrons, so that milk carried diseases may not be transferred from one herd to another through this channel. The whole question of the value of the by-products of the dairy in fact, depends on the care they receive and if properly handled they probably yield about as much actual profit as the whole milk itself.—Essay by Charles A. Publow, M. D. of Picton, Ont., awarded first prize in New York State Fair Competition.

Cause of Sour Milk.

Bacteria, ordinarily found in milk, may or may not facilitate the growth of lactic micro-organisms. About 57 per cent. of the associate micro-organisms, when shown in combination with the specific lactic micro-organisms, accelerate their growth and action. The relative number of each micro-organisms introduced into the combination may or may not have a decided influence upon the accelerations of the growth of the lactic micro-organisms of lactic fermentation. Acceleration may occur at the beginning of the fermentation, or at the end, or at any stage between.

The means by which this acceleration of lactic fermentation is produced is not the same in all cases. It appears to be due to products manufactured by the associate micro-organisms, sometimes stable to heat, sometimes unstable; sometimes under alkaline conditions, sometimes under acid conditions; sometimes with apparent digestion, sometimes with no apparent digestion. It is very doubtful wnether these products combine with the inorganic or casein constituents of milk, as is the case of lactic acid, so as to permitlactic micro-organisms to grow more freely.

The period at the beginning of lactic fermentation, during which the number of bacteria is continually increasing may be greatly shortened by vigorous associate bacteria influencing the lactic micro-organisms. Usually the associate micro-organisms disappear with the formation of appreciable amounts of lactic acid, yet the associate micro-organisms may continue or persist, causing an abnormal lactic fermentation.

Associate micro-organisms may influence lactic fermentation by producing "off flavors," "off aromas" and an unusual high degree of acidity. Even the character of the acid may be completely changed. It follows that the elimination of "filth"

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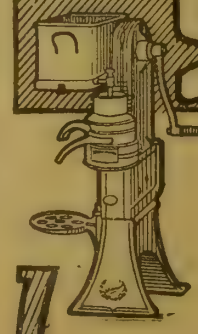

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bacteria is the only means of eliminating the product causing lactic acceleration, inasmuch as the products may be so stable as not to be destroyed by ordinary means of milk treatment.

The Origin and Distribution of the Guernsey.

Editor Maritime Farmer:—

During the past few years dairying has made rapid progress in tne Maritime Provinces and we see a greater interest being taken in the different dairy breeds of cattle and also a large increase in the number of pure bred cattle that farmers are keeping.

Perhaps no breed has made such rapid advancement in popular favor as the Guernsey, and this is seen in the large exhibits at our fairs and dairy tests at each one of which they have demonstrated that they have a right to a very high place in the opinion of the farmers of our Maritime Provinces.

The native home of the Guernsey is on the island of that name, one of the Channel Islands situated in the English Channel and distant from France about fifteen miles. The group of islands consists of four large ones: Jersey, Guernsey, Alderney and Sark. It is on the second and third of these that Guernseys are raised. The island of Guernsey is triangular in shape, about nine and one half miles long and six wide at its widest part. Its population numbers about 35,000 and about 5,000 head of cattle are maintained. The climate is very mild the year around and the people, besides raising cattle, make a specialty of growing under glass such crops as tomatoes, grapes, etc., for the London market.

Like many other breeds the origin of this one is somewhat obscure but it is supposed that it is derived from the French cattle of Brittany and Normandy. The dark color and size of the present animals being attributed to the use of bulls brought from the latter place to the island at a very early date.

For many years this breed in its native home has been protected from outside ones as all cattle brought to the island, from any source other than Alderney, had to be slaughtered within twenty-four hours after landing, consequently, we have a comparatively pure breed of cattle and by careful selection on the part of the breeders they have developed a larger breed of cattle than the Jerseys, which are of the same origin, and one that is able to consume a large amount of fodder and convert it into a valuable product.

Guernsey breeders on the Island have long been encouraged to improve their cattle by the Royal Guernsey Agricultural and Horticultural Society, which aimed to bring the breed up to a high scale of excellence. To do this they hold annual exhibitions and the best individuals are carefully inspected and are given a rank according to merit.

About 1818 we have the first record of the importation of Guernseys to the American continent when a pair were brought from Alderney to Penn. U. S. A. The next importation was made from Guernsey Island about 1830, and the importation has gone on from that time until the present. In 1870 the American Guernsey Cattle Club was orgaized and for some time the Maritime breeders recorded their cattle in this club's books but in 1905 the Canadian Guernsey Breeders' Association was formed and the animals are now recorded in the Canadian National records at Ottawa.

During the early and middle part of the nineteenth century the breed met with rather slow growth on account of the limited number of animals that were imported but in 1893 they attracted a great deal of attention by their record at the World's Columbian Exposition at Chicago and since that their growth has been a rapid and healthy one. At the present time they are distributed throughout the New England States, many of the Central ones, and are rapidly invading the territory on the Pacific slope and we find many herds in California, Oregon and Washington. In Canada we find them strongest in the Maritime Provinces, but they are gradually spreading westward and there are a number of large herds in Quebec and some few in Ontario.—D. G. McKay, Heathbell, Pictou Co., N. S.

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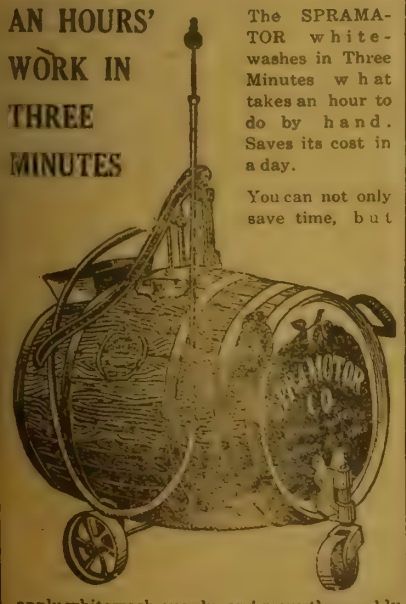

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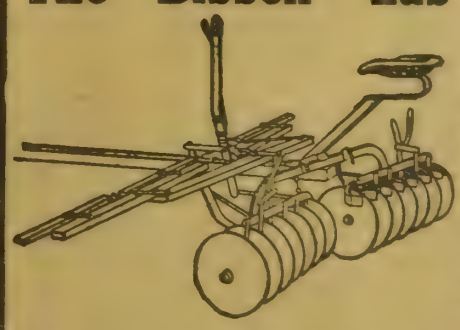

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The special shape of the "Bissell" plates cause them to enter the ground naturally and TURN THE SOIL EASILY. Steel scraper blades meet the Disk Plates chisel fashion and keep the plates clean of trash by movable clod irons—the only Harrow that has this feature.

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LIVE STOCK.

Warm Food for Pigs in Winter.

In a general way I am not impressed with the necessity or desirability of cooking food for the animals of the farm, either on the score of health or economy, but the pig in winter is an exception. He is decidedly a warmth-loving animal, and he always makes much greater progress in summer than during the colder months, although the food he gets then is generally inferior. All animals, and especially all young animals, thrive best in warm weather, but the pig is especially remarkable in this respect. Indeed, many breeders will not have young pigs about them in winter, not only on account of the tendency to rheumatism, but because they do not grow and thrive or pay for the extra food required for maintenance. Pigs in a state of nature supplement grass or herbage with roots of various kinds, for which they grub, beech nuts, acorns, &c., but domestication has accustomed the pig to a dietary consisting mainly of meals, or starchy foods like potatoes. With the improved breeds, bulky materials are as out of place as straw for a racehorse, and concentrated foodstuffs need to be employed. With this knowledge of the habits and needs of the animal to guide him, the pig-keeper, in his choice and preparation of food, should take care that the selection is such as will enable the animal to make the greatest possible progress in the shortest possible time.

In these days no other system of pork production is possible, and feeding, like farming, has to be intensive to be profitable. A healthy pig will eat almost anything that is put before him—he is literally omaivorous—but there can be little, if any, progress made if the food consumed has the effect of causing the animal to shiver for an hour after it has returned to its bed, or while it is being warmed up to the temperature of the body.

DANGER OF COLD FEEDING.

Dealing with the so-called "cramp" in pigs, Mr. Sanders Spencer ("Pigs: Breeds and Management") says:—"Then, if they are fed on a large quantity of cold slop, they are frequently seen to shake with cold, and return to the damp lair and huddle one on top of the other in the vain attempt to find warmth, and to warm up to natural heat the cold food with which they have filled themselves."

This is what commonly happens in cold weather, say, from December to March, if the pig's food consists of swill or wash and meal, the former taken from a tub or cistern exposed to the weather, and, therefore, at a very low temperature, or the meal mixed up into a thin paste with water that is little above freezing point. If these conditions are reversed and food given that has been cooked, or is warm, the pig may shiver as before, but this is a temporary chill from coming into contact with the colder air outside the sleeping place, and not on account of having swallowed a bellyful of cold swill.

COOKED FOOD.

No better proof of the benefits derived from the use of warm food can be adduced than the appearance of the animals themselves. In ordinary circumstances there is no great gain in cooking food, with the exception, perhaps, of potatoes, as most of the benefits derived from it can be obtained by heating the food with scalding water, but cooked food is generally warm food. The use of warm food for pigs is often objected to on the score of expense, and there is something in it, for time and fuel are important items. Economy in pig feeding is of great importance, because there is not a wide margin of profit under normal conditions of the pig trade, and pig feeders may well hesitate about going to the expense of boiling pig food, or boiling water to scald meals. In summer, when the temperature is high, cooking or scalding for pigs is quite unnecessary; but in cold weather the same quantity of meal gives better results when mixed with boiled mash, potatoes, or garden stuff, or prepared with boiling water, than if mixed with cold swill or colder water fresh from pump, well, or spring. There have been many practical experiments carried out on an extended scale, which confirm individual experience that the gain on warm faod is worth the expense.—Pateley Bridge in Farm and Home.

Sheep the Golden Hoof.

Editor Maritime Farmer:—

What a pleasure it affords me to sit down and write a few lines in favor of one of the greatest gifts of the Almighty to mankind. Bible history tells us that the raising of sheep was one of the earliest modes of business, for was not one of the first family a herder of sheep, and at that time wealth was counted by the number of sheep kept by them. And so it has been handed down to us from one generation unto another until we find ourselves still raising sheep, but by no means the numbers that we might be raising. What a wonderful wealth might be wandering in wooly members o'er these hills of ours, clad with such nutritious grasses as are prevalent in our Maritime Provinces and with a climatic condition favoring the production of the very best grade of wool to be found in our country. What reason have we then to offer against the production of more sheep and better ones? We have no more obstacles before us here than in any other part of the country—but best of all many, very many, advantages. One only needs to travel into the great sheep ranching States or Provinces of the west, and then you would wonder where or how the sheep found grazing in such large numbers, received their living. I am firmly of the opinion that the most of our Maritime farmers are not aware of the good fortune they possess, or of the possibilities that are before them. Let us then be up and doing. That there shall be a growing demand for good lamb there is no doubt. Very hard, severe winters followed by a long drouth has been the cause of 50,000 head of sheep a day being slumped onto the great Chicago market, and who can doubt but that there shall be a scarcity of lamb, for some time to come. Good prices are almost a certainty, but we must bear in mind to share in these good prices we must have the goods.

Then to the would-be sheepman let me say a few words. First in the selection of your flock, see to it that your choice lies in good strong ewes—well wooled—I mean by this that your sheep carry a good heavy fleece, of good quality and covering not being bare of wool on belly and legs. Then choose as to your form, in this case first of all do not look for sheep too nigh off the ground in other words—leggy ones—usually speaking they are hard feeders, therefore try to get them as low to the ground as possible.

Next, following the sheep from the head backwards; try to have as little neck as possible. Coming to the shoulder point have it open or broad on top with strong neck viens and directly behind the shoulder a strong heart girth; this is very essential as a weakness or depression here is what I consider to be a great fault, leaving as it does, lack of constitution.

Then coming to the back, have it straight, with well arched ribs, loin broad and full and hips wide and level and rump carried back as squarely as possible. The twist being deep and full and flank full and even with the underline. Then having chosen your flock of ewes, what about the sire for your next year's crop of lambs? This is by all means the most important issue to your building up of your grade flock. Kindly bear in mind the sire is half the flock. This being the case, you will readily see the value in securing a ram of number one quality. As to the breed, that is a matter of one's own judgment, some prefer one breed while another has his choice, but at any rate, see that you procure a pure bred sire and a good one. Now having selected your sire and your flock, look to your care or management of same.

Sheep do not need pampering nor great care as do other kinds of stock, but still care must be given them to prove of great success to the owner.

Let us direct our attention to the building which we will call our sheep barn or shed. See to it that there is first of all plenty of light penetrating into it and equally as much fresh air. This is very essential. Have the building well enclosed or boarded so that the sheep shall not be exposed to draughts in the cold fall and winter nights. Place inside your pen a serviceable feeding rack being so designed so as to shield the sheep from getting their fleeces full of foreign material that might lodge on them from the hay or fodder being fed.

Starting then in the fall of the year with your flock, be sure and have them dipped in any good reliable dip so that they shall enter the winter free of vermin and have the fleece in a good, healthy state.

See to it also that your ram is not over taxed at the mating season, and don't forget to try to get him a feed of oats and bran, mixed, say at least once a day, and when breeding season is over have him put into a pen and cared for away from the ewe flocks. It is very injurious to have the ram running at large with them during months of pregnancy. When feeding (the ram) is sometimes apt to knock the ewes and this has very often caused abortion. Through these months of pregnancy care must be taken of the ewe flock so that when the lambs arrive they shall be strong, healthy ones. At this time do not over feed with roots of any kind especially Swedish Turnips, but a few are grand feed, and these not more than once a day, a little grain, say once a day a mixture of one part wheat bran to two parts oats is good, and hay, clover if possible where alfalfa clover is fed no grain would be needed. But above all your feeding ration, see that your ewes have plenty of exercise. If they are not inclined to leave the barn, take your hay out a few rods in a sheltered place and so make them travel in and out, and in this way force them to exercise themselves.

And now we come to the most pleasant and interesting part of all—to the shepherd—that of the lambing time. What a welcome bleat is the cry of the first dropped lamb of the season. Now is the time for the shepherd to exercise all of his ability. Save as many of the lambs as possible and see that the little fellows never have a stunt in their growth.

It is an allwise thing when the young lamb, of masculine sex, is from ten to fifteen days of age, to have him castrated, and at the same age, to dock the tails of all. And now the lambs will be looking for a chance to eat. For this purpose I would advise a small enclosure or pen made at one corner of the ewe pen, with spars so that the little lambs could run through, and in a trough with some tempting rolled or crushed oats, wheat bran, and a few pulped roots, help themselves.

It is surprising indeed to see how quickly the lambs will take onto their feeding pen, and they will look for their feed as regularly as do the older ones.

Now is the time to keep watch on the lambs for ticks, which are sure to come off of the mothers, these can be made away with by the dipping process. But make haste and as soon as possible shear the ewes, and a few days afterward dip your lambs and you will in all probability have solved the tick question for a time.

When seeding time comes, don't forget a patch of rape for the lambs; this will be found a great help for summer or fall feeding. It was with great pleasure I read in your valuable columns of the step now being taken for the advancement of sheep in Newfoundland. May this be an object lesson to us, and may we all start fresh again and revive a fallen industry so much in need in our country, and where advantages for same are unexcelled anywhere. Only a little work and energy along this line, and, may I ask where shall our land values be at in a very few years hence?—Jas. A. Telfer, Markhamville, N. B.

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Digestion in the Calf.

In the juvenile ruminant, the abomasum, or true digestive stomach, popularly the "reed," or "rennet," so called because it secretes the rennin or milk-curdling ferment, whose action is necessary to clot the casein of milk, is by far the largest pouch of the gastric mass. Fluids, like milk or substitute gruels with skimmed milk, are carried directly into it, and there meet the secretions most concerned in their digestion, so that there is no great use for the other pouches or compartments which later in life play such an important part in the function of digestion or preparation of the food for assimilation for the purposes of nutrition. This is why the young calf cannot deal properly with hay or other bulky food, and also why bringing it on to bulky or solid material should be a gradual process. In a state of nature, where the cow and the calf run together on the grass, the calf begins very early in its life to pick about with its mother. It takes a little grass and a great deal of milk, but by progressive stages, during which the rumen or "maw" is gradually developed, this proportion is changed, and the first stomach eventually overshadows the fourth in the matter of capacity to an even greater degree than at birth the fourth exceeds the first. This explains why the young ruminant cannot extract sufficient nutriment from hay, and why the mature bovine cannot exist in a healthy, thriving condition on slops, although for some time life may be maintained on it.

Keeping Aborting Cows.

Many a valuable cow has been disposed of at the price of a canner for the simple reason that she has aborted. To substantiate this statement I wish to call attention to the case of a cow that has long held the world's record in her breed. This cow was bought out of a stock yard by one who knew a good cow regardless of her history and surroundings.

The mere fact that a canner may be developed into a champion butter producer ought to satisfy the average person that wonderful work can be accomplished with cows if they receive the proper care and attention. For this reason, do not dispose of cows because they have aborted, or have had misfortunes that make it seem easier to dispose of them as canners than to give them a little special care and attention and develop them into healthy, profitable animals.

Disposing of a cow that has aborted does not necessarily free the herd from exposure. Invariably a cow that has aborted retains the afterbirth. This is often permitted to rot or slough away. The animal is then rendered a hotbed of disease.

If such an animal is not fit to live, why should it be fit to die and be consumed by human beings. Unless a cow is advanced in years, it will pay the owner handsomely to give her a little special care and attention and restore her to her normal health and condition. This can be done at a much less expense, compared with the loss brought about in disposing of her as a canner.

Fails to Breed.

T. A. M., P. E. I., has a six-year-old cow that does not get with calf, although she has been bred to three different bulls. Failure to breed is due to many causes, such as too high flesh and feed, diseased ovaries and uterus, abnormal uterine secretions and adhesions about the mouth of the uterus caused by injury, perhaps at last calf. Give low feed and a dose of a pound of epsom salts a few days before coming in heat, and just before service the hand should be introduced and the mouth of the uterus opened. If this treatment fails I should be inclined to think that there is some local disease.

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THE HORSE.

Horses do Best When Supplied with Different Foods.

A common fault in feeding horses is the lack of variety of feed. With the large number of different grains and feed stuffs available, it does seem that every team owner should provide for his animals a ration that would be perfectly acceptable. It is a fact, however, that not more than 20 per cent. of the horsemen of the country feed a well balanced ration, and, adds the American Agricultural from which paper this article is reprinted, the other 80 per cent. still cling to the old rations of corn and hay, or oats and hay, which practical experiments have long since proved to be expensive and wasteful.

Think of your own appetite, when it comes to feeding of horses. Suppose you are performing hard, manual labor. How long would you be content to eat two articles of food, the same thing for every meal, day after day? It is quite safe to say you would tire of your ration in a very short time. It would be like eating a quail a day for 30 days, and your digestion would soon get out of order.

CAUSE OF IMPERFECT DIGESTION.

A bad digestion and a poorly nourished body is always the result of improperly balanced food. When such a condition exists in either man or horse, the best physical effort cannot be expected. It is impossible. No one or two articles of feed will give your horses all the elements of nutrition their system needs. If you want the best results, feed a ration that contains all the elements of nutrition in properly balanced proportions. Every stockman realizes that corn alone is not a well balanced grain for feeding. Neither is oats, or barley. Of the three grains, oats is probably fed more extensively than corn or barley combined. The latter grain is rapidly gaining favor as feed, however, and when properly combined with the other grains, makes an ideal ration.

The necessity for grinding a part of the ration cannot be too strongly emphasized. The horse owner who fails to do this loses 25 to 30 per cent. of its nutritive value. The hard outer covering of the grain makes it difficult to assimilate and a very large proportion passes through the stomach of the animal in an undigested condition. An examination will show the whole grain and prove the truth of this statement.

ADVANTAGES OF GRINDING.

A ground ration is ready for quick digestion. Your animals utilize it more readily and there is practically no waste. It should be remembered that the horse digests its food quickly and whatever ration you feed should be prepared with a view to supplying the nutrition the horse needs. Horses will work better and keep in better condition on five or six quarts of ground mixed feed than they will on a considerably larger amount of whole grain. Feed a variety of grains properly balanced and have them well ground and you will not only have better horses, but it will cost you less money to obtain this much desired result.

Horse Shoeing.

True economy does not consist in refraining from spending money; to withold repairs at a critical time, for example, may save a labour bill, but it may mean the entire destruction of a building, and that would be a very expensive "economy." So it is with the feet of the horse, unless they are kept in a proper healthy condition the horse becomes practically valueless, for "no foot, no horse" is an axiom the truth of which is very plain. Reasonable expense in the care of the feet is, therefore, the truest of economy. One of the extravagances which country people especially are guilty of, is in allowing the shoes to remain on too long.

HEAVY SHOES.

With this end in view, they insist on the use of shoes that are unnecessarily heavy,—indeed, many seem to hold the opinion, though they would not perhaps admit it, that the best farrier is he whose shoes will wear the longest. It ought not to need saying that if a horse, every time he lifts a foot, has to raise a shoe which is needlessly heavy, a strain is put upon him for which there is no return, and to a certain extent his working powers are lessened. A well-known veterinary authority, Sir F. Fitzwygram, says that he has known very large cart horses burdened with shoes which weighed as much as 7 lb. each. This means an enormous weight of iron to lift if the movements in a day's work are calculated, and in so far as it is unnecessary it is not only unduly wearying to the horse but is a loss to the owner. It is not possible to give any exact weight to adopt for the shoe, for the wear in the case of different horses varies greatly, and much depends on where the work is done. Horses travelling over stone sets, for example, would wear their shoes much more quickly than animals working on the land. Two horses working together may have different requirements as their "action" is different, and it must not be forgotten that the feet themselves vary in character, animals bred in an upland district having generally much stronger feet than those bred in the fens or in other low-lying moist places. But it may be taken as a general rule that no horse should be fitted with a shoe that will last more than a month or five weeks, and that the shoe should be replaced as nearly as possible every month.

THE FOOT A LIVING STRUCTURE.

The foot is not a mere block of horn to which iron is nailed for its preservation when travelling over hard surfaces, but a living structure, continually growing, shedding off parts that are worn out and replacing them with new material; and if the shoe is allowed to remain on too long the horse will suffer and his capacity for work will be impaired, while the foot itself may be permanently damaged. It is, therefore, not in any sense economical to keep the shoes on as long as they will last, and if they are to be discarded as quickly as they should be it is a waste of iron and of the horse's strength to make them too heavy. The owner should study the require-

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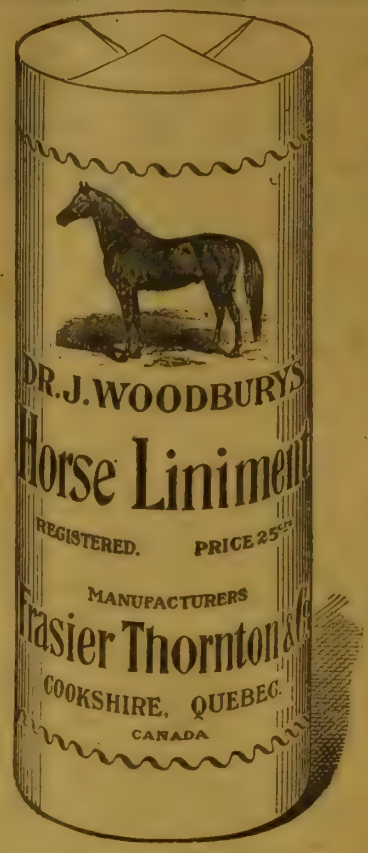

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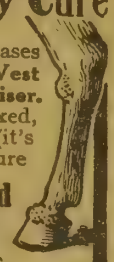

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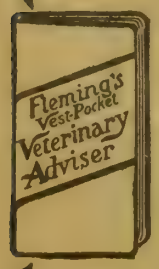

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ments of each of his animals and give him just what shoes are suited to him, if he desires to let the horse work in comfort and do the utmost of which he is capable.

But there is a fashion in shoeing as in most other things, and the treatment of the horse's foot is dictated by fashion, sometimes to an extraordinary degree. Who is not acquainted with the paring out of the sole and the trimming of the frog, and the rasping of the crust, that take place in the farrier's shop, and for which it is to be feared it is not the farrier so much as the owner who is responsible! The owner has his own views, and will have them carried out, if not by this farrier then by that. It would sometimes seem that the object is to make the foot to fit the shoe rather that the shoe to fit the foot, but the underlying reason of the paring and rasping is to make a "neat" foot—to finish it off nicely, so that it may look symmetrical and blocky. The desire for neatness is commendable, but a nice appearance is dearly purchased if the horse is damaged in the process.

What is it that keeps the horn of the foot in its elastic and pliable condition? It is the amount of water that it contains, and it may surprise many a horseman to know that the amount ranges from 25 per cent. in the horn of the crust to 43 per cent. in that of the frog—that is to say, nearly half of the latter is water! Let horn be exposed to sun and air and it quickly becomes so dry and brittle that it can easily be reduced to powder, but if it is soaked in water it remains tough, yet pliable, and is not easily broken. Nature provides the foot with a varnish for the special purpose of keeping the horn moist, and all the parts of the foot have some provision for the same purpose. Now, in rasping the smith takes off this varnish and leaves the horn exposed to the action of the atmosphere, with the result that it quickly dries and deteriorates, and we have all sorts of troubles arising as a consequence.

EVILS FOLLOWING MUTILATION.

Among these evils may, for example, be mentioned sand-crack, which is frequently traceable to this foolish practice of rasping the crust, though it may be due to other causes also. This may cause great lameness and pain, and if it progresses far, so as to expose the sensitive laminae; and it is a troublesome complaint, because split horn cannot unite, and repair can be brought about only by growth, which takes time, during which the services of the horse are lost to the owner. That very painful disease known as laminitis, or founder, may be brought about by the rasping of the crust and the paring of the sole and frog, because of the effect these practices have on the horn. The disease is directly caused by concussion, and when the horn is damaged the sensitive parts are naturally exposed to harder blows than they would get were the foot sound.

These are illustrations of the results of the mistaken practices indulged in by owners and smiths, either in response to the dictates of fashion or because of prejudice. But they do not stop here, for often the paring of the sole and trimming up of the frog are carried on to a much greater extent. Some horsemen will have the sole pared away until it "springs" when pressed by the thumb—a most mischievous thing to do. In order to enable this to be done they make use of filthy stoppings such as cow-dung to soften the horn. Or when this has not been done in preparation, sometimes a shovelful of hot ashes is poured into the hollow of the foot before the removal of the shoe, and allowed to remain long enough to soften the horn and render paring easy. But the sole needs no paring at all, because the fibres break off in flakes when they have attained a certain length, and this constant succession of flakes serves a purpose in keeping the other layers in a moist and supple condition.

THE FROG.

It is similar with the frog, which is sliced away for appearance' sake. Notice the high calks to be seen on the feet of many cart horses. It would seem that many drivers of heavy horses have the idea that something dreadful will happen if the frog comes on the ground, but that is exactly what nature intends it to do, and if the feet have been kept in a healthy condition from the start, the frog will be in a condition to carry on its natural work. It is curious that horsemen will first of all have their animals rasped and cut, and afterwards will apply a "dressing" to keep the feet moist—that is, they first destroy nature's own provision, and then go to trouble and expense to provide something else, for the same purpose, that is not nearly so good!

If we contrast the feet of a horse who has been shod in the conventional fashion for a long time, with those of a colt who has not yet been burdened with shoes, we shall see that the frogs of the former are weak, shrivelled and thrushy, while those of the latter are full, healthy and fleshy. Those of the horse cannot stand pressure, while the colt's are uninjured by work even on hard ground. In dealing with horses not spoilt, let the crust or wall be lowered sufficiently to allow the frog to come to the ground, but never permit the smith to use the knife on the frog or sole, or to rasp the wall above the clinches.

HOT SHOES.

Damage is often done by fitting shoes on too hot. This injures the parts near to those burnt away, and the practice ought to be prevented. We do not mean the practice of fitting hot shoes, but the use of excessive heat in order to burn away portions to make the foot fit the shoe. This we are assured is sometimes the result of "cutting" prices, and it is well to pay a good smith a fair price for doing his work properly. If prices are reduced unduly it is rarely the purchaser who benefits in the long run. In this case the smith lightens his own labour to compensate for the smaller price, but the owner, although he may not realise the fact, is the loser because his horse is injured.—Farmyard Series.

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POULTRY.

When the Amateur Becomes an Exhibitor.

To the amateur who has decided to show his birds the question where he shall make his first exhibit is an important one. He is to be congratulated upon arriving at the decision to become an exhibitor. If he desires to establish a reputation as a breeder of high-grade Standard-bred poultry, it is essential that he show his birds in competition. If it is his intention to breed them for his own satisfaction, exhibiting in competition with others adds zest to his pleasure.

Different motives impel the amateur to place his birds in competition with others. Perhaps he bought eggs or stock at a medium price from some breeder who claimed to have pure-bred stock and he believes that his birds are just as good as those of his neighbor who bought high-priced stock and eggs from some well-known breeder of high-class stock. They look much alike to him, though amateur No. 2 naturally thinks that his birds are far superior. Amateurs usually are pretty certain of the superior excellence of their own birds. Did he not buy good breeding stock or eggs? Were not the chicks that hatched lively and did they not grow fast and are they not the picture of good health and vigor? The proud owner sees nothing but their good points, perhaps through ignorance, overlooking serious defects or even a disqualification. Some think that the good points ought to outweigh even the latter.

Before deciding definitely where to make his first exhibit, the amateur should study that part of the Standard of Perfection that applies to his particular breed or variety. He should also look up tne general disqualifications and then earnestly endeavor to select those birds that come nearest the Standard requirements in every section or the ones that average best. If possible he should call in some experienced breeder, an exhibitor or judge, some one who is familiar with his breed or variety and who knows about how strong the competition is likely to be. His advice should be valuable.

Occasionally an amateur makes his first exhibit at one of the largest shows and meets with success, but we do not advise amateurs to try the big shows first, for there are several things (we might call them tricks, of the trade) that enter into the winning of a blue ribbon at a large show that the amateur can learn only by observation and experience.

THE FALL FAIR POULTRY SHOW.

Perhaps the safest course for the amateur who thinks he has good stock, is to send for a good poultry judge and get his opinion. If this is not practical, then take the birds to some fall show. The poultry shows at our county fairs these days afford good competition and poultry judges of ability are now being employed to place the awards where formerly the judging was done by Tom, Dick or Harry. As a rule, amateurs have very few ideas in regard to properly conditioning their birds and his first exhibit is likely to teach him a great deal. He will learn from older exhibitors many things in regard to preparing his birds so as to bring out their best points.

Of course we always meet the fellow who has "just as good at home," but when finally he puts his birds in competition with others he learns that tne judge discovers many defects that he never saw. The trouble is that most breeders, especially beginners, can see nothing but the good points of their fowls. They watch them grow from shell to maturity and some one bird or some good point stands out so prominently that it overshadows the defects in the eye of the owner, but the judge looks for defects.

Let us not call the fall fair a poultry exhibition. Let us consider it rather as a school of instruction. Suppose the amateur following our advice takes his birds to a fall fair and gets the opinion of the judge and good breeders in regard to them. He is then in a position to select his fowls for his real exhibit, which generally follows the fall fair within a month or two, and the knowledge that he has gained is well worth all the expense to which he has gone. As the largest shows are held generally in December and January, the amateur will have plenty of time to "try out" his birds at some of the smaller shows in November. While it is a fact that birds are at their best just once and it is not advisable to exhibit fowls too often, still the amateur must consider his first show or two as a school wherein he is to learn how to win the ribbons. Therefore, we advise the amateur to select some good show to be held in November that is not too far from home. When one wins all he can, the money barely pays expenses and as expenses are an important item with the majority of exhibitors, it is well to show first at no great distance from home, nevertheless he should seek a show that will have good birds in competition, for that is where he will learn the most and where the honors count if he should win. The poultry journals publish lists of shows that are to be held, with dates and judges and all shows are advertised more or less locally. When he decides where he would like to show, write to the secretary and ask for catalogue and entry blanks, doing so as early as possible. Study the rules printed in the catalogue very carefully so that the entry may be properly made.

A proper understanding of the rules governing the show at which he is to exhibit will save the amateur trouble in the show room. At a majority of the smaller (score card) shows an exhibitor's pen entry is generally selected by taking his four highest-scoring females and his highest scoring male. In such cases he should select his fowls for their individual merit and thus have on exhibition his nighest scoring individuals

If the amateur decides to enter birds in a comparison show where a pen entry consists of four females and one male that do not compete in the single classes, then he must decide whether he prefers to win in the single classes or to win a pen prize. It takes a large string of good birds to win in both the single and pen classes at such shows and the ordinary amateur would not have enough good birds. The first prize pen is considered the best prize to win and first prize cockerel the next. The reason for this is that the first prize pen shows that the breeder has fowls that are well matched, while the first prize cockerel shows that he can produce good stock (and the male being half the pen has the preference), hence in selecting a pen for exhibition look first for uniformity of type and size and then select birds that are as uniform as possible in color. A well balanced pen is what we want. They may all be a little too dark or a little too light in color, a trifle small or large in size, but if they are well balanced they will stand a much better show of winning than if they are uneven in type, size or color.

Be careful in making entries that the leg band numbers are properly listed. See that the fowls entered for pen competition have the proper numbers grouped and are marked "pen entry." It is well to put a brace in front of them as many pen prizes have been lost through birds getting mixed. This is especially true when the exhibitor cannot accompany his birds to see that they are cooped right. Keep a duplicate list of leg band numbers and a record of how each was entered so that you may have something to which to refer in case tne original is lost or delayed in the mails. Be sure to select your birds and make your entries in plenty of time as it saves the secretary a great deal of time and work and avoids confusion.

COOPING AND SHIPPING BIRDS.

The distance, the weather and the fowls must all be considered when cooping and shipping. The coops should be light in weight in order to save express charges, but they must be strong enough to withstand the rough handling given them by the express messengers and draymen. Many exhibitors ship in cloth-covered exhibition coops without knowing that they have to pay double express charges on that style of coop. If you contemplate shipping in such a coop, nail lath on all sides so that the birds cannot escape should the cloth be torn. By doing this you will also get a cheaper express rate, but you probably will have to call the express agent's attention to the fact that you are using something more than a cloth-covered coop in order to get the rate. If the association furnishes the exhibition coops, then it is advisable to ship in a light-weignt, wooden coop.

Have plenty of ventilation as too often shipping coops are piled on top of each other and the birds are smothered. At the same time protect the birds from drafts and dirt by covering the openings with muslin. After the coops are ready, see that the shipping tags are made out according to directions given in the show catalogue. Put in good, clean bedding and see that the inside of the coops is wiped off so that the plumage of the fowls will not get dirty by rubbing.

Before shipping the birds give them a feed of raw onion as it will help to ward off colds. If the birds are well up to Standard weight we would not feed very much of anything except onion, but if they are a little underweight give them a good feed of boiled rice or cracked corn, or both, and put some whole corn in the shipping coop. If they are under-weight and are being sent to a score card show, it is well to mark on the coop tag, "Be sure to feed before weighing."—R. P. J.

Turkeys.

In selecting breeding stock for a market turkey ranch the most important point of all will be to secure good strong healthy birds, not akin, and from stock that has not been in-bred in the past, as in-bred stock is a source of disappointment and failure. It is strange that this habit of inbreeding is persisted in when the disastrous results are so well known. It will pay to mate hens of local stock with pure bred bronze, wild or

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semi-wild toms even though the cost may seem a little high. It must be remembered that the male is half of the flock, so to speak, and no reasonable expense should be spared to prevent inbreeding.

At the present time the bronze turkey takes the lead and is more popular than all other breeds combined. It meets the requirements of the market, makes a rapid growth, is hardy and a good forager. For the reason that they are so generally bred it is not difficult to secure good breeding stock at a slight advance over the market price and one should be able to buy good hens in the fall of that season's hatching, selected from a large flock, for $2.50 to $3 and gobblers of the same age at $4 to $6 each. Older birds which would be more desirable would cost a trifle higher, however, first class breeding stock, suitable for starting a market turkey ranch could be obtained from $4 to $6 for hens and $6 to $10 for gobblers.

The standard weight of the bronze turkey is 12 to 18 pounds for hens and 20 to 30 for gobblers, according to age and condition. Select turkeys with large frames snugly built, heavy turkeys, owing to excessive fat are not desirable. A hen two years old in good breeding condition weighing from 12 to 14 pounds and toms, the same age, weighing from 25 to 30 pounds will be considered good weight but large stout vigorous hens should be the aim of the breeder.

If inconvenient to secure all the breeding stock two years of age, buy at least part of the flock that have been through one breeding season and the balance from the ealiest poults of the year. In selecting breeding stock it would be best to buy of some reliable breeder who is making a success of the turkey business, whose stock has free range and as far as known have no trouble with disease. Better pay a little more for the right kind of stock to start with.

The breeding stock should be purchased before January in order to become acquainted with their new quarters before the breeding season. In buying this stock it would be best when possible to buy from a place of the same kind of climate as that in which they are to be kept. To ship turkeys from a hot climate to a cold one means a chance of loss and the same when shipping birds from a cold part af the country to a very hot one.

When the breeding stock arrives, place them in the stockade and keep them in until they become accustomed to their new quarters, go among them and feed them what they will eat readily, feed often at first, spend as much time in the stockade as can be spared in order to tame the birds.

After a week or ten days try them out of the enclosure by opening the doors just before it is time for them to go to roost allowing an hour or more to look around outside the enclosure. It is quite important that the birds are watched at this time and see that they all return, for once beginning to roost outside they will give endless trouble. If they are slow about coming in at night toll them with a little grain. The following day the birds may be let out earlier in the afternoon and in this way they will soon become acquainted and may be given their freedom for the entire day.

Having started with good stock it will be an easy matter to improve and build up the future breeding stock by selecting the most promising young birds from the hens having a good record as breeders, this is where the record card will come in very handy. Always keep the best and earliest hatched birds of the flock for future breeders, marketing those with poor records. After a flock has been built up that will produce hens weighing from 9 to 11 pounds and gobblers from 12 to 15 pounds at Thanksgiving time then it will be well to begin looking after the fancy end of the business for selling breeding stock at an advance over the market quotations.

To get the top price for breeding stock they would have to meet competition in the show room. This will cost more than the awards amount to in dollars and cents but not so as an advertisement. All noted poultry breeders who are securing fancy prices for their stock and hatching eggs won honors in the show room.

In breeding for the fancy end of the business health and vigor should not be sacrificed for fine feathers. Gradually by selecting from a large flock, birds that will be proficient for market and show room may be secured. In breeding pure stock a copy of the American Standard of Excellence and two or three good poultry journals will be of great assistance.

During the mating season the proper proportion to divide the sex would be from 7 to 10 hens with one gobbler although it is often the case that successful hatches have been obtained when a much larger number of females have been allowed with one male. Better be on the safe side and have enough males so there will be no doubt of the fertility of the eggs.—Successful Farming.

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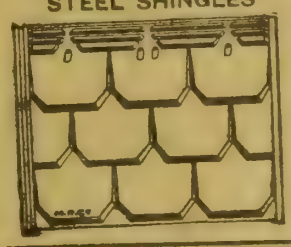

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Down at Uncle Bill's.

I want to go to Uncle Bill's,
Where I can have some fun;
Where all the folks ain't findin' fault
With everything that's done;
Where hired girls don't try to keep
Things so all-fined neat,
An' yell when I come up the steps:
"You, Johnny, clean yer feet!"

I want to go to Uncle Bill's,
Wnere folks don't stick their nose
Up in the air becuz I wear
My very oldest clo'es;
Where I can haul my stockin's off
An' go barefoot all day,
An' wade out in the duck pond, er
Turn han' springs on the hay.

I want to go to Uncle Bill's,
They's sumthin' there to do.
I sit up readin' Injun books
As long as I want to.
I ride the horses to the barn,
An' help to milk the cow,
An' go down in the lot to watch
The hired man 'at plows.

I want to go to Uncle Bill's,
I don't have no fun here!
They keep me too all-fired clean,
An' call me "Johnny dear,"
They're allers watchin' out fer words
I hadn't orter speak,
An' make me wash my face and han's
A million times a week.

I want to go to Uncle Bill's,
Where I kin get enough
Of puddin', doughnuts, pie an' cake,
An' all that kind o' stuff.
Where I ain't told I mustn't call
Fer but one piece, but where
They tell me to keep eatin', long
As anything is there.

I want to go to Uncle Bill's,
That's jest the place for me.
They 'se allers sumthin' there to do,
An' sumthin' there to see.
I go in swimmin' when I please,
An' climb around the hills—
O, you can bet the place for fun
Is down to Uncle Bill's!

Author Unknown.

Love's Barrier.

(Continued from last issue).

CHAPTER XVII.

HIS OWN WIFE.

Helen's lips instantly smiled.

"Why, yes, of course; there is nothing I should like better. I am very fond of Audrey, Mrs. Hayes."

"It is because I know you are that I came to-day. I am seriously concerned about the child's future, and really, Mr. Hayes is so unpractical about everything outside the works that I have simply no one to consult with."

"But what is the matter with Audrey? I am sure she is perfectly happy. She comes in here like a singing bird or a bit of sunshine. She looks well, too, the picture of health. What is there to trouble about?"

"Well, you see, Audrey is nineteen, and she has never been properly brought out. And she is very like her father in his unpractical ways. She's a perfect Socialist in some things. As I said to her father this morning, she would much rather entertain the Girls' Club to tea than meet decent society. And I'm so afraid she may get into any undesirable entanglement."

"But Audrey is not at all that kind of girl, Mrs. Hayes," said Helen perplexedly. She simply never thinks about men, for I suppose it is men you mean."

"Yes, of course, there could not be an entanglement of any other kind that would seriously matter. Audrey is not a flirt, certainly, and in some things she is ridiculously young; but she's impressionable, too. Let me tell you.

"There is a young man at the works called John Ridd, of whom my husband thinks very highly. He has just told me that he may be a partner some day. He is considerably older than Audrey, and, unfortunately, when we were away last summer, he happened to be spending his holiday at Scarborough, and, invited by Mr. Hayes, he came about with us a good deal. Audrey was allowed to go out a good deal alone with him. I was not at all well—the sea did not suit my gout—and I had to be indoors a good deal. And I must say I thought a sober-minded sort of elderly young man like John Ridd was perfectly safe. There is no doubt he fell in love with her. No, of course, he did not say anything to her—he would not have dared, I fancy, without speaking to her father first—but he managed to make an impression on her. She says she likes him better than any man in the world except her father and Mr. Secretan."

Helen smiled.

"And what does Mr. Hayes think about it? Audrey has never mentioned John Ridd's name to me, so I don't think his image can be very deeply engraven on her heart. She talks to me about most things."

"I thought she did, and that's why I've made bold to ask your advice and help with Audrey. You see how it is with us here," said Mrs. Hayes plaintively. "We have not really the kind of society we ought to have, the kind of families into which I should like to see Audrey married. You'll admit, won't you, that she would grace any station?"

"Yes, certainly she would; but she is very young. Let the child have her youth. She will never be as happy again in the world as she is now."

Helen spoke with a kind of quiet passion, which would have impressed a less frivolous and selfish woman than Mrs. Hayes. But she, passing by that warning note, hastened on to the business in hand.

"Audrey ought to have her chance. I had a very good mind to speak to the Duchess at the garden-party last week, but she was kept so busy with her guests, I didn't have a chance. But she has always seemed interested in Audrey, and she has met her here a good deal."

"She thinks her a sweet child, as everyone does. Let her be as she is as long as possible, Mrs. Hayes," pleaded Helen. "There are so few like her, we can't afford to have her spoiled."

"But she needn't be changed in any way, though she were to have more chances. What I should like would be to see her presented at Court next spring, and come really out in London."

"Well, that would not be so very difficult, surely. So many people go now, don't they?" said Helen vaguely.

"Yes, I suppose they do; but, living so quietly as we do up here on these moors, and Mr. Hayes being so void of ambitions of that kind, I am simply blocked. I mean I can't do it unless I have somebody to help me. I thought I could rely on you, dear Mrs. Secretan."

"But I am nobody," said Helen quickly. "I should be abjectly useless."

"But you have been to Court, haven't you?"

"Yes, about ten years ago, in a borrowed frock one of my cousins lent me. I was frightfully bored, and I never was so cold in the whole of my life, I think, as when waiting in a hired carriage in the Mall in a March snowstorm."

"These are small things when weighed against the distinction of being received by the Queen. Where do you think I could get anybody to present Audrey?"

"Wouldn't Lady Durham do it? She's the wife of the lord lieutenant, isn't she? And Mr. Hayes is an influential man in the county."

"She wouldn't; she has snubbed me. Lady Durham is not at all a kindly person from whom one could ask the smallest favour," said Mrs. Hayes eagerly, willing to confess something in her desire to win her way with Helen. "What I should like. and I wonder whether it would be too much to ask, is if you would interest the Duchess in the matter, and—and, perhaps, some day when it would be quite convenient for herself, she might be so good as to present Audrey."

Helen's eyes became round with amazement.

"The Duchess has not been to Court for over twenty years, not since she became a widow, I am certain."

"But she would always have the entry, and I am sure she would do it if you asked her."

Helen snook her head.

"I could mention it to her, but I am as certain as I sit here she would refuse."

"Dear Mrs. Secretan, if only you would mention it, I have great faith in your powers of persuasion; and of course, you are very intimate aren't you?"

"Yes, I suppose we are. But now she is leaving Mardocks, and nobody knows when she will come back—that is not going to be of much use to any of us."

"But she must have a wide circle, she might use her influence," said Mrs. Hayes eagerly, pressing the matter beyond the limits of courtesy. Unless she had been wilfully blind, she must have seen that Helen was now listening with reluctance and evident dislike.

"I'm afraid I can't do much," she said finally. "If I get a chance before the Duchess leaves, I can just mention it to her, but frankly I don't think it is the smallest use. She belongs to the very old school, and I have often heard her declaim at the present elasticity of Court etiquette. I don't think she would care to go any more."

"Ah, but one never knows; and if you will just bear the dear child in mind I shall be for ever grateful. Well, as you are alone to-night, won't you come back with me and dine; then you will see John Ridd. It will not be formal; I shall not even wear a low dress."

"Thank you, but it is impossible Mrs. Hayes. My husband will be home by the late train, I expect, and I should not like him to find me out of the house."

"What a devoted wife you are!" said Mrs. Hayes admiringly. "But don't spoil the Rector. The best of them are easily spoiled. Well, I must go. We are going to Marienbad next month. At least, Mr. Hayes has consented to my taking a foreign cure. I am looking forward to enjoying it, and it will be good for Audrey, too. I understand Marienbad is very full and very fashionable in August."

"I have never been there," answered Helen; "but I dare say you will meet all sorts and conditions of people."

Helen laughed in the depths of her old prie-dieu, after the scheming mother had left the house. She was so transparent in her scheming that a child could see through her. Presently, however, Helen's thoughts flowed into more dear and intimate channels, and she owned to herself how empty the house was without her husband. He had not been gone more than thirty-six hours, and she knew herself counting the hours till his return. Her face even flushed a little, and her eyes became luminous, as she admitted it to herself. Should she tell him, she wondered? Some day soon the veil must be lifted. The love which was growing up in her heart—a strong and gracious power—must soon assert itself. Sometimes she caught herself wishing that his reserve and self-control were less admirable. He had kept his promise to her in the spirit and in the letter, and she knew that he waited for the first advance to come from her. She was in no haste. She was living now in a delectable land of hope and promise, and could wait for fulfilment.

Sometimes Jane, who loved her so well, watching the sweet face in the Rectory pew, discerned there a new tenderness, a something that robbed

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every feature of the hardness which had marred it when she came first to Midcar. And she kept on praying, first, that God would reveal Himself to Helen's soul, and that through the miracle of Divine love she might begin to understand the human. Jane was not a very great or learned woman, but she was wise with the wisdom which can create the joy of life.

She saw, without making the smallest remark, that the power of the religious life was beginning to be exercised over Helen, and that she took pleasure in what had formerly been a duty. Secretan had been very careful not to press the advantage he had gained, and, professing himself to be grateful for the concession she had made, forebore to advance any claim for personal consideration. These weeks had not been without their lesson for Secretan also. All his life the spirit of selfishness had been paramount, and oddly fostered by his immediate environment; now he had to think continually of the comfort and convenience, even of the caprice, of another. He became more patient, more tolerant, more considerate in every relation of his life. His naturally quick temper often flamed yet, but the flame did not disturb Helen's equanimity. It was a generous temper, always ready to make amends, and without a trace of vindictiveness in its composition. Very gradually these two so strangely wed were being led by a way they knew not towards a more perfect understanding. But the realization of a thousand lovely hopes was not to be accomplished without a descent into the deeps of human anguish.

The late train arrived at Midcar station at ten minutes to nine o'clock. When Secretan stepped off it, and his keen eyes swept the platform, without, however, any expectation of seeing his wife there, Helen stepped forward from the doorway of a cheerfully lighted waiting-room and touched his arm as he was about to stride into the booking-office.

"Here I am, dear! I had been in the house—at least, in the garden—most of the day. I thought I would like a walk."

Therewas a certain shyness in her speech which was exquisite. She had to apologise for her disposition to offer him a wifely welcome.

His face flushed, he passed over his ticket, and drew her hand through his arm.

"Thank you very much. It's the first time you've met me, Helen, of your own accord, isn't it?"

"Oh, don't say that! Well, and are you very tired? How is old Colchester looking, and how did you find Cynthia?"

"Colchester looks charming, and so, I must say, does Mrs. Revell. She sent you her love.

"Was she very much surprised to see you?"

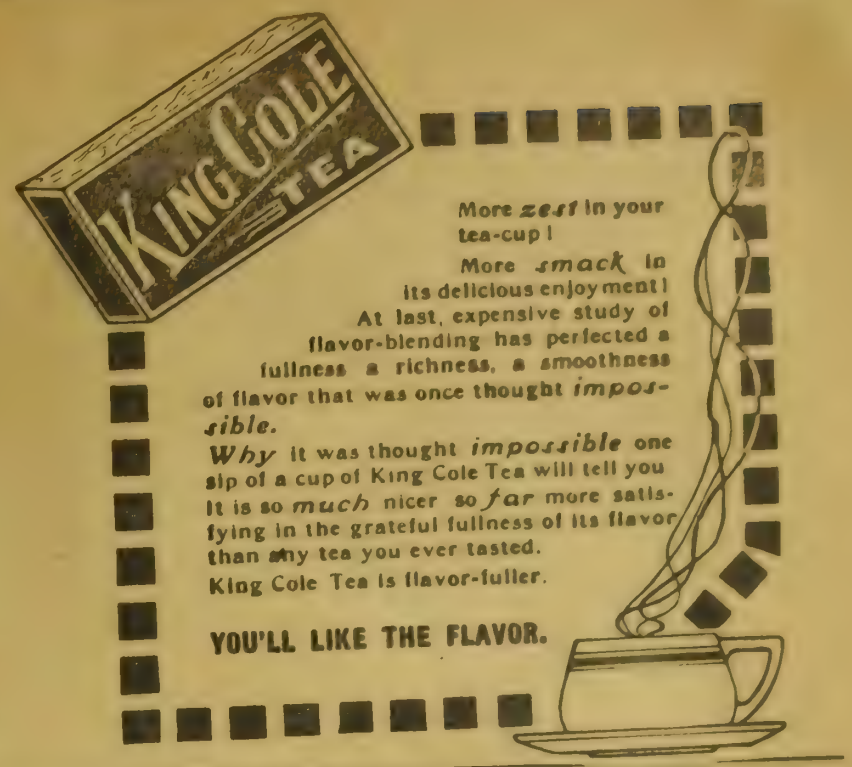
"She did not say, and we discussed the business quite amicably. She wishes to sell the house. She thinks it too big for her."

"But I don't want to sell it, Claude. It could be let quite as profitably. Besides, I know exactly what will happen if she gets the responsibility of the house off her shoulder. These poor children won't have a home anywhere. Don't you see, the house is a sort of anchor for her to keep her from wandering on the Continent and elsewhere?"

"I see your point perfectly, but I don't really think she will be kept from wandering in her present mood. She is thoroughly disgusted with Colchester and all its ways."

"That's because she has put herself outside the pale, in a sense. People don't like her; she has never cultivated the best people, and now the others have got tired of her. Was anything arranged, then?"

"When I got there I found that Mrs. Revell had practically made her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own plans. She has let the house furnished for August and September, and is going to Marienbad or Wiesbaden or some other of the health resorts."

"And the children?"

"She was to send them to Margate with Betty, the nurse girl. You will remember Betty—she asked almost tearfully for you."

"I remember Betty perfectly, of course. She was the general drudge. So the poor things are to go to Margate with Betty! You see what an irresponsible creature Cynthia is. She simply doesn't see that these wretched children spell duty for her."

"I must admit she takes them very casually. Well, as I couldn't bear the idea of them going like that, and they asked so—so affectionately for you, I proposed that Mrs. Revell should send them here for the two months the house is let."

"You did, Claude, without ever consulting me!" she cried, with a little gasp.

"I thought it the right thing to do," he answered quite calmly. After all, they are your father's children, and, besides, they are dear little things; they only want a little guiding. You don't mind, do you?"

"You take my breath away. I'm not sure whether I mind or not. Geoffrey and Margot trapesing over my pretty house, and trampling down my rose-beds! Did she agree, then?"

"Yes; they will be here next Monday, by this very train."

"Why, Claude, you are very masterful. How did you dare to make such an arrangement without consulting me?"

"I thought it the best one in the circumstances. They can run wild on the moor, and when you tire of them you can send them up to Jane. There isn't anything else we can do about the house in the meantime. Perhaps we could both go down to Colchester after Mrs. Revell returns, and try to arrive at some definite arrangement about things. If she can find a purchaser, she is determined to sell. One can see that. And in Colchester, apparently, there is a good demand for houses."

'Yes, of course, there are not enough to go round; but I don't want the house sold. I shall hold out against it as long as I can."

"The matter isn't urgent in the meantime, at least, and that urgent letter of Mrs. Revell's didn't mean anything. You need not have alarmed yourself about it. I felt quite sorry for her. Perhaps if she had had some wiser friends to advise her, she would have been a different woman."

Helen stole a side glance at him, and perceived that Cynthia had not woven her spell in vain. To pose as a misunderstood and unappreciated creature had become an art with her. A slightly qitter smile destroyed for an instant the sweetness of Helen's mouth. Once more she derided in her soul the lack of perspicacity in man. As Ann Coyne truly said, they were all babies from start to finish.

"Now tell me what you have been

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about all day?" said Secretan tenderly.

"Presently; I haven't done with Cynthia yet. Did she say anything about me?"

"Why, yes. She spent a good deal of time talking about you."

"But that was unnecessary. You should not have allowed her to go on. She would not say anything kind about me."

"On the contrary, she was all kindness, and I really believe that she misses you. I asked her to come here when she returned to England, and take the children back with her, and she seemed quite grateful for the suggestion."

"Claude, how could you—how dared you? You don't know Cynthia. She would be quite capable of coming here, and, if she happened to feel pretty comfortable, would think nothing of settling down for the winter with us."

Secretan's laugh rolled out on the fragrant dark of the midsummer night.

"I think we might be able to shift her before she attached herself like a limpet to our rock. Let's dismiss Cynthia. I want to know what you've been about since I've been away."

"Yesterday I was most of the day at Mardocks, helping the Duchess to pack. To-day I have been in the garden up till tea-time, when the deluge descended in the shape of Mrs. Hayes bursting with a new project that Audrey shall be presented next spring by the Duchess."

"Good for Madame Hayes! She came to enlist your good offices, I suppose?"

"Yes; and while I did not altogether nip her in the bud, I explained that her ambition was unlikely to be realised—at least, as far as the Duchess is concerned. She is afraid lest Audrey makes an undesirable matrimonial venture. It seems there is one John Ridd."

"I have met John Ridd at High Ridges, a very fine fellow, but certainly, from her mother's point of view, Audrey might do better."

They crossed slantwise through the village, and arrived without further speech at the Rectory gate. It looked so sweet and homelike in the moonlight that Secretan's heart swelled within him with a quickened sense of gratitude.

"A man never knows the true inwardness and dearness of his home till he has seen other places that are homeless," he said in a sudden full tone which stirred Helen's heart. Her hand trembled on his arm. She made a little sudden movement which he did not understand. They came presently to the open door, and lingered a moment on the step. The moonlight lell full on Helen's face, and Secretan's eyes scanning her every feature, he was thrilled once more by its beauty. There was an expression there which he had not seen before, and made him put an anxious question.

"You are not tired, are you, darling?" he asked, with a sudden passionate tenderness. "It was very sweet to see you to be at the station, but I did not expect it, and it was not even necessary."

"Perhaps I thought it was," she said wistfully; then suddenly, without a moment's warning, she turned and threw herself upon his breast.

Secretan's arms closed upon her, and his face bent inquiringly to hers, his breath came quick and fast. There in the soft midsummer moonlight, on the threshold of their own home, was their real betrothal. Love had stolen unawares, and secretly, into Helen's heart, and now, sweeping everything before it, would have its own.

Home Made Candies.

By patience and a little practice you can make a perfect cream candy. Then you have a splendid foundation for any cream you may wish to make. One thing we must always remember, never to cook our sugar in an old or black pan. Always use a bright, new pan.

Place four cups of white sugar and one cup of water into a bright pan on the fire and boil ten minutes without stirring. Test it by dropping some from the spoon, and if it threads remove the pan from the fire. Take out a small spoonful, and rub it against the sides of a bowl; if it becomes creamy, and you can roll it into a ball between the fingers, it is properly cooked. If it will not cream let it cook two or three minutes longer, being careful not to leave it on the fire too long. When it will cream and roll into a ball, pour the whole into a bowl; when cool enough to bear your finger in it, beat it with a large spoon; it will soon look like cream, and as it grows stiffer work it like bread dough. Add flavoring as soon as it begins to cool. It can be packed in plates and cut into fancy shapes, or it can be made into rolls and sliced off; if the cream gets too cold in the working you can warm it. Here are several points to be remembered: If the sugar looks rough when it is cool enough to beat it is because it has been boiled too much or has been stirred. After it is beaten if it looks sandy or sugary instead of looking like lard or cream it is the result of not being cool enough before beating. It should harden and work like dough, if it does not it has not been boiled enough. If this is the condition you can put it back into the pan with an ounce of hot water and cook it a few minutes. When turned into a bowl to cool it should look clear as jelly.

Fruit creams are made by adding raisins, figs or any fruit chopped and added to the cream while it is quite warm.

English walnut creams are very nice and very easily made. Form the foundation cream into a ball, place one-half of each nut upon each side of the ball, pressing them into the ball.

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Chocolate Creams—Melt one cake of chocolate and keep it hot. Have small cone shaped balls formed of the foundation cream; take the balls on the tines of a fork, pour the melted chocolate over them with a teaspoon, and when well covered slip them from the fork upon the oiled paper.

Cocoanut Creams.—For one cocoanut ream c take two tablespoons of grated cocoanut and half as much foundation cream; work them with your hand till the cocoanut is well mixed in. Add a drop of vanilla.

If the cream is too soft to work into balls, you can stiffen it with confectioners' sugar. These can be dipped into melted chocolate if desired.

Colored Creams.—Make the foundation cream receipt and divide into three parts; leaving one part white, coloring one part pink with fruit coloring, and one part brown with chocolate. Make the white cream into a flat ball, lay on a buttered dish and pat it out flat until it is half an inch

thick; work the pink in the same way and lay it upon the white, then the chocolate and lay upon the pink, pressing them together. Trim the edges off smooth then cut into slices. Work this up as rapidly as possible.

When the Child is Sick.

The child's illness is the mother's opportunity. There is nothing that can so crystallize the love of home as the memory of some childish illness when mother knew just what to do. Men and women brought up under the old, stern regime remember gratefully the season of illness as the time when they were allowed to have a fire in their bedrooms—a luxury at other times unattainable. Nowadays we surround our children with comforts unknown to former generations, but the little illnesses of childhood have not ceased to be times of special privileges, special care, special tenderness.

To a child, the mere fact of being in the house all day, of the foods prescribed as a special diet, of the unaccustomed quiet of the room are features of a drama. But there is danger in this thought that mothers do not always realize. Children are adults in the making, and we all like to feel ourselves important. The delight of being the central figure on the stage, the object of attention from everybody in the house, may, to a child of egotistic temperament so conquer the pain and discomfort of the illness that a morbid, hysterical after-effect will be left. The child should have every possible care and attention, every demonstration of affection—that goes without saying—but it should not be made to feel that an invalid by right rules the house. We have all known nervous, exacting women who make slaves of their families, and drain the family purse and patience, to minister to some ailment that is half fancy. We have all known men who will indulge themselves in some favorite dish, though they know perfectly well what will happen if they do. That sort of thing is not infrequently begun in childhood by the injudicious coddling of mothers, aunts, and grandmothers. It does the child no good to hover about the bed, asking every five minutes, "How do you feel now, darling?" and discussing symptoms with all the neighbors who happen in. If the child is healthy-minded it will be bored by the whole performance, and, if not, it will rather enjoy it and play up to it, which is much worse.

IMPRESSIVE LESSONS.

Another lesson that should be taught in the illness of a child is absolute obedience to the doctor's orders. The habit of this may actually save life. In the hospitals, the doctors speak of certain people who are "good patients," meaning that by intelligent docility they are co-operating with the doctor's efforts to cure. It makes all the difference in the world, in some illnesses, whether the patient is working with the physician or against him and the wilful, capricious invalid who will not obey orders, who has never learned self-control, who makes the most of every symptom, is simply "doing his best possible" to prolong the illness. Habit is everything in such a case. The child can learn that there is a right way and a wrong way even of being ill, taking medicine, etc.

The easiest way to bring about this self-discipline is through the imagination. The small boy knows that soldiers in hospitals show their saldierly qualities quite as well as they do when in battle. There are many good hospital stories in the old war annals. If the boy can dramatize his sprained ankle or his attack of fever as part of the fortunes of war he will be making a hero of himself in the right way. Girls, too, often feel the thrill of such stories as quickly as boys. Tell the children of the heroism shown when great cities have been besieged; give them the stories of the Indian Mutiny, Florence Nightingale, Mother Bickerdyke, and Clara Barton. The advantage of taking the heroic side of illness for one's theme is that it does not tend to prolong the illness, and it is to be feared that some of the old tales of patient and saintlike child-invalids might.

DIET IN SICKNESS.

The diet of the child is naturally dependent on the orders of the doctor for that particular illness. But the food should always be served in a dainty way. A fastidious child will often be absolutely unable to touch food served in a sloppy, unappetizing fashion. One can always have a few odd and pretty bits of china, and fringed napkins, and tiny glasses, for just this emergency. Not only do such trifles help to create the memory-picture, but they are part of the home training every child should have, and when the little girl, grown to be a woman, has other invalids to care for, she will have learned how to do it right. Little glasses or cups for fruit-juice, broth served in one's special silver cup, toast on a plate with the quaint nursery-rhyme picture in the middle—things like this go a long way with a child.

Too much pains should not be taken when convalescence begins to "keep the child amused." It is better for all invalids to take a rest cure than to be stimulated. Some trouble should be taken, however, to make little changes in the room from day to day. It is easy to put up different pictures now and then, to change the growing plant in the window, to shift the position of the bed and give a difference view. Here, again, one can save up for such an emergeocy. When stray magazines have lovely colored frontispieces or covers, save them when the magazine is thrown away, and keep the pictures in a box out of sight. Have two or three frames of a size to fit the different pictures—one large enough to take in a large picture, the others of the right size for the usual magazine frontispiece. These pictures may be hung on the bedroom wall and from time to time changed when the child is asleep, and in case of contagious illness, they can be destroyed when their use is over. Even a better plan is to hang them from the screen which every sick-room should have, to fold around the bed and shut off drafts or light. An easy way to make such a screen is to tack soft-colored cambric on a folding clothesrack. When the child is well enough to read, little verses and pictures can be pasted on one side of the screen, one or two being added each day.

A large box of scrap pictures is most convenient in providing amusement for the child's convalescence; so are paper dolls, tin soldiers and puzzle pictures of a simple kind.

Among the special comforts of illness may be counted sand-bags to keep small chilly toes warm. Make a round bag eight or 10 inches across, fill it laosely with good dry sand and sew it up. Then make a cover in the shape of a hunched-up rabbit or a cat out of flannel or eiderdown. Such a sand-bag will heat on the top of a radiator or in a moderate oven, and if you have two for each cover, can be changed in a moment, while the child's fancy will be taken with the quaint iittle bunny or pussy. In Japan the earthen hot-water bottle is made in the form of a curled-up kitten and is called "neko" (kitty).

For a very little child one of the blankets with borders of animals will afford amusement, but for an older one try a geography coverlet. It takes some time to make, but when made it will last indefinitely and older children used to map-drawing can do it. Use for the upper side of such a coverlet pale blue cotton, and draw on it a large map—a map of the world if you like. Then, either go over its outlines with black embroidery cotton or cut out the continents, islands, etc., in colored cambrics and applique them on, drawing the rivers, cities, and mountain ranges in indelible ink. The outlines need not be absolutely accurate or very detailed, of course. The material used should be washable. Then, with the tiny china figures that one can buy for two or three cents at any shop where they sell favors, there will be chance for all sorts of travel-plays. A favor-shop is an excellent place to pick up toys for small invalids for next to nothing. Water-flowers, rice-paper pictures, tiny paper animals and birds, and all sorts of trifles are sold there, and have the advantage of weighing nothing in the languid little fingers which are to handle them.

But the main point in providing amusements and accessories for a child's illness is that they should be kept for such a time. The ability to provide a seemingly inexhaustible store of new playthings in an emergency is one of the faculties which make a child feel that mother knows everything.—L. Lamprey.

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A Talk to Farmers' Wives.

As I sit and watch the first snowflakes of the season dancing around the buildings and scudding along the pavement, my mind travels back to the many times when from the window of a little farmhouse on the prairie I watched the first snowflakes and thought of the long winter before me, just as many of you are doing to-day.

As I look back to life on the farm I feel like one who, from a distance, watches a game, and feels that he can tell the players what to do; so, because I am outside of the game, I can perhaps warn you, who are in the thick of the struggle, of a few dangers that are threatening.

First, I would like to tell you how happy you should be in your life of quietness and plenty, but I suppose you will not believe me any more than we believed our parents when they told us our school days were the happiest in life. But note that I said your lives should be very happy, not that they are, because in too many cases the greed for gain is making slaves of our farmers and their families.

We teach our children that the days of idols are passed; that we no longer offer sacrifices, but they will soon learn from life that we still worship idols, and our offering now is always a human sacrifice. Students every year are offering themselves on the altar of ambition; business men are following the glimmer of gold, regardless of all the other and higher joys of life; professional men are lured on by the most subtle of all temptations—fame—to give themselves body and soul; while too often the farmer offers himself and his family to satisfy an insatiable desire for cattle and horses and land.

Just here, it seems to me, comes in the tragedy of life on the farm. It is always possible to get men to garner the harvest, but there is no one to help the farmer's wife, cook and care for the extra harvest hands, and prepare for threshing. Then, too, at this time of year, pickling and preserving must be done, and the fall sewing is always demanding time. How one pair of hands can do so much I cannot say; in fact, it has always been a mystery to me, but do it they often do, and very well at that. Of course, they have to work long after the rest of the family are sound asleep, and they have to begin again before the others are up, but they get it done.

You wonder why the husband and father will allow the mother of his children and the woman he has solemnly promised to love and protect to commit suicide, and never raise a hand in protest. It is chiefly because he does not think. When they first started out in life together, they were very anxious to succeed, and both did all they could. Then a child came to the home. The mother was not strong, but she persisted in doing without help, regardless of the fact that she was ruining her physical frame. The husband at first protested, but men are very human, and he soon became accustomed to her doing all the work, and expected it of her. She made superhuman efforts, and congratulated herself that she was saving a girl's wages, never thinking that she was violating one of Nature's most stringent laws, and that she would in time pay the penalty; never thinking that she was wronging ner husband, her child, and her children yet unborn; never thinking that in time to come her children might blame her needless and wicked abuse of herself for their lives of torture and blighted hopes. You are paying too dearly for your farms, my friends. Your worldly possessions will but mock you when you come to face the great and inevitable fate of mankind—death.

I am not prepared to offer a solution of the servant girl problem for the west, but it has frequently occurred to me that if farmers advertised as diligently for help for their wives as they do for help for themselves, that the demand would not greatly exceed the supply. I would like to suggest, however, that you lighten your burden this fall by engaging a girl to do your fall sewing. If you have never had one, you will be surprised at the great relief you will feel to have all the sewing for the winter done. In all the districts in which I have lived sewing girls can be engaged at from seventy-five cents to a dollar and a half a day, and it is surprising how much they can do in a couple of weeks if they are reasonably smart.

It will be money well spent, for it is eternally true that "The hand that rocks the cradle is the hand that rocks the world," and we do not want a nation nurtured by white slaves, weak in body and mind, but by women, strong in body and intellect, and able to bequeath to their children that which is above the price of cattle and horses and land.—Belle MacDonald in Hearth and Home.

How to be Happy.

Many of us miss the joys that might be ours by keeping our eyes fixed on those of other people. No one can enjoy his own opportunities for happiness while he is envious of another's. We lose a great deal of the joy of living by not cheerfully accepting the small pleasures that come to us every day, instead of longing and wishing for what belongs to others. We do not take any pleasure in our own modest horse and carriage, because we long for the automobile or victoria that someone else owns. The edge is taken off the enjoyment of our own little home because we are watching the palatial residence of our neighbor. We can get no satisfaction out of a trolley ride into the country or a sail on a river steamer, because someone else can enjoy the luxury of his own carriage or yacht. Life has its full measure of happiness for every one of us, if we would only make up our minds to make the very most out of every opportunity that comes our way, instead of longing for the things that come our neighbor's way.

This Was No Joke.

The other day over in the town of G—, Ontario, Mrs. R. came into Mr. B's store and asked for a couple of packages of Dye. He was selling the Old Style Dyes that require a Separate Dye for Wool and Cotton, and asked her if she knew what kind of cloth her goods were made of. Mrs. R. said she wasn't sure, so he advised her to go home and make the following test:—

"First to take a small piece of the goods, and ravel out the threads each way of the Cloth, then put a match to them. Cotton would be apt to burn freely with little odor, Wool might merely singe and would be apt to give out a disagreeable odor, something like burning hair. Silk would burn less freely than Cotton and smell like burning Wool. Now, if it did not smell very much, she was to use a Dye for Cotton, if it did she was to use a Wool Dye, but she was to look out to see that it did not smell too much or too little.

Now, unfortunately, Mrs. R. had a cold in her head at the time, and couldn't smell anything, so she naturally thought that the goods were Cotton, and used the Cotton Dye. It turned out that her goods were really all Wool, and naturally her Dyeing was a failure. Since then B. has put in an assortment of the Guaranteed One Dye for All Kinds of Cloth, which does away with all chance of using the Wrong Dye for the Goods one has to color.

Mrs. R. is naturally much relieved as well as B's other Lady Customers.

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And This Handsome RING Set With a Sparkling Jewel

GIRLS—We want to give you, absolutely without a cent of cost, this beautiful Imported Doll, lovely Doll Carriage, complete with parasol; and this handsome jewelled Ring. This is the greatest offer ever made, girls—Don't miss it. This large, handsome doll is dressed complete from hat to shoes with lovely clothes, lace underwear, shoes, stockings, picture hat, etc. She can move her arms, head and legs, and close her eyes and go to sleep just like a real baby These are the best kind of dolls, and NEARLY HALF A YARD TALL.

The lovely carriage and parasol we give you with the doll, and it is a beauty Made of fine brown reed in the newest style, with strong, real steel wheels and axles enamelled a pretty blue, curved handle and a lovely silk-finished parasol and rod to complete it and protect dolly from the sun and weather. It is just the carriage you would love to have, and fit for the finest dolly in the land.

GIRLS—If you want this beautiful doll, and carriage complete with parasol, and in addition a lovely jewelled ring, send your name and address to-day, and we will send you, postage paid, only 25 of the handsomest jewellery novelties you have ever seen, to sell for us at only 10c. each. They are handsome novelties, everybody wants them and you will surely sell this very small quantity in a few minutes after school. When sold send us the money, only $2.50, and you will promptly receive all 4 presents: the handsome doll, lovely doll carriage with parasol all complete, and the lovely ring exactly as represented. DON'T DELAY.

We arrange to stand payment of all delivery charges right to your door. Remember when we say we will give you all these 5 grand presents for selling only $2.50 worth we will do so. Write to-day and you will soon be the proud possessor of all these grand presents. Address:

This little girl has one of our handsome dolls and carriages

NATIONAL SALES CO., LTD. Dept. D
Toronto Canada

Sermons Boiled Down.

Charity requires no other letter of introduction than a real need.

Always it is better to get a man to thinking than to give him thoughts.

The secret of consecration is simply concentration on some high service.

An analysis of the water of life will do little to relieve this thirsty world.

Many a word in our language is empty until sorrow gives it a new content.

Debating doctrine is an old dodge of the devil to avoid the doing of some duty.

You cannot make a text of scripture bore any deeper by twisting it like a corkscrew.

Whatever strengthens class feeling lengthens the day of waiting for the kingdom.

He who limits his knowledge by his understanding dies of experimental ignorance.

The more a man vociferates against vice the less likely he is to put virtue into action.

Some folks never get any dreams of heaven except when they go to hear a sleepy preacher.—Chicago Tribune.

QUICK RESULTS.

Laurie M. Anderson, Sackville, N. B., in sending in a new advertisement to the Maritime Farmer, writes: "The last ad. I had in the Maritime Farmer sold the bull I offered, at once."

Slow Witted.

When persons aim at me their wit
I give them dart for dart;
I do not show them that I'm hit
But play a Spartan part.
Unscathed they make of me no sport,
As I can firmly state,
For I'm most clever with retort—
About an hour too late.

Ah, yes, I think of answers when
The foe has gone away;
The acid things that strike me then
Are sharp enough to slay.
But readiness is not my forte;
It is my doleful fate
To be most clever with retort
About an hour too late.
—Baltimore American.

Good Advice.

Senator Ingalls tried sarcasm in public life, and it failed. He had an exceptional gift for making enemies, and they ultimately retired him to private life. Once an intimate friend wrote asking his influence in favor of a friend desiring a public appointment. To this letter the Senator returned a very sarcastic answer, and received the following reply:—"My Dear Senator,—I think it would be well for you to reserve your sarcasm for the rapidly increasing number of your enemies, instead of offering it to the decreasing number of your friends of whom I am one." It is said Mr. Ingalls never forgot the rebuke, but it was too late.—New York Tribune.

Tact Lacked.

Miss Clara Clemens, Mark Twain's daughter, was talking at Atlantic City about entertaining.

"Tact," said she, "is essential to good entertaining. I once dined at a house where the hostess had no tact. Opposite me sat a modest, quiet man. This man suddenly turned as red as a lobster and fell into a horrible fit of confusion on hearing his hostess say to her husband:

" 'How inattentive you are, Joe. You must look after Mr. Blank better. He's helping himself to everything.' "

Wanted a Hearing.

"Are you the editor that takes in the society news?" enquired the caller, an undersized man with a timid, appealing look on his face.

"Yes, sir," replied the young man at the desk. "I can take in any kind of news. What have you?"

"Why, it's this way," said the caller, lowering his voice. "My wife gave a swell party last night and I'm willing to pay to have this report of the affair put in your paper."

"We don't charge anything for publishing society affairs," observed the young man at the desk, taking the proffered manuscript and looking it over.

"That's all right," was the reply. "You don't understand. I wrote this up myself and I put in a line or two that says, 'Mr. Halfstick assisted his distinguished wife in receiving the guests.' That's the way I want it to go, and I don't care if it costs a sovereign a line. I want my friends to know, by George, that I still belong to the family!"—Tit-Bits.

"I sent you some suggestions telling you how to make your paper more interesting. Have you carried out any of my ideas?'-

Editor—Did you meet the office boy with the waste basket as you came up the stairs?" "Yes?" "Well he was carrying out your ideas!"—Woman's Home Companion.

Knowledge is power, and so is a gasolene-engine. Both must be used to get the most out of them.

Both A
Bread Flour
And A
Pastry Flour

"A woman always wants a reason, but never gives one".

So we are going to tell you just why **"Beaver" Flour** is a bread flour and a pastry flour —as good for one as for the other—*and best for both.*

Ontario Fall Wheat is the most nutritious wheat in the world — rich in flesh and strength building qualities and with a full rich flavor and splendid pastry making qualities.

Manitoba Spring Wheat has more strength than Ontario Fall Wheat—but is not so good for pastry.

Naturally, *the perfect flour* is the one that combines the good qualities of *both* Ontario and Manitoba wheat. *This is exactly what* **"Beaver" Flour** *does.* It is a *blend* of Ontario Fall Wheat and Western Spring Wheat. It contains *exact quantities of each.* **"Beaver" Flour** has the real home made flavor that a Western Wheat flour lacks—it makes deliciously light, tasty Cakes, Pies and Fancy Pastry.

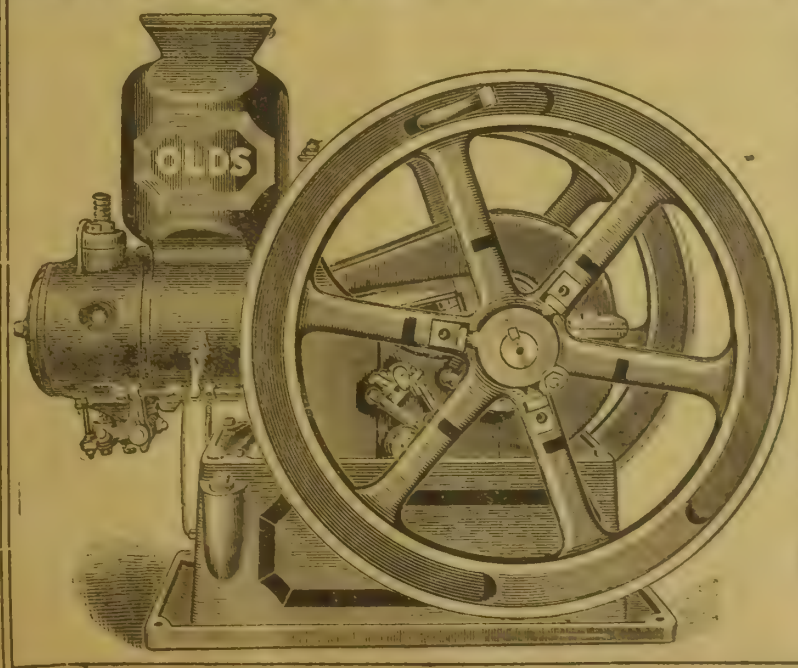
135

Order "Beaver" Flour

for your next baking day. Put it to the test. Try it for *both* Bread and Pastry—and see for yourself the convenience and economy of using a true blended Flour. Dealers—Write us for prices on Feed, Coarse Grains and Cereals.

THE T. H. TAYLOR CO., LIMITED, - CHATHAM, Ont.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

CAUGHT HEAVY COLD.

Left Throat and Lungs Very Sore.

There is no better cure for a cough or cold than Dr. Wood's Norway Pine Syrup.

It is rich in the lung-healing virtues of the Norway pine tree, and is a pleasant, safe and effectual medicine that may be confidentially relied upon as a specific for Coughs, Colds, Bronchitis, Hoarseness, Sore Throat, Quinsy, and all Throat and Lung Troubles.

Mr. S. Monaghan, Charlottetown, P.E.I., writes:—"I certify that Dr. Wood's Norway Pine Syrup is an excellent medicine for coughs and colds. Last winter I contracted a heavy cold which left my lungs and throat very sore. I had to give up work and stay in the house for two weeks. I used several cough mixtures, but got no relief until a friend advised me to use Dr. Wood's Norway Pine Syrup. Three bottles entirely cured me, and I can recommend it as the best medicine for coughs."

Don't be imposed upon by taking anything but "Dr. Wood's" as there are many imitations of this sterling remedy on the market.

"Dr. Wood's" is put up in a yellow wrapper; three pine trees the trade mark; price 25 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

TRAPPERS

send us your

FURS

and we will pay you the Highest Prices

REVILLON FRÈRES

LIMITED

134-136 McGILL STREET

MONTREAL, P.Q.

We will send free to every trapper who sends us furs, our book "The Trapper's Loyal Companion".

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Read the Advertisements in the Maritime Farmer.

FLORICULTURE.

O. M. of St. John, writes:—I have a large Hyderangea plant that was given to me last Easter. I was told to put it in the cellar during the winter. I have done so but now it has sprouted until the leaves are showing. They are lookiog yellow and sickly. What shall I do with the plant? It is in a very small pot. Should it be repotted? Do these plants require much water at this time of the year? It took a great deal of water last summer.

The Hyderangea should be brought to the light but should not be placed in direct sunlight for a fortnight. It may be repotted in a large pot, say two sizes larger, only be sure and press the soil firmly about the old ball of roots. Water thoroughly; you will find that the plant will not require nearly as much as last summer. After the buds form it will be helped by using manure water twice a week.

E. L. I., St. John, writes:—I have a large Sellegenella. It is about two feet across in a pan about twelve inches in diameter and six inches deep. It has grown finely and is a large plant but the pan is a mass of roots and there does not seem to be any earth in it, in fact the plant seems to live on water of which it takes a large amount daily. The centre of tne plant is beginning to turn brown. It certainly seems to need repotting but I do not know what to put it in or haw to do it.

This plant evidently requires repotting badly, otherwise the brown would not have appeared in the centre. You will have ta get an unglazed pan or pot, about six inches wider and about two or three inches deeper; be sure that at least six drainage holes are made in the pan. Draw the top of the plant together with a newspaper so that it will be out of the way and repot as you would any other plant. Be sure that the soil is kept wet after repotting, you will find that less water will do than was needed before.

A. M., Chatham, writes:—Is it wrong to put more than one bulb in a pot, I have been told it was not right? I like a lot of blooms on a pot.

It is certainly better to have a single plant or bulb of Callia in a pot. A single plant is quite capable of filling a large size pan with roots in a comparatively short time and will take about all the water you can give it.

Be sure and watch your Hyacinth bulbs. If the green tops are beginning to show, bring them up to the light and water.

H. A., St. John, writes'—What can I do to prevent the bugs and wood ticks from eating the sprouts of the bulbs kept in our cellar? They have ruined some White Narcissus and are eating holes in the Hyacinths. The insects referred to are oval with many legs. They come out of the old planks on the cellar stairs and floor. What is the best variety of fern for house culture the Boston or the Ostrich plume?

The writer had better put the bulbs on a hanging shelf or some such arrangement to protect them from the wood lice. They can be killed with slices of raw potatoes dipped in Paris Green, but suspension of bulbs or placing the container on legs set in dishes of water is much more practical. The injury of bulbs by wood lice as described is very unusual. The ferns referred to are both most satisfactory and the varieties as regards care of culture entirely a matter of personal choice.

A. A. B., of St. Andrews, N. B., writes:—We have an old palm that is so large that it fills a whole window. It is planted in a tub set on rollers. It is getting brown at the tips and seems to require repotting, but to pot it into a larger vessel is entirely out of the question. Can you suggest any thing that we can do to feed it so that we can keep it alive without repotting? The surface soil in the tub is a solid mass of tradescantia, does this injure the plant?

Remove the tradescantia, which certainly takes much strength from the soil. Scrape all the top soil off that you can without injuring the roots too much and fill in with rotted or even fresh cow manure—rotted is best. This should carry the plant another season at least, if the roots are all sight.

I have been given some bulbs called Ixias; what are they like and how should they be cultivated?

The Ixias makes a very pretty winter flowering bulb, of many bright colors. One distinctive feature is that the middle of the flower is always distinct from the centre in color. They come out from the side of a grass-like stalk and are rather striking. Plant six or eight bulbs in a six inch pan covering them about one inch deep.

Prevention of Concrete Dust.

Cement floors, particularly in office buildings or warehouses, which do not have the advantage of obtaining the necessary moisture from the atmosphere, such as outside floors and sidewalks on which the dew falls at night, if not properly protected and kept damp, become prematurely dry and therefore more or less porous, and weak, causing easy abrasion under foot traffic, or what is commonly known as dusting.

Care should be exercised in keeping such floors damp by covering with wet sand, wet hay or straw, for a week or more until the floor has properly hardened. If this has not been done and the floors are found to dust under foot traffic, the following remedy will be found very easy to accomplish, economical and effective:

Wash the floor thoroughly with clean water, scrubbing with a stiff broom or scrubbing brush, removing all dirt and loose particles. Allow the surface to dry; as soon as dry apply a solution of one part waterglass (sodium silicate) of 40 degrees Beaume, and 3 to 4 parts of water, the proportian of water depending uponthe porosity of the concrete. The denser the concrete the weaker the solution required. Stir well, apply this mixture with a brush (a large whitewash brush with a long handle will be found the most economical). Do not mix a greater quantity than you can use in an hour.

If this solution is sufficiently thin, it will penetrate the pores of the concrete. Allow the concrete surface to dry. As soon as dry, wash off with clean water, using a mop. Again allow surface to dry and apply the solution as belore. Allow to dry and again wash off with clean water, using a mop. As soon as the surface is again dry, apply the solution as before. If the third coat does not flush to the surface apply another coat as above.

The sodium silicate which remains on the surface, not having come in contact with the other alkalies in the concrete, is readily soluble in water and can therefore be easily washed off, thus evening up the color and texture of the floor. That which has penetrated into the pores, having come in contact with the other alkalies in the concrete, has formed into an insoluble and very hard material, hardening the surface, preventing dusting and adding materially to the wearing value of the floor.—Albert Moyer.

FELL FROM A HAY LOFT

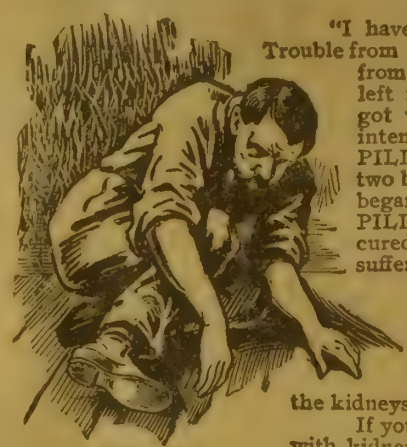
Suffered Tortures With His Kidneys Until He Tried Gin Pills

You might think that Mr. Baker needed a surgeon more than GIN PILLS. But there were no bones broken. His back was strained, which was harder to cure because nothing seemed to do any good. It is the same with a sprained ankle and broken leg. You can set the fracture and it will be well in six weeks—but the sprain may take months to get well.

However, Mr. Baker found the quick way to get relief from the pain—here are his own words.

AULTSVILLE, ONT.

"I have been a great sufferer from Kidney Trouble from an injury to my back caused by falling from a hay loft about six years ago. This left my kidneys weak, so that every cold I got would settle in my kidneys and cause intense suffering. I was advised to try GIN PILLS. I found, to my surprise, after taking two boxes, that the pains were relieved and I began to feel better. I am still taking GIN PILLS and feel sure I will be completely cured. I recommend GIN PILLS to all who suffer from any Kidney Trouble". C. BAKER.



A BAD FALL

You see, the fall had strained the kidneys and they were affected by the slightest chill. GIN PILLS immediately strengthened the kidneys—soothed any irritation and thus enabled the kidneys to overcome the effects of the fall.

If you are having pain in the back—or trouble with kidneys or bladder through accident or overwork—do just as Mr. Baker did—take GIN PILLS. They will help you—cure you—or we will promptly refund your money. Buy six boxes at your dealer's. If, after taking them, you feel that Gin Pills have not helped you, return the empty boxes and get your money. We will take your word for it. 50c. a box, 6 for $2.50. Sample box sent free if you write National Drug and Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS regulate the bowels and cure Constipation, Biliousness and Indigestion. 25c. a box. 111

For a sprain you will find Chamberlain's Liniment excellent. It allays the pain, removes the soreness and soon restores the parts to a healthy condition. 25 and 50 cent bottles for sale by all dealers.

A C. P. R. Model Farm.

A model farm for illustration purposes, is to be started in New Brunswick by the Canadian Pacific Railway. The matter has been under consideration for about a year, and the railway company has in view several farms which will serve the purpose. The actual purchase has not yet been announced, but it is expected that a farm will be bought in time to allow the railway to commence operations this spring.

The principal motive of the company in undertaking this new venture is to show what can be done on a New Brunswick farm. Experts will be be employed and the most scientific methods will be used, from the selection of the crops and the preparation of the soil to the harvesting and marketing, everything will be done on the most modern lines.

Not only will an effort be made to secure the best possible results from the crops which are now generally raised in the province, but experiments will also be made with others which are not so common, or have not been introduced here, for the purpose of learning the success with which they can be adapted to our soil and climate.

The farm will be operated somewhat on similar lines to the Government farms in other provinces, and will be a valuable contribution to the agricultural interests of New Brunswick. It will be for the benefit of farmers, and in order to give as many as possible an opportunity to visit it and profit by the practical lessons taught there, excursions will be run periodically from different parts of the territory served by the C. P. R.

Parts of the products of the farm will be used in supplying the dining car and hotel departments of the railway.

P. E. I. Provincial Seed Fair.

The seed growers of Prince Edward Island are preparing for their Annual Provincial Seed Fair, which will be held at Summerside, P. E. I. on March 5th and 8th inclusive. The P. E. I. Provincial Seed Fair is, unquestionably, the largest Seed Show on the American continent. The contests in the respective classes are always keen, and the very best seed grain grown on Prince Edward Island will be there. The Fair is a good place to meet with honest farmers who will supply seed grain true to name in large or small quantities, at fair prices.

Herbaceous Perennials.

There are, undoubtedly, a great many of our readers who are interested in a study of Herbaceous Perennials who would like to get a bulletin on this subject.

If such parties will write making known their requests to the Dominion Horticulturist, Central Experimental Farm, Ottawa, a copy of a bulletin on Herbaceous Perennials, written by Prof. W. T. Macoun, Dominion Horticulturist, will be forwarded to them.

Cumberland County Farmers' Association.

Editor Maritime Farmer:—

The Annual Meeting of the Cumberland County Farmers' Association was held in Amherst on January tenth. On account of the day being so stormy, the attendance was small.

The minutes of the last meeting were read and approved.

A reply to the letter of thanks to W. W. Andrews was read, in which he stated that he was glad if anything he had done was of benefit to the farmers and that marshland, now worth fifty dollars an acre could be made to be worth one hundred and fifty dollars an acre in a very short time.

The directors' and secretary's reports were read and adopted. The officers were re-elected, two more directors being appointed, W. A. McKenzie, Malagash and W. R. Oulten, Lorneville.

Mr. Jackson, Westchester and Mr. S. A. Logan were appointed delegates to N. S. Farmers' Association, alternates, Laurie McFarlane, Fox Harbor, Hiram Brown, Wallace Bay and Mr. Robertson.

Several matters were looked into and different problems discussed, including the hired help problem.

The membership, we regret to say, has decreased thirty-eight since last year. We hope to see it increased by a good majority in 1912.—R. R. B.

Sign Here
Mr.
your Name
your Post Office
your Province
WRITE your name and address in the lines above, clip out this ad, and mail it now. We will send, by return mail, a book that tells how to make yours a "Twentieth Century" farm.
You wouldn't be satisfied to use a scythe to cut your grain, when a modern harvester can do it so much better, would you?
Nor to use the old soft-iron plough-share that your ancestors walked behind, when you can get an up-to-date riding plough?
Every Canadian farmer realizes the advantages of Twentieth Century implements.
The next step is
The 20th Century Material—Concrete
Concrete is as far ahead of brick, stone, or wood as the harvester is ahead of the scythe or the riding-plough is ahead of the old iron plough-share.
Concrete is easily mixed, and easily placed. It resists heat and cold as no other material can; hence is best for ice-houses, root-cellars, barns, silos and homes. It never needs repair; therefore it makes the best walks, fence-posts, culverts, drain-tiles, survey monuments, bridges and culverts. It cannot burn; you can clean a concrete poultry-house by filling it with straw and setting the straw afire. The lice, ticks and all germs will be burned, but the house is uninjured.
It is cheap—sand and gravel can be taken from your own farm. Cement, the only material you must buy, forms from one-seventh to one-tenth of the whole volume.
Do you want to know more about Concrete on the Farm? Then write your name and address in the lines above, or on a postcard, mail it to us, and you will receive by return mail a copy of
"What the Farmer Can Do With Concrete"
Not a catalogue, but a 160-page book, profusely illustrated, explaining how you can use concrete on YOUR farm.
ADDRESS—
CANADA CEMENT CO., Ltd.
22-32 NATIONAL BANK BUILDING . MONTREAL
WOOD

Why Don't You Plant
EWING'S
Reliable Seeds
What's the use of giving your land, your time and your work for a season for anything less than the best crops? Ewing's Reliable Seeds have proved, for more than forty seasons, favorable and unfavorable, that they will produce the highest crops of the best quality. Ask your neighbors who plant Ewing's Seeds all about them. Plant them yourself this spring and get the full reward for your work. Your dealer should have Ewing's Reliable Seeds, but if he hasn't, write for our illustrated catalogue and order from us direct.
Wm. Ewing & Co., Seedsmen
McGill St., Montreal.
23
EWING'S RELIABLE SEEDS

Field Crops for 1911.

The Census and Statistics Office of the Department of Agriculture has issued the following bulletin giving the final estimates of the area, yield and value of the principal field crops of the Dominian for 1911. The field crops of Canada are shown to have occupied last year a total area of 32,-853,000, and their value, calculated at the average local market prices, amounts to $565,712,000. The area under wheat last year was 10,374,000 acres, of which 1,172,000 acres were fall wheat in Ontario and Alberta, and the production was 215,851,000 bushels of the value of $138,567,000. Fall wheat produced 26,014,000 bushels of the value of $21,461,000. Oats occupied 9,220,800 acres, and yielded 348,188,000 bushels of the value of $126,812,000, barley 1,404,000 acres yielded 40,641,000 bushels of the value of $23,004,000 and flax 1,132,000 acres yielded 12,921,000 bushels of the value of $19,467,000. The combined area under rye, peas, buckwheat, mixed grains and flax was 2,481,000 acres, the yield 44, 986,000 bushels and the value $41,560,000. Hoed and cultivated crops, comprising beans, corn for husking, potatoes, turnips and other roots except sugar beets occupied 1,-063,000 acres, and yielded 170,884,000 bushels of the value of $73,290,000. Sugar beets in Ontario and Alberta had an acreage of 20,878 and a yield of 177,000 tons of the value of $1,165,-000. Fodder crops including fodder, corn, hay, clover and alfalfa show an acreage of 8,290,000, a production of 15,499,000 tons and a value of $161,-314,000. Alfalfa, a record of which was taken for the first time, shows an area of 101,781 acres with a yield of 227,900 tons. This valuable fodder crop is being principally grown in Ontario, Quebec and Alberta, the average yield per acre for the whole of Canada being 2¼ tons.

For the year 1911 the areas from which the yields are calculated were those of the recent Census and the resulting data are not therefore strictly comparable with the estimates of the three previous years which were based upon the reports of selected correspondents. It may be mentioned however that tne area and production of wheat in 1911 exceed by over 1,000,000 acres and 65,862,000 bushels the estimates of 1910. A more satisfactory criterion of the difference between the two seasons of 1911 and 1910 is afforded by the average rates of yield per acre which for fall wheat was 22.19 bushels in 1911 against 23.49 in 1910, spring wheat 20.63 against 15.-3, oats 37.76 against 32.79, barley 28.94 against 24.62 and flax 11.41 against 7.97.

In the three Northwest provinces of Manitoba, Saskatchewan and Alberta the wheat production was 194,083,000 bushels compared with 128,891,000 bushels the estimate of 1910 of oats 212,819,000 compared with 126,753,000 and of barley 24,043,000 compared with 21,377,000. The wheat production of 1911 in Manitoba was 60,275,-000 bushels from 2,980,000 acres, in Saskatchewan 97,665,000 bushels from 4,705,000 acres and in Alberta 36,143,-000 bushels from 1,617,000 acres.

By provinces the total value of all field crops in 1911 was as follows: Prince Edward Island, $8,846,700; Nova Scotia, $14,297,900; New Brunswick, $16,797,000; Quebec, $103,187,000; Ontario, $193,260,000; Manitoba, $78,-136,000; Saskatchewan, $107,147,000; Alberta, $47,750,000; British Columbia, $1,290,000.

Owing to the exceptionally mild weather which prevailed during the fall and early winter live stock are reported as having entered winter quarters in excellent condition. As a general rule winter supplies are ample.--Archibald Blue, Chief Officer.

New Brunswick Apples.

By the courtesy of the Company we have been able to examine a selection of the apples grown upon the property of the St. John Valley Farm and Fruit Land Company, Burton, N. B. There is no doubt wnatever that these apples will always command favour in the Home market, alike by reason of their excellent colour and appearance, condition, flavour, and all-round quality. An apple of this high class can always command high prices in England, and is a credit both to its growers and to the land which produces it.

It is interesting to note that, so far as the fertile Province of New Brunswick is concerned, the St. John Valley Company is the first Company to take up systematically the question of offering small fruit farms to settlers and to adopt apple-growing themselves on an organized commercial basis. There is undoubtedly a great future before this most agreeable form of farming in New Brunswick. The St. John Valley Company's holdings at present comprise fully a thousand acres, part of which they retain as a commercial orchard, while the balance is divided up into convenient fifteen acre orchard lots for sale to settlers and the public. If the Company's own fruit products may be regarded as a specimen, it is safe to assume that no part of Canada will yield better returns to the orchardist. Would-be settlers should address their inquiries to the New Brunswick Government Office in Southampton-street.—Standard of Empire, London.

The Cape Breton Poultry Show.

A very succesful Poultry Show was held in North Sydney, N. S., on January 16th and 17th. Although this was the first Show held under the auspices of the Cape Breton Poultry Association, the showing made was very creditable. There are some poultry fanciers in the vicinity of the Sydneys who have been able to make matters hum in their classes at the Winter Fair and Provincial Exhibition. Their example is doing much towards creating a deeper interest in poultry culture in their respective localities.

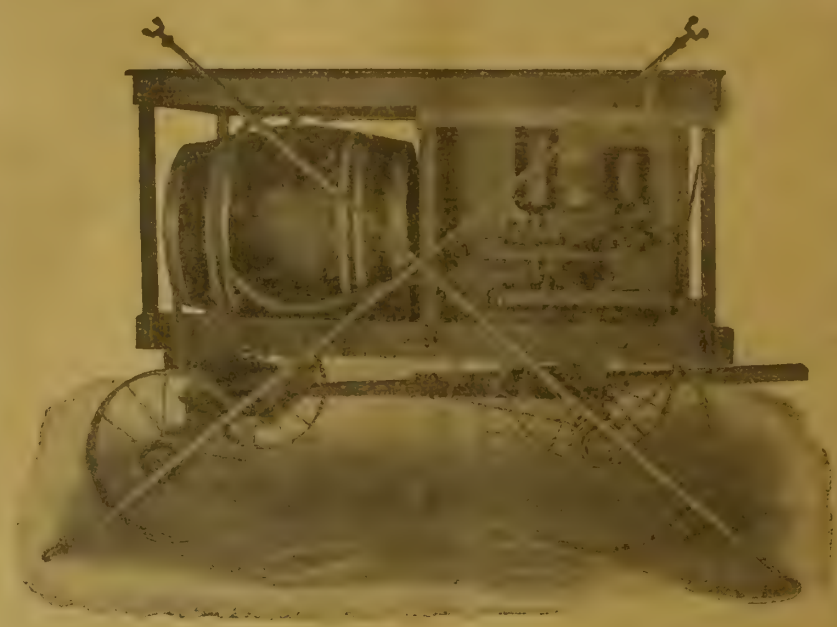
Some Good Sales.

H. W. Corning, M. P. P., Chegoggin, N. S., writes:—I made some good sales last week. I sold the two-year-old Clydesdale Stallion, Baron Corning to the Fraser Lumber Co., of Plaster Rock, N. B., at a nice price. I believe this colt will be heard from later as he has a lot of quality and he will make a mighty, trim horse.

In Guernseys, Dairymaid of Hillside dropped a beautiful bull calf on January 25th. This calf was sold the day he was dropped for $150.00 when six weeks old. He was bought by Prof. J. H. Grisdale to head the Guernsey herd at the Dominion Experimental Farm, Ottawa.

I also sold a very fine young bull, eight months old to head the herd of J. W. Flatt, of British Columbia. This bull, is also out of a Record of Performance dam and should do credit to the Maritime Province Guernseys, when he arrives on the Pacific Coast.

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

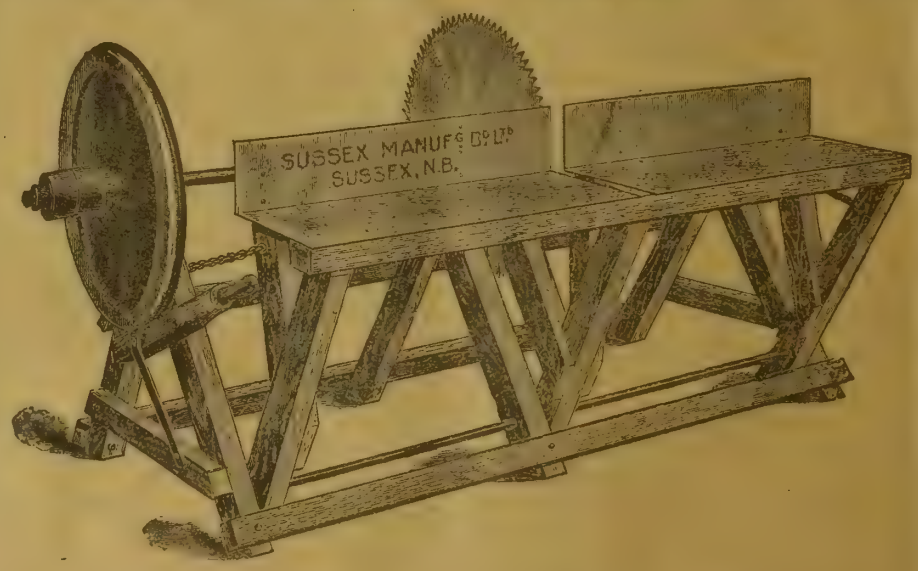
Illsley & Harvey Co.,

Limited

Port Williams, N. S.

Catalogue Sent on Application.

Wood Cutters Made in Three Sizes.



We make the best Wood Cutter on the market. The length of table on our Long Swing is 8 feet, 3 inches; distance between balance wheel and saw 4 feet, 3 inches. Heavy substantial frame and well braced. Steel plate table.

Length of table on Flat Rolling Machine is 8 feet, 3 inches; distance between balance wheel and saw 4 feet 3 inches. The table of this machine moves on grooved rollers and vd. track, which holds the table in position, making it move very easily to and from the saw.

Our Short Swing is built on the same principles as the Long Swing, the arbor and frame is shorter; length of frame 4 feet, 3 inches; distance between balance wheel and saw 3 feet, 6 inches.

On all our machines the arbor is the same size, made of the best turned steel and runs in bearings of the best babbitt. The balance wheel is a solid web and weighs 180 pounds.

We have a large number in stock and can ship promptly. All enquiries will have prompt attention.

The Sussex Manufacturing Company, Ltd., Sussex, N. B.

"Arguments in Favor of Home Mixing."

Extract from

"Artificial Fertilizers; Their Nature and Use"

By B. Leslie Emslie, F.C.S., P.A.S.I., C.D.A.

"1. ECONOMY: Usually at least 25 per cent. is saved in purchasing the separate ingredients. There is no useless "filler" to add to the freight charges; there is no duty on the separate ingredients, whereas the farmer must bear the cost of the duty imposed on the ready mixed fertilizers when these are imported from the United States.

2. ASSURANCE. The farmer who purchases the separate ingredients, especially if he insists on getting the goods in the original sacks, knows exactly what he is getting for his money; whereas the purchase of a ready mixed brand is more often like buying a "pig in a sack."

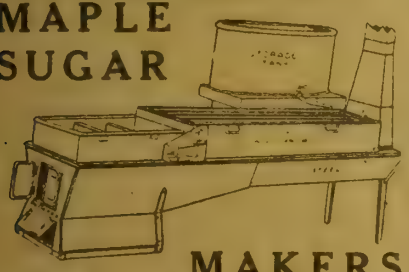
3. ADAPTATION. With a stock of the separate ingredients on hand, the farmer is enabled to make up his mixtures according to prescriptions which he has prepared to suit the varying requirements of the different crops and soils.

From this short resume each farmer may judge for himself whether, in his case, it will pay him to purchase the separate ingredients in preference to the ready mixed goods."

Farmers may obtain copies of this, as well as other important bulletins on this important subject, by applying to

GERMAN POTASH SYNDICATE,
1106 Temple Building, Toronto, Ont.

MAPLE SUGAR



MAKERS

The Lightning Evaporator is not only the fastest one made in the world, but it holds more prizes, medals and diplomas for quality of syrup it makes than all the other makes put together. Write for catalogue, it is free and gives lots of information.

SMALL BROS. - Dunham, Que.

Any little girl can do the churning with

MAXWELL'S

Favorite Churn.

It makes the smoothest, richest, most delicious butter you ever tasted.

The roller bearings—and hand and foot levers -make churning an easy task, even for a child.

All sizes from ½ to 30 gallons.

Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.

David Maxwell & Sons, St. Mary's, Ont.

Growing and Marketing Seed Potatoes.

(Continued from page 299).

4. Delivery to be made f. o. b. .....between .....and..... .....A. D. 19

5. Payments to be made by drafts at ..... attached to Bill of Lading for acceptance or in case of sight drafts for payment.

6. This contract is entered into by the Vendor subject always to drought, floods and excessive rains.

7. Vendor warrants goods to be of varieties specified and to be sound and in good condition and of good merchantable quality when delivered.

Witness our hands this..... day of.....A. D. 19

Signed in presence of

.....

.....

.....

N. B. Vendor is a member of Canadian Seed Growers' Association, and is in a position to contract for registered stock in Green Mountains for 1912 delivery and in Irish Cobblers for 1913 delivery.

Waterfowl in Winter.

Geese can do with warmer quarters than turkeys, as long as the floor is not damp and dirty. Keep lots of straw on the floor of the pen, so as to keep it clean and dry. On the farm the geese can be allowed the run of the barnyard during the day, as long as they have comfortable quarters at night.

A shed opening on the farmyard with the cracks covered with cleats or paper, so as to stop drafts, makes a very good spot for geese. As long as their feet are warm they are all right, and plenty of straw will fix them up in this respect.

Geese will eat almost any kind of grain. I find that oats make about the cheapest feed, and I feed this together with some corn on cold nights. Give plenty of water, grit and green food, such as beets, cabbage, etc.

Ducks require much the same treatment as geese, although it is not advisable to let them run out in the snow much. Needless to say, ducks, like geese, do not require any roosts, so all you need to do is to keep the floor dry and covered with plenty of straw and you have them fixed all right. Avoid drafts and cold, wet floors.

Ducks will eat almost anything. All grains look alike to them. They have a special liking for a pail of hot mash on a cold morning and some fresh water with the chill taken off. Give plenty of green feed and grit, and if you want to be real good to your stock on cold days, warm some corn in the oven for the night feed.

Valuable Book of Accounts for Farmers

Readers of this paper should take advantage of the generous offer of the Bickmore Gall Cure people in our advertising columns and write for their free Farmers' Account Book. This one is specially designed for farm use. Farmers find it much better suited to their wants than ordinary books they get at the store. It is not merely a "ledger" or time book, but is gotten up in right form to enable farmers to keep just such accounts as they ought to keep. If they will use this book as they should their business will be better systematized, they will know more about their accounts, will have a more accurate idea of what brings in a profit, where the losses are, how much they are making, etc. The book is prepared and published by the makers of Bickmore's Gall Cure, that long-time sovereign remedy for galls, sore shoulders, wire cuts, etc.—the remedy which "cures while you work the horse." Nearly every horse owner has heard of Bickmore's Gall Cure. It is a remedy which well deserves a place in every stable. It is not necessary to send postage for the Farm Account Book. Simply write the Bickmore Gall Cure Company, Box 37, Old Town, Maine, and say you would like to have it.

FREE

Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 58 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels and clear the complexion, an invigorator, tonic, and blood purifier. We will make you a present of this handsome set exactly as we offer it. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly, by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's Imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address.

THE DR. BURDICK MEDICINE CO., Dept. - Toronto, Ont.

Mr. Wise Grocer says:

The One Big Difference

between the Ordinary, Wooden, Wire-hooped Pail or Tub and the Pail or Tub made of EDDY'S FIBREWARE

is that the Former loses its Hoops and Goes Back into the Pieces which Formed it, while the Latter is a Solid, Hardened, Lasting Mass, without a Hoop or Seam.

And, besides, EDDY'S FIBRE PAILS AND TUBS have Many Features that you'd Never get the Good of if you Purchased the Inferior Wooden Articles Positively Persist in getting EDDY'S.

ALWAYS, EVERYWHERE, IN CANADA, ASK FOR EDDY'S MATCHES

Tank Heater Wanted.

We have an inquiry from one of our subscribers re a small size tank heater for warming water for stock. If any of our readers use a heater of this kind, will they be kind enough to forward us a description and the name of the manufacturers?

Violent Crossing.

Dr. J. G. Rutherford, among some brief rules for horse-breeders, has the following: Avoid violent crossing. All deformed colts are not caused by mental impressions, very many being due to the foolish but too common practice of serving small, light mares to heavy draught sires. It is well known that some stallions are notorious for this sort of thing, and it is a curious but instructive fact that the worst offender I ever knew was himself a small horse, but bred from extra heavy Clydesdale stock on both sides of the house. While this is, perhaps, the most objectionable, all violent crossing will be found, as a rule, unsatisfactory.

HAD WEAK and DIZZ YSPELLS

COULD NOT SLEEP AT NIGHT.

People all over this land toss night after night on a sleepless pillow, and do not close their eyes in the refreshing slumber that comes to those whose heart and nerves are right.

The sleeplessness comes entirely from a derangement of either the heart or nerves, or both, but whatever the cause Milburn's Heart and Nerve Pills offer the blessing of sound refreshing slumber. They do this by their invigorating effect on the heart and nerves, and will tone up the whole system to a perfect condition.

Mrs. A. E. Martell, Rockdale, N.S., writes:—"I was troubled for a long time with my heart, had weak and dizzy spells, could not sleep, and would have to sit up the greater part of the night, and it was impossible for me to lie on my left side. At last I got a box of Milburn's Heart and Nerve Pills, and they did me so much good I got another, and after taking it I could lie on my left side, and sleep as well as before I was taken sick. They are the best medicine I ever heard of for heart or nerve trouble."

Price 50 cents per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

"BANNER"

Cold Blast Lantern

Patent Lift Lock
No Jammed Fingers

Send Coupon in Lantern for Calendar.

Costs no more than inferior Lanterns

ONTARIO LANTERN & LAMP CO.,
Limited, Hamilton, Ontario.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont. will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child. the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

MUMFORD BROS.

Produce Commission Merchants

MUMFORD'S BUILDING, ARGYLE ST.

Halifax, N. S.

Personal attention given to sales of utter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.

TELEPHONE 906.

Read the Advertisements in the Maritime Farmer.

The New Brunswick Farmers' and Dairymen's Association.

The 1912 Annual Meeting of the N. B. & D. A. will meet in Fredericton, N. B. on March 18th to 22nd.

The morning and afternoon programme will consist of Live Stock Judging Classes as follows:

Light Horse Classes, Tuesday, A.M.
Heavy Horse Classes, Tuesday, P.M.
Dairy Cattle Classes, Wednesday, A.M.
Beef Cattle Classes, Wednesday, P. M.
Sheep—Wool Classes, Thursday, A. M.
Seed Judging, Thursday, P.M.
Seed Judging, Friday, A.M.

Evening Meetings will be held on Monday, Tuesday, Wednesday and Thursday evenings commencing at 8 P.M.

Among the experts who will speak at these meetings will be: Dr. Geo. M. Twitchell, Augusta, Me.; Prof. H. S. Arkell, Ottawa; Dr. Jno. Standish, V. S., Truro; Prof. E. S. Archibald, Truro; Mr. C. F. Whitley, Chief of Cow Testing Branch, Ottawa; Mr. G. C. Cutler, McDonald College; Mr. S. J. Moore, Truro and others.

A large delegation of farmers is expected. Plan to be present with the rest of your progressive co-workers and help to make these meetings the most successful in the history of the N. B. F. & D. A.

Worth More Than We Ask For It.

Mr. G. A. Fawcett, Grower and Shipper of Potatoes, Sackville, N. B., in renewing his Maritime Farmer subscription for the ensuing year, writes:

Your well printed paper with its sound editorials and enterprise is well worth $1.00 although you only charge eighty cents per year when paid in advance. Since September 11th, 1911 I have shipped seventy-four car-loads of potatoes. Some buyers to whom I sold wrote: "I saw by your ad, in the Maritime Farmer that you are a grower and shipper of potatoes." A firm in Carleton Place, Ontario even enclosed a clipping from one of your April 1911 issues containing my ad. I look upon the three Maritime Provinces as offering by far the best opportunities for happiness and prosperity of any spot in our Dominion. Our schools are grand; our markets are good enough for any man and our church privileges are unexcelled."

The New Brunswick Provincial Seed Fair.

The New Brunswick Provincial Seed Fair will be held in Fredericton, on Thursday and Friday, March 21st and 22nd. The prize list now on the press has places for one bushel samples of White Fife, Red Fife, White Russian and Any Other Variety of Wheat. There will also be a competition open to all varieties of wheat. The entries in the latter section must be separate bags from the bags entered in the other sections. The prizes in each of the wheat sections are seven in number and range from $4.00 to $1.00.

Ib oats, Banner, Early Blossoms, Any Other White Variety, Any Black Variety and a special competition, open to all varieties are provided for by prizes ranging from $5.00 to $ .50. Two rowed and six rowed Barley are provided with an offering of six prizes ranging from $3.00 to $ .50 in each section, and similar amounts are offered for two classes of buckwheat, rough and smooth.

Six prizes ranging from $3.00 to $ .50 are offered in the following sections: Field Peas, large, Field Peas, small, Garden Peas, Beans, colored, Beans, white, Timothy Seed, Clover seed, red, Alsike and white, Corn, any field variety and sweet corn.

Potatoes come in for seven prizes ranging from $3.00 to $ .50 in classes for Green Mountains or Delawares, Irish Cobblers, Any Other Long White Variety, Any Other Round White Variety, Rose Type, long, Rose Type, round, Red Skinned, any variety, and Dark Skinned, any variety.

Potato Onions, Turnip Seed, Carrot Seed, Six Turnips for seed raising and six Mangolds for seed raising will have four prizes ranging from $2.00 to $ .50 in their respective classes.

Lectures on Seed Production and general discussion by prize winners who will be asked to describe their methods will be given at the closing session of the Seed Fair.

Each and every farmer in New Brunswick is invited to send exhibits and also to visit the Fair.

$150.00 to $250.00 Per Cow.

H. S. Pipes & Son, Amherst, N. S., write:—The Bayview Farm Jerseys have rounded out the year 1911 with $150 per cow cash received for milk, cream, butter and buttermilk.

There has been no account made of the products consumed in the home nor has there been one pound of skimmilk credited to the cows.

When they are credited with skimmilk fed to twelve or more calves during the year the cash returns per cow is over $200.

The herd of some 42 head are in prime condition and are delivering a choice quality of cream and milk, so our patrons tell us.

A pair of Blue Blood heifers dropped their first calves about the fifteenth of December and are doing grand work, although the temperature was ten degrees below zero.

Bonnie Blue, the heifer that won first money at the fall show, as a two year old, is now giving as high as 20 lbs. milk at one milking.

An Encouraging Message

I have a message of hope and good cheer, of encouragement and inspiration to every suffering woman. I have endured the torture due to female troubles and the consequent despondency and mental agony almost to the point of despair, and I have been restored from this condition to a state of vigorous health, and to the happy, exhilarating frame of mind which accompanies physical well being. This change has been brought about wholly by the use of ORANGE LILY.

In addition I have had the privilege and pleasure of inducing multitudes of other suffering women to give ORANGE LILY a trial, and have received thousands of enthusiastic acknowledgments of the blessings it has brought to them. The following is a sample:

Truro, N. S., April 5, 1909.

Dear Mrs. Currah,—Your very kind letter was received yesterday. In reply to your question about my health, I am thankful to say that I am very well. As I have never given you a statement of my case you may be interested in it.

For several years I have suffered untold agony. This suffering was continuous, but I would have violent attacks every few weeks, each attack lasting several days. The first Sunday in November, I felt the pain increasing and so did not go to prayers. The rest of the family did go, and soon after the forcing down pains seized me and I had to remain on the floor until their return. I was in great pain all night and was very sick for a whole week.

Then Mrs. L. came to see me and told me of your wonderful medicine. I got my husband to send for it right away, as I was too sick to write myself. (My doctor could do nothing for me.) I have used 5 boxes of ORANGE LILY, have had three months of good rest, and am now well, never better in my life. I have not had the old pains since. I often ask my husband if it is myself that is going around and doing my own work. I can scarcely believe it. It brings tears of joy to my eyes. I could shout it to all the world. I cannot speak enough in its praise.

Your friend, MRS. E. H. F.

Receiving, as I do, dozens of such reports each day, I feel impelled to make known to my suffering sisters the merits of ORANGE LILY. It differs from other so-called remedies in that it is not taken internally. It is a strictly local treatment, and is applied directly to the affected organs. Its curative elements are absorbed into the congested tissues, expelling the stagnant foreign matter which has been irritating the membrane and oppressing the nerves, and a growing feeling of physical and mental relief is noticeable almost from the start. It is a positive, scientific remedy, and even if you use no more than the Free Trial treatment you will be very materially benefited.

FREE TRIAL OFFER

I want every reader of this, who suffers in any way from painful monthly periods, irregularities, leucorrhoea, inflammation or congestion of the womb, pains in the back, etc., to send me their addresses, and I will forward at once, without charge, 10 days' treatment. If your case is not far advanced it may entirely cure you, and in any event it will do you much good. I am so earnest in making this statement, and so positive that it is true, that I trust every sufferer who reads this notice will take advantage of my offer and get cured at home, without a doctor's bill. Address, enclosing 3 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

It Pays to Advertise.

Wm. Clark & Sons, Maple Grove Farm, North Wiltshire, P. E. I., write:— 'The bull calf from Sylvia of Maple Grove advertised in a recent issue of the Maritime Farmer has been sold. We received three orders for him within a week of the time our advertisement appeared. The first offer came from Mr. D. R. Crockett, Alma, Pictou Co., N. S., who has become the possessor of this very promising calf. Mr. Crockett evidently believes in getting the best, both in breed and in individuality. We hope to be able to supply the other gentlemen who wrote for this bull with some equally good ones.

This is the season of the year when mothers feel very much concerned over the frequent colds contracted by their children, and have abundant reason for it as every cold weakens the lungs, lowers the vitality and paves the way for the more serious diseases that so often follow. Chamberlain's Cough Remedy is famous for its cures, and is pleasant and safe to take. For sale by all dealers.

Health Board Advises Dairymen.

In its September report the Massachusetts state board of health favors dairymen with a dozen and a half "don'ts." They are given herewith. The New England Homestead annexes three of its own brand. Read all through and suggest a few things yourself.

1. Don't take it as a personal insult if boards of health criticize dairymen for the way they run their business.
2. Don't buy or keep diseased cattle. They may, and often do, infect the rest of your herd. Have a competent veterinarian examine all animals every six months.
3. Don't sell milk from cows suffering from tuberculosis, garget, cowpox, anthrax, foot and mouth disease.
4. Don't make the mistake of thinking any place is good enough to keep cows in. Give each cow 500 cubic feet of air space, 4 square feet of light, and plenty of fresh air.
5. Don't store manure in, under, or near the barn. Remove it daily a distance of at least 50 feet.
6. Don't allow water or liquid manure to collect in pools in the barnyard.
7. Don't keep pigs in, under, or near the barn. Most pig pens are very filthy and breed flies, and flies carry disease germs to the milk pail.
8. Don't use horse manure for bedding the cows.
9. Don't fail to keep the cows clean.
10. Don't sweep, throw down hay, or otherwise stir the dust, within an hour before milking.
11. Don't milk unless your hands and clothing are clean.
12. Don't have outhouses near the cow tie-up.
13. Don't have anything to do with the milk if you are not feeling well.
14. Don't use a broad open pail for milking.
15. Don't strain or handle the milk back of the cows. Always use a milk room.
16. Don't use utensils that are rusty and rough inside.
17. Don't fail to cool your milk as soon as possible to 50 degrees, and keep it there during storage. Never cool milk in a water trough, and use plenty of ice.
18. Finally, don't forget that all that health authorities wish you to do is to produce a safe, healthy milk.

The editor has some don'ts for the state board of health.

1. Don't send a bunch of idiots into the country to enforce above rules, and tell farmers where to get off.
2. Don't expect dairymen who are already underpaid for the high quality product they produce to continue the work of reform indefinitely without reasonable compensation.
3. Don't think the farmer is inherently opposed to clean milk, and the campaign waged therefore by boards of health. He favors both; only he wishes to be sure of a square deal, and feel that the campaign for sanitary milk is not lopsided. The middlemen and consumers themselves have important rules too seldom spoken of.

A Familiar Friend of 100 Years Ago.

Marvelous changes have been wrought in the way of living in the last 100 years. We prepare our food in a different way, we eat differently, dress differently, are taught differently in the schools. If we stop a moment to compare our "ways" with those of a hundred years ago, we are almost led to believe that everything has changed and everything has been improved.

In the mateer of treating our ailments the changes are no less noticeable than in other things. Old ways and old methods are gone. Amid all this change, however, we are almost startled when we think of one household preparation which has come down to us out of the remote past unchanged, and which is today more highly respected than ever before. We refer to that old reliable household remedy, Johnson's Anodyne Liniment, which has been used continuously by the people of this country for 101 years.

One hundred years is a long time. To go back to when it began is to get out of the age of the flying machine, the automobile, the telephone and the telegraph to a time when such things were not even dreamed of. It goes back beyond the steam railroad into the realm of the stage coach. The steamboat was a hundred years ago a new thing. In 1810, when Johnson's Anodyne Liniment was first compounded, James Madison, 4th President of the U. S., had just been inaugurated. Abraham Lincoln was then a one-year-old baby. The country then had less than one-tenth of the population it now has and not one in a hundred thousand of its present 90 million people had then been born.

With the age of this 101-year-old friend goes respectability. The respect is due solely to its virtues. It could not have lived over 100 years if it had not been one of the most efficient remedies the world has ever known for the aches and pains, the ills and ailments to which the human family is subject. During its lifetime thousands of other liniments have come and gone and been forgotten. The 101-year-old liniment lives and grows in the affections of the people. Where it has once been used in a family it is a rare thing that anything else has ever been found to take its place. Thus, in innumerable households it has come down, like a valued heirloom, from father to son for generations.

The Anodyne Liniment is manufactured by I. S. Johnson & Co., Boston, Mass., and is sold by dealers generally throughout the country.

Weight Instead of Measure.

In these days when the cost of all sorts of foodstuffs is so high, it is a matter of necessity that the measure and quantity should be standardized sale of vegetables, eggs, and even and strictly enforced. More particularly should this be the case in the fruit. In the days when potatoes sold for from 50 to 80 cents a bag, people did not consider it a matter of much importance exactly what the bag contained or how much it weighful tubers runs up to $2 a bag and ed. But when the price of these useover, as it has done this winter, each potato has a distinct commercial value. And when it comes to selling by measure the amount of air space in a bag for which the consumer has to pay will be considerable. The Market Gardeners' Association are themselves in favor of selling by weight, so as to standardize the price. A "bag of potatoes" is an elastic quantity. Some bags contain not much over a bushel, while others contain more than a bushel and a half. The unscrupulous vendor by the simple process of putting fewer potatoes in a bag can undersell the honest vendor. That is the reason the vendors desire to standardize the amount sold by regulating the quantity by weight instead of measure. Naturally the consumer has a much greater reason for desiring the same system to be in vogue. Purchasers of fruit are well acquainted with the strawberry basket which has a round bottom about an inch thick, a row of fine fruit on the top and a filling of ignoble, sand covered, half ripe fruit underneath. The same applies to eggs. When this delectable fruit is five cents apiece the consumer expects to receive five cents worth of egg, when, as a matter of fact, at this season of the year eggs are so small that it would require about eighteen to weigh as much as a full sized dozen. Even the hens seem to find the cost of living so high that they cannot afford to furnish the fine, large spheroid of better days.

For the protection of the public a law should be passed standardizing the weight of such articles of food as can be more equitably measured by weight than bulk, and provision made for enforcing the law. From the enquiries made the existing regulations in that respect are practically a dead letter even in their present antiquated form, and there is no provision made for carrying them into effect. The new Federal government could not enact a more generally popular measure than such an act that would protect alike the consumer and the honest vendor.—Exchange.

Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparation, and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers.

Advantages of a Good Pasture-Replace by Using

HERBAGEUM

Twenty-five Years' Test Without Failure with

HORSES, COWS, FAT CATTLE, SHEEP, PIGS AND POULTRY

IT INSURES GOOD HEALTH AND BETTER RETURNS

It keeps Sheep free from Ticks and Assures better Wool and Heavier Clip.

Flavor of Milk and Butter are improved when Herbageum is given regularly.

MAKE YOUR OWN CALF MEAL

None Better—Costs only 1 1-2c. per lb.

HERE IT IS—100 lbs. Oil Cake Meal; 300 lbs. Shorts; 4 lbs. Herbageum; about 1 lb. Salt. Mix well. Stir about two cupfuls in a gallon of scalding water and feed warm.

Leading Poultrymen Assure Us that Herbageum has no Equal. Now is the Time to Use It.

AND REMEMBER—NOTHING ELSE IS QUITE SO GOOD

The BEAVER MFG., CO., Ltd.,

Galt, Ont. - - Sole Manufacturers.

Plant Stark Apple Trees

Nova Scotia's Great

Commercial Apple

20,000 Trees Like Illustratson, for Spring Delivery, 1912.

Send for Circular and Catalogue

Order Now Agents Wanted

Stone & Wellington,

TORONTO. - - - - ONT.

PEERLESS PERFECTION

The first cost should be the last cost.

You should put up a fence that will give you real fence service first, last and all the time. The cheapest is always the most expensive in the long run on account of repairs necessary.

Peerless Saves Expense

because it is the poultry fence that never needs repairs.

Peerless poultry fencing is made of the best steel fence wire—tough, elastic and springy—and will not snap or break under sudden shocks or quick atmospheric changes. Our method of galvanizing positively prevents rust and will not flake, peel or chip off. This feature alone adds many years to the life of a fence.

The joints are securely held with the "Peerless Lock" which will withstand all sudden shocks and strains yet is so constructed that Peerless Poultry Fence can be erected on the most hilly and uneven ground without buckling, snapping or kinking.

The heavy stay wires we use make Peerless Poultry fencing rigid and upstanding thereby preventing sagging and needs only about half as many posts as other fences.

We build our poultry fence stronger than seems necessary in order to keep marauding animals out and close enough to keep the smallest fowls in. Many of our customers are using this style as a general purpose fence with entire satisfaction.

Peerless Poultry Fence when once put up is always up and will look better, wear better and serve you better than any other fence built.

Our Catalogs are all Free to You

Write us for literature and address of nearest agent. We also manufacture a complete line of general fencing, farm gates, walk gates and ornamental fencing. Agents almost everywhere.

Banwell-Hoxie Wire Fence Co., Ltd.
Winnipeg, Man. Hamilton, Ont.

This Book Grows Dollars

It's an honest guide to better profits through the use of

McDONALD'S SEEDS

FREE

Absolutely the most vigorous and reliable on the market. Also complete stock of farm and garden necessities.

Send for your copy to-day to Dept. D

Kenneth McDonald & Sons, Ltd,
Ottawa Ontario

STAMMERERS

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to 11

THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

There is no better medicine made for colds than Chamberlain's Cough Remedy. It acts on nature's plan, relieves the lungs, opens the secretions, aids expectoration and restores the system to a healthy condition. For sale by all dealers.

Horse Breeding Legislation.

(Continued from page 295).

for public service must, in every case, prominently advertise the fact that he is a grade, so that everyone easily knows the breeding of the horse. The results of this Legislation have been striking. In 1906, when the first enrollment of stallions was made, 1561 grade stallions were licensed. In 1908, when the licenses were renewed, 553, or 35.2 per cent. of these had been retired from public service and the whole trend has been towards the recognition of the merits of the pure bred stallion. Besides this, the law has lead to more care being taken in regard to the correctness of pedigrees, which has lead to a far better appreciation, on the part of the public, of the whole matter of the breeding of horses.

Very similar legislation now exists in Iowa, Minnesota, Utah, Pennsylvania, New Jersey, Montana, Oregon, Idaho and several other States of the Union. In some of these States the laws are a little less drastic and in others more so. The principal addition which has been made in some States is that relating to a lien which the owner of an enrolled stallion has upon the colt sired by this stallion in case the fee has not been paid. As similar Legislation exists in Manitoba, Saskatchewan and Alberta, we will discuss it more in detail in connection with our statement of tne law in those provinces.

In Manitoba, Saskatchewan and Alberta, legislation has been in force for from 5 to 8 years very similar to the Wisconsin law. One particular in which these western province laws fall short of the Wisconsin law is that, provision is made for issuing certificates for "pure-bred stallions not submitted for examination for soundness and, therefore, not guaranteed." Naturally, the person owning a pure bred stallion, which he knew to be sound, would not submit it for examination and would, therefore, receive such non-guarantee certificate and so would legally travel an unsound stallion. A valuable provision is made in the laws of all of these Canadian provinces, to the effect that the owner of any stallion holding a Government certificate of enrollment may file in the Register of Deeds office, or other office for the purpose, a statutory declaration in regard to the amount of service fee due and shall, consequently, have a lien for the amount of service fee together with costs, which can be collected from the proceeds of a forced sale of the colts. I am advised that in all of these provinces it is purposed to pass more stringent legislation, especially in reference to unsoundnesses.

In Ontario in 1911, a bill was submitted to the legislature to the effect that all stallions kept for public service must be enrolled. Provision was made for enrollment into four classes:

1st.—Pure bred.

2nd.—Pure bred with malformation or disease (malformation or disease to be named).

3rd.—Grade or Cross bred.

4th.—Grade or Cross bred with malformation or disease (malformation or disease to be named).

It will be noticed that the proposed Ontario act differed from the Wisconsin act in that in the latter it was made illegal to travel an unsound stallion; whereas, the Ontario act permitted all stallions to stand for service, with the provision, however, that whatever unsoundness, etc. they might have should be publicly advertised.

After the bill was introduced changes were made, owing to a strong opposition to the clauses in regard to unsoundness, but even with these clauses excluded the bill did not pass for it still met the opposition of those who were opposed to legislation of any sort and it lost a large measure of the support of the leading breeders of tne country owing to its incomplete character.

From the foregoing resume, it will be seen that legislation for the control of stallions has come into force in a number of States of the Union and Provinces of Canada. Wherever such legislation has been passed, new clauses have from year to year been introduced, making the legislation more and more effective. Enthusiastic horsemen look forward to the day when the results of this legislation, coupled with the efforts of private enterprise, will lead to pure bred sires, free from hereditary unsoundness, becoming the only monarchs of horsedom.

Should such Horse Legislation be passed in Nova Scotia?

A Sign of the Times

PEOPLE are becoming very careful about what they eat and drink—

The preference for goods in **sealed** packages —especially in food stuffs—**is now quite definite** and becoming more so every day.

We must frankly admit that there are **sound** reasons for this preference. Food stuffs **cannot** be exposed to varying atmospheric conditions without **losing** both strength and flavor.

Tea—of all articles of everyday diet (excepting coffee, perhaps) needs protection most, and best merchants have been quick to appreciate the fact. So much is this the case that the selling of loose Tea in bulk will soon be a thing of the past.

RED ROSE TEA reaches you with all its virginal flavor, strength and purity—

—It is sealed in air-tight packages—dust and damp-proof—

RED ROSE is a blend of the best Indian and Ceylon Teas.

—The former assures generous strength and richness—the latter **that** coaxing, delicate flavor, Qualities for which Red Rose Tea is famed.

Ask your Grocer for the 40c. package of Red Rose and you'll get **better** Tea—Tea that spends farther—for the same money.

You want "Good" Tea—well,

"Red Rose Tea is Good Tea"

210

The men who advertise in The Maritime Farmer are experts in their business. It will pay you to consult them about your needs in their line. Tell them you are writing them because you saw their advertisement in The Maritime Farmer where all ads

The purchaser of a barrel of apples has as much right to demand that the middle of a barrel shall equal the face and tail as the purchaser of flour or any other commodity.

1,000 Toilet Sets FREE

A toilet set is a very necessary article on every dressing table and the one we offer as a premium will commend itself to the most refined and artistic taste. The case is **Beautifully Lithographed** in fancy patterns and large floral sprays. It is **Sateen Puff Lined** and fitted with a handsomely **Embossed Back Bevel Mirror and Brush** with **Comb** to match. We give you this lovely toilet set **FREE** for selling $3.00 worth of pretty **Lithographed** and **Embossed Picture Post Cards** at 6 for 10c. These cards are the latest designs in VIEWS, FLORAL, BIRTHDAY, COMICS; also ST. PATRICK and EASTER in season. Write to-day and we will send you a package of cards which you can sell in every house. We also give an extra present for promptness, so write to-day. **COBALT GOLD PEN CO.**, Dept. 613 Toronto, Ont.

Current Prices of Farm Seeds.

Clover Seed.

RED MEDIUM OR EARLY. Bush.	10 lbs.	60 lbs.	100 lbs.
No. 1 Gov't Standard	$2.75	$15.90	$26.50
	2.85	16.50	27.50
No. 2 Gov't Standard	2.65	15.30	25.50
No. 3 Gov't Standard	2.55	14.70	24.50
MAMMOTH OR LARGE LATE RED.			
No. 1 Gov't Standard	3.05	17.70	29.50
No. 2 Gov't Standard	2.85	16.50	27.50
No. 3 Gov't Standard	2.75	15.90	26.50
ALSIKE CLOVER.			
No. 1 Gov't Standard	2.75	15.90	26.50
No. 2 Gov't Standard	2.45	14.10	23.50
	2.55	14.70	24.50
No. 3 Gov't Standard	2.35	13.50	22.50
WHITE DUTCH CLOVER.			
No. 1 Gov't Standard	4.15	24.30	40.50
No. 2 Gov't Standard	3.85	22.50	37.50
No. 3 Gov't Standard	2.75	15.80	26.50
White and Alsike Mixed, No. 3. Gov't Standard	2.20	12.60	21.00
Timothy and Alsike Mixed No. 3. Gov't Standard	2.05	11.70	19.50
ALFALFA (Lucerne).			
No. 1. Gov't Standard	2.20	12.60	21.00
	2.35	13.50	22.50
No. 2 Gov't Standard	1.95	11.10	18.50
No. 3 Gov't Standard	1.90	10.80	18.00
CRIMSON CLOVER			
No. 2 Gov't Standard	1.85	10.50	17.50
SAINFOIN	1.70	.....	16.00

Timothy.

	Bush. 10 lbs.	48 lbs.	100 lbs.
No. 1 Gov't Standard	$2.20	$10.08	$21.00
	2.30	10.32	21.50
No. 2 Gov't Standard	2.10	9.60	20.00
No. 3 Gov't Standard	2.00	9.12	19.00

Grass Seeds.

	10 lbs.	100 lbs
Rye Grass for Hay	$1.40	$13.00
Bromus Inermis	2.10	20.00
Canadian Blue	2.10	20.00
Creeping Bent	4.10	40.00
Italian Rye	1.80	17.00
Kentucky Blue	3.30	32.00
Meadow Fescue	5.10	50.00
Orchard	2.60	25.00
Perennial Rye	1.50	14.00
Red Top	2.70	26.00
Rhode Island Bent	4.10	40.00
Western Rye	1.30	12.00
HUNGARIAN AND MILLET		
Common Millet	.45	3.90
German Millet	.55	4.75
Hog Millet	.55	4.75
Hungarian	.50	4.50
Japanese Millet	.85	7.50
Siberian Millet	.60	5.50

PERMANENT PASTURE MIXTURES (for all lands)	10 lbs.	100 lbs.
Medium Soils	$2.80	$27.00
High, Light Dry Soils	2.80	27.00
Moist, Heavy Rich Land (Subject to overflow)	2.80	27.00
Orchards (shady places)	2.80	27.00
LAWN SEED MIXTURES		
Evergreen Lawn (Our Best)	$3.50	$32.50
Park Lawn	3.00	27.00
Sandy Nook Lawn	4.50	42.50
Bowling Green Lawn	3.50	32.50
Golf Link	2.50	24.00
Golf Putting Green	4.00	37.50
FODDER PLANT SEED.		
Cow Peas	.85	7.50
Dwarfl Essex Rape	1.00	9.50
Evergreen Broom Corn	.75	7.00
Horse Beans	.85	7.50
Jerusaleum Corn	.85	7.50
Kaffir Corn	.55	4.50
Lathyrus Sylvestris	9.50	90.00
Sunflower	.80	7.00
Sorghum (Sugar Cane)	.75	6.50
Sand Vetch	1.60	14.00
Soy or Soja Beans	.90	8.00
Teosinte	6.00	55.00
Thousand-Headed Kale	2.45	24.00

Seed Grain.

BARLEY (Bu 48 lbs.)	Peck	Bush
Success Beardless	$0.60	$2.00
White Hulless	.60	2.20
Duckbill (two-Rowed)	.40	1.50
No. "21" (Six-Rowed)	.45	1.50
Mandscheuri (Six-Rowed)	.40	1.40
10 bushel or over, 5c per bushel less.		
BEANS (Bu. 60 lbs.)		
White Field (Medium)	.75	2.80
White Marrowfat (Large)	1.00	3.75
BUCKWHEAT (Bu. 48 lbs.)		
Japanese	.35	1.35
Common	.35	1.20
Silver Hull	.35	1.20
10 bushels or over, 5c per bushel less.		
CORN, FLINT SORTS (Bu. 56 lbs.)		
King Philip (Red)	.50	1.75
Northern Prolific (Yellow)	50	1.40
Extra Early Australian	.60	2.20
Quebec Yellow	.45	1.75
Compton's Early (Yellew)	50	1.90
Longfellow (Yellow)	.45	1.75
North Dakota (Sanford) White	.45	1.75
5 bushel or over, 5c per bushel less.		
CORN, DENT SORTS.		
Bailey, Ontario Grown (Yellew)	35	1.30
Cloud's Early (Yellow)	.35	1.30
White Cap (Yellow)	.35	1.25
Mastodon (Yellew)	35	1.30
Imp. Leaming (Yellow)	.35	1.25
Fodder Leaming	.30	1.15
Red Cob (White)	30	1.15
Giant White Ensilage	.30	1.15

CORN, SWEET OR SUGAR.	Peck.	Bush.
Stowell's Evergreen for Cutting (Bu. 40 lbs.)	$1.20	$4.00
OATS (Bu. 34 lbs.)		
White Wave (New)	45	1.50
Bumper King (White)	45	1.50
Fifty Pound (Black)	50	1.75
Dodd's (White)	45	1.50
Bristol (Black)	45	1.50
Irish (White)	25	90
Storm King (White)	25	90
American Banner (White)	25	85
Black Tartarian	25	85
5 bushel or over, 5c per bushel less.		
PEAS Bu. 60 lbs.)		
Brittany	$0.75	$2.75
Black Eye Marrowfat	.75	2.75
White Marrowfat	.75	2.75
Rrussian Blue	.75	2.75
Canadian Beauty	.75	2.75
Golden Vine	.60	2.20
Prince Albert	.60	2.20
5 bushels or over, 5c per bushel less.		
RYE, SPRING (Bu. 56 lbs)	.50	1.75
SPELTZ (EMMER) (Bu. 40 lbs.)	.35	1.35
TARES (VETCHES) (Bu. 60 lbs.)	.60	2.25
WHEAT (Bu. 60 lbs.)		
Red or Scotch Fife (Bald)	.50	1.75
White Fife (Bald)	.50	1.75
White Russian (Bald)	.50	1.80
Wild Goose (Bearded)	.40	1.55
5 bushels ar over, 5c per bushel less.		

Seed Potatoes.

Earliest Six Weeks	$0.65	$2.50
Early Rochester Rose	65	2.50
Gold Coin	65	2.50
Improved Early Ohio	65	2.50
Irish Cobbler	65	2.50

CONSIDER NOW

what it will cost and how much money you will save on your next season's fertilizer bill if you should buy your

Nitrate of Soda

and other Farm Chemicals and mix them yourself

Your own brand MIXED AT HOME will be better than any patent brand and is sure to have in it just what you want.

Book of formulas and full instructions for Home Mixing will be sent

FREE OF COST

If you will send your name and address on Post Card

Dr. WILLIAM S. MYERS, Director of Chilean Propaganda
17 Madison Avenue, New York *NO BRANCH OFFICES*

If Pays to Plant Selected Seed.

In 1910 Mr. C. Fred Fawcett, Pioneer Farm, Upper Sackville, N. B., planted one whole selected Green Mountain potato in a hill and from it harvested 31 potatoes, 27 of which were marketable. Total weight 8 pounds, 14 ounces. The best potato from this hill was planted whole in 1911 and the above cut is a photo of the result, 34 potatoes, 28 of which were marketable. Total weight 11 1-2 pounds.

When we visited Pioneer Farm in June 1910 we saw Mr. Fawcett's selected seed plot and although it had been planted on the same date as the general crop in the same field, the contrast in tops was very much in favor of the selected plot, which showed a height of stems and volume of leaves fully double that of the general crop plants.

See Mr. Fawcett's article on other pages of this issue. Can any other farms in Canada beat this record?

Liquid Rennet.

W. A. Smith, Char. Co., N. B.:—Can you give me the address of any firm who deals in Liquid Rennet? Where can I obtain Irish Cobbler and Green Mountain Seed Potatoes?

Ans.:—If subscriber has access to a cheese factory a satisfactory and cheap supply can likely be obtained. Such an arrangement would permit of small quantities being secured. Liquid Rennet is not usually sold by dealers in less quantity than one gallon.

It can be obtained of Hunter White, St. John, N. B. or Maritime Dairy Co., Sussex, N. B. Hansen is a good brand.

C. Fred Fawcett, Upper Sackville, N. B. and Clements & Co., St. John, N. B. are offering Irish Cobbler and Green Mountain Seed Potatoes for sale.

Hay and Straw.

Hay on the city scales is worth $23 per ton in Toronto this week. By the carload there is no change. The American hay markets have advanced during the past week, as receipts have been greatly reduced, leading to an acute scarcity at some points. More hay is now in transit, and a good deal ready to load as soon as roads are open for shipment. Much weather damaged hay is finding its way on the British markets, and it is hard to get rid of. Canadian hay arrivals are still small and this helps to support prices.

In Montreal hay is ranging in price from $10 to $16 in car lots, according to quality. $13 to $17.50 per ton, in car lots are the selling hay prices in Toronto.

FREE $100.00

WIN A PRIZE

8	21	14	4	18	5	4
4	15	12	12	1	18	19
7	9	22	5	14		
1	23	1	25			

WIN A PRIZE

GIVEN AWAY

And many other Prizes according to the simple Conditions of the Contest (which will be sent).

Each one of the above four lines of figures spells a word. This most interesting puzzle can be solved with a little study, as follows: There are twenty-six letters in the alphabet, and we have used figures in spelling the four words instead of letters. Letter A is number 1, B number 2, C number 3, etc., throughout the alphabet.

USE YOUR BRAINS. Try and make out the four words. **ACT QUICKLY.** This is a chance for clever persons to win Cash and other Prizes with a little effort. Write the four words, with your name and address, neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. **Act Promptly.**

DOMINION PREMIUM CO. **210 St. James St. (Dept. 91 MONTREAL**

Breeding Hopples.

Information is thus sought by J. S., Mill Grove:

"What kind of cheap but serviceable and reliable hopples would you recommend for mares at breeding time? My neighbor had a $1,000 stallion kicked and probably ruined. I thought I could manage any mare so she would not kick, but this season I found two that did kick in spite of all I could do."

The usual form of hopples has a heavy leather neckband about the size of a collar and made about as heavy as a work harness trace. This may be either a continuous loop to slip on over the head, or it may be made with a buckle so as to be adjustable to size. Heavy double leather bands are also made to buckle tightly around eacn hind pastern, and these are sometimes lined witn sheepskin with the wool on to prevent chafing. Each pastern band has a ring sewed in and a rope extends from the ring in one up between the fore legs to the neckband and back to the ring in the other pastern band. The rope should be not less than ¾ inch in diameter and adjusted so as to be snug when a mare stands naturally. Some men dispense with the neckband and merely tie a loop of the same size in the middle of the rope, using the ends to extend to the hind pasterns. In an emergency a rope alone may be used in this way by tying each end to a hind pastern by double half-hitches, but the straps to buckle around the pasterns can be more safely and quickly put on strange mares and are more secure.—Breeders Gazette.

Beauty and Fertility.

"That same instinct and culture which lead men of means to pay thousands of dollars for a beautiful painting, also induce them to invest liberally in beauty of animal form. Jacob's ring-streaked and speckled cattle may have been useful, but they were not beautiful in that day, nor would they be appreciated in this day. 'Handsome is as handsome does' may cover a multitude of faults, but it loses much money to the breeder of pedigree stock who orders his matings according to its philosophy. A hammer-headed, gabled-rumped, three-cornered cow does not give milk by reason of these deformities, but in spite of them. A man should not desire a three-corned cow any more than a three teated udder. There is something lacking—something of tangible value missing. Beauty is more than skin-deep in a pedigree animal. It is pocket-book deep. The man who reads the history of the trade and fails to find that fact is blind, as it looms large on every page. It is possible to combine beauty of form with excellence of function in the dairy cow, and the combination rates high in financial value. The breeder who neglects either factor in the equation is like the man who undertakes to row a straight course with one oar. A wide appreciative market awaits breeders who combine attractiveness of form and finish with profitable production. Until a love of the esthetic is eliminated from the human mind, shapeliness and finish in the dairy cow may be minted into money."—W. R. Goodwin.

St. John Prices.

GRAIN—Oats, 55c. to 58c. bushel; Buckwheat, $2.50 to $3.00 cwt.

FEEDSTUFFS—Bran, $21.00 ton.

HORSES—Drafters, $225 to $250; Roadsters, $175 to $200; Carriage, $175 to $200.

DAIRY PRODUCTS—Creamery Butter, 30c. to 33c.; Dairy Butter, 25c. to 28c.; Cheese, 13c. to 14c.

TAKE THIS BELT

AND BECOME

A MAN

All men cannot be MILLIONAIRES, but thousands of them could be much better off FINANCIALLY, SOCIALLY and in every other respect if they would guard their health. With VIGOROUS HEALTH—a body full of ELECTRICAL ENERGY—a man can make OPPORTUNITIES if he don't find them, but lacking in the COURAGE and SELF-ASSURANCE that is born of MANLY VIGOR, he is but a derelict—a vessel without mast or rudder—cast hither and thither by every storm of life that besets his pathway. GIVE ME A MAN that has exhausted his VITALITY—suffering from PAINS AND ACHES—MENTAL DEPRESSION —SLEEPLESSNESS—NERVOUS DEBILITY—without HOPE—AMBITION — COURAGE gone — drifting with the tide—and I can transform him into a STRONG MAN—A man of push—a man that will make his way in spite of all obstacles—if he has anything left to build upon, and he will follow my advice and use the DR. McLAUGHLIN ELECTRIC BELT as I direct. Save your tobacco money for a few weeks—cut out a few of your health-destroying, soul-destroying habits—procure one of these appliances—USE ELECTRICITY, and use it in the right way to invigorate your body, and you will look upon the day you gave your case to me as the TURNING POINT OF YOUR LIFE. Here is what some say of this remedy, who have used it:

Dear Sir,—I am perfectly satisfied with your Belt for what it has done for me. I am now a well man.

Yours, very truly,
HUGH McLEAN.
New Glasgow, N.S., Box 464.

Dear Sir,—I find your Belt all right for every kind of pain that is felt in the human body, and I have not missed a day with sickness since I got the Belt.

Yours very truly,
JAS. W. BARRIE.
Auld's Cove, N.S.

Dear Sir:—

Having received a Belt from you some years ago, I now desire to express myself in regard to the benefits, which I received from it. I wish to say in as few words as possible that it was all that it was represented to be, having cured me of Indigestion and other ailments, and I must say that I feel a new man, and I give all credit to Dr. McLaughlin's Electric Belt. I would advise any one suffering to give the Belt a trial, and I know they will feel as I do. Although I have been four years benefited without saying so to you, I have been doing all I could in my locality personally. So giving you the privilege of using this letter as you wish, and wishing your Belt every success, I remain,

Sincerely yours,
SAM J. HARNETT.
North Gower, Ont.

Any man or woman who will give me reasonable security, I will send them the Belt, with all the necessary attachments suitable for their case, and they can

PAY WHEN CURED

Never mind waiting until you use the last dose of that bottle from the drug store. Begin now. Call and talk your case over with me or send for my book. It costs you nothing. For over 24 years I have taught the great truth that "ELECTRICITY IS LIFE," and have proved the soundness of my doctrine by making cures when others have failed time and again. Others have aspired to do the work I am doing with my ELECTRIC BELT. They offer you Electricity in some other form, or an "electric belt" that possesses no curative power whatever. They are like "boys on bladders" floundering in a sea of uncertainty—while to-day the DR. McLAUGHLIN ELECTRIC BELT stands the world over as the most correct—the most perfect—method of applying Galvanic Electricity to the body that has ever been devised. Call at once or send coupon for our FREE illustrated 80-page book, from which you can learn much that you want to know. Do it now.

M. K McLAUGHLIN

214 St. James St., Montreal, Can.
Dear Sir,—Please forward me one of your books as advertised.

Name .....

Address .....

Office Hours—9 a.m. to 6 p.m.; Wednesday and Saturday till 8.30 p.m.

POULTRY AND POULTRY PRODUCTS—Eggs, 25c. to 28c., fresh, 35c.; Fowl, $1.30 to $1.65 and $2.00; Chickens, $1.30 to $1.75; Ducks, $1.75; Geese, $1.50 to $1.75; Turkeys, 25c. to 32c. pound.

FRUIT—Apples, $2.25 to $3.00.

MISCELLANEOUS—Hay, $12.00 to $15.00 ton; Straw, $8.00; Wool, 18c. to 23c.; Beef Hides, 11½c.; Calf Skins, 16c.; Sheep Skins, 80c. to $1.00; Lamb Skins, 80c. to $1.00.

VEGETABLES—Carrots, $1.50 bbl.; Potatoes, $2.25 to $3.00; Turnips, $1.00; Beets, $1.25 to $1.40.

The market is very well supplied with meats of all kinds. Mutton and veal if it is good quality will bring good prices. Of late the farmers have been sending poor stock to market. They have to sell at a low price while the Western firms are demanding good prices for their stock. Swift Co. and Gunn Co. are selling 100 to 125 carcasses of Western Beef in the City. My advice to the farmers of New Brunswick is to get up and take a hustle on for the day is not far distant when the Western Beef will have full control. Potatoes are advancing in price and they will go higher. Good veal is bringing good prices. Butter is in good demand prices 25c. to 33c. and the farmers are asking 35c. for up-to-date goods in the market to-day.—W. C. D.

Halifax Prices.

GRAIN—Oats, 56c. to 57c. per bus; Peas, Round, $5.50 to $5.75 per bbl.

FEEDSTUFFS—Bran, $27.00 to $27.50 per ton; Shorts, $28.50 to $29.00 per ton; Middlings, $29.00 to $29.50 per ton; Oil-cake Meal, $2.40 to $2.45 per 100 lbs.; Cottonseed Meal, $1.80 to $1.85 per 100 lbs.; Gluten Meal, $1.65 to $1.70 per 100 lbs.; Corn Meal, $1.72½ to $1.77½ per bag.

GRASS SEEDS—Timothy, 18½c. to 19½c. pound; Com. Red Clover, 23c. to 24c. pound; Mam. Red Clover, 23c. to 24c. pound; Alsike, 20c. to 21c. pound.

LIVE STOCK—Milch Cows, $40.00 to $50.00.

DRESSED MEATS—Beef (retail), 16c. to 20c. lb; Mutton, 9c. to 9½c.; Veal, 8c. to 8½c.; Pork, 12c. to 15c.

HORSES—Drafters, $250.00 to $300.00; Roadsters, $275.00 to $300.00; Carriage, $275.00 to .$300.00.

DAIRY PRODUCTS—Creamery Butter, 32c. to 34c. lb.; Dairy Butter, 25c. to 27c. lb.; Cheese, 15c. to 15½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 35c. to 40c. doz.; Fowl 20c. to 22c. lb.; Chickens, 19c. to 20c. lb.; Ducks, 20c. to 21c. lb.; Geese, 19c.. to 20c. lb.; Turkeys, 25c. to 26c. lb.

FRUIT—Apples, $2.50 to $3.50 bbl.

MISCELLANEOUS—Hay, $13.50 to $14.50 ton; Straw, $8.00 to $9.00 ton; Beef Hides, 11c. to 11½c.; Calf Skins, 15c. to 16c.; Sheep Skins, 80c. to 90c.; Lamb Skins, 80c. to 90c.

VEGETABLES—Potatoes, 80c. to 85c. bus.; Turnips, 40c. to 50c. bus.

WHY MAN OF TODAY IS ONLY 50 PER CENT. EFFICIENT

By Walter Walgrove.

If one were to form an opinion from the number of helpful, inspiring and informing articles one sees in the public press and magazines, the purpose of which is to increase our efficiency, he must believe that the entire American Nation is striving for such an end—

And this is so.

The American Man because the race is swifter every day: competition is keener and the stronger the man the greater his capacity to win. The stronger the man the stronger his will and brain, and the greater his ability to match wits and win. The greater his confidence in himself, the greater the confidence of other people in him: the keener his wit and the clearer his brain.

The American Woman because she must be competent to rear and manage the family and home, and take all the thought and responsibility from the shoulders of the man, whose present-day business burdens are all that he can carry.

Now what are we doing to secure that efficiency? Much mentally, some of us much physically, but what is the trouble?

We are not really efficient more than half the time. Half the time blue and worried—all the time nervous—some of the time really incapacitated by illness.

There is a reason for this—a practical reason, one that has been known to physicians for quite a period and will be known to the entire World ere long.

That reason is that the human system does not, and will not, rid itself of all the waste which it accumulates under our present mode of living. No matter how regular we are, the food we eat and the sedentary lives we live (even though we do get some exercise) make it impossible; just as impossible as it is for the grate of a stove to rid itself of clinkers.

And the waste does to us exactly what the clinkers do to the stove; make the fire burn low and inefficiently until enough clinkers have accumulated and then prevent its burning at all.

It has been our habit, after this waste has reduced our efficiency about 75 per cent., to drug ourselves; or after we have become 100 per cent. inefficient through illness, to still further attempt to rid ourselves of it in the same way—by drugging.

If a clock is not cleaned once in a while it clogs up and stops; the same way with an engine because of the residue which it, itself, accumulates. To clean the clock, you would not put acid on the parts, though you could probably find one that would do the work, nor to clean the engine would you force a cleaner through it that would injure its parts; yet that is the process you employ when you drug the system to rid it of waste.

You would clean your clock and engine with a harmless cleanser that Nature has provided, and you can do exactly the same for yourself as I will demonstrate before I conclude.

The reason that a physician's first step in illness is to purge the system is that no medicine can take effect nor can the system work properly while the colon (large intestine) is clogged up. If the colon were not clogged up the chances are 10 to 1 that you would not have been ill at all.

It may take some time for the clogging process to reach the stage where it produces real illness, but, no matter how long it takes, while it is going on the functions are not working so as to keep us up to "concert pitch." Our livers are sluggish, we are dull and heavy—slight or severe headaches come on—our sleep does not rest us—in short, we are about 50 per cent. efficient.

And if this condition progresses to where real illness develops, it is impossible to tell what form that illness will take, because—

...The blood is constantly circulating through the colon and, taking up by absorption the poisons in the waste which it contains, it distributes them throughout the system and weakens it so that we are subject to whatever disease is most prevalent.

The nature of the illness depends on our own little weaknesses and what we are the least able to resist.

These facts are all scientifically correct in every particular, and it has often surprised me that they are not more generally known and appreciated. All we have to do is to consider the treatment that we have received in illness to realize fully how it developed and the methods used to remove it.

So you see that not only is accumulated waste directly and constantly pulling down our efficiency by making our blood poor and our intellect dull—our spirits low and our ambitions weak, but it is responsible through its weakening and infecting processes for a list of illnesses that if catalogued here would seem almost unbelievable.

It is the direct and immediate cause of that very expensive and dangerous complaint—appendicitis.

If we can successfully eliminate the waste all our functions work properly and in accord—there are no poisons being taken up by the blood, so it is pure and imparts strength to every part of the body instead af weakness—there is nothing to clog up the system and make us bilious, dull and nervously fearful.

With everything working in perfect accord and without obstruction, our brains are clear, our entire physical being is competent to respond quickly to every requirement and we are 100 per cent. efficient.

Now this waste that I speak of cannot be thoroughly removed by drugs, but even if it could the effect of these drugs on the functions is very unnatural, and if continued becomes a periodical necessity.

Note the opinions on drugging of two most eminent physicians-

Prof. Alonzo Clark, M.D., of the New York College af Physicians and Surgeons, says: "All of our curative agents are poisons, and, as a consequence, every dose diminishes the patient's vitality."

Prof. Joseph M. Smith, M.D., of the same school, says: "All medicines which enter the circulation poison the blood in the same manner as do the poisons that produce disease."

Now, the internal organism can be kept as sweet and pure and clean as the external and by the same natural, sane method—bathing. By the proper system warm water can be introduced so that the colon is perfectly cleansed and kept pure.

There is no violence in this process—it seems to be just as normal and natural as washing one's hands.

Physicians are taking it up more widely and generally every day, and it seems as though everyone should be informed thoroughly on a practice which, though so rational and simple, is revolutionary in its accomplishments.

This is rather a delicate subject to write of exhaustively in the public press, but Chas. A. Tyrrell, M.D., has prepared an interesting treatise on "The What, The Why, The Way" of the Internal Bath, which he will send without cost to anyone addressing him at 275 College St., Toronto, and mentioning that they have read this article in The Maritime Farmer.

Personally, I am enthusiastic on Internal Bathing because I have seen what it has done in illness as well as in health, and I believe that every person who wishes to keep in as near a perfect condition as is humanly possible should at least be informed on this subject; he will also probably learn something about himself which he has never known through reading the little book to which I refer.

Symptoms, Treatment and Prevention of Scratches.

The time is not long to the season when mud and slush will prevail. In such a time the horses' legs need careful attention to keep them free from scratches, grease, or mud fever, as the disease is variously called. In a western exchange we und the following excellent treatment ror the disease:

NATURE OF SCRATCHES.

This is distinctly a disease caused by continued exposure to mud or slush, especially when precautions are lacking to keep the legs clean. In occasional instances the disease may arise from keeping horses standing in nithy stables. The long continued contact with mud or moisture may so saturate the long hair on the legs, half way or more up the cannon bone from the hoof, that the skin is not dry or clean for many consecutive days. Soon an inflammation begins that causes the disease known by the various names already mentioned. Some horses are more susceptible than others, depending on the nature of their skin, the amount or length of hair, and such other characteristics as constitute the individuality of any particular animal.

SYMPTOMS.

When scratches begin to make their appearance, the owner will first notice small patches of hair matted with a slight watery discnarge. These patches vary in size from a pinhead to a pea, and under them the skin is slightly elevated and tender. Soon these areas enlarge in diameter and thickness and the discharge becomes thicker and more profuse. As the disease advances, the skin becomes painful to touch or when the horse moves. A still more copious discnarge follows, the hair falls on and the skin becomes covered with a thick layer of greasy-looking matter. In severe cases the disease may extend as far as the knee or hock joint. The leg sometimes assumes a much enlarged condition, which may become permanent.

TREATMENT.

This is both simple and inexpensive, and if begun in time is usually followed by early recovery. Until healing has made a good start, keep the horse out of mud or slush. Soften and remove the scabs and crusts by the repeated application of poultices of linseed meal. Then the application of a lotion composed of zinc sulphate and lead acetate, six drams of each in a pint of water, will prove very beneficial. All crusts and matted hair may be kept off by washing with castile soap and warm water. Dry throughly after washing before applying the lotion. A little carbolized vaseline applied occasionally will overcome any tendency of the skin to become dry or crack. It will also protect from wet if the horse must be driven in mud before complete recovery. Good feed of a laxative nature will serve as a valuable adjunct to the above treatment.

PREVENTION.

As already stated, scratches yield readily to the above treatment, providing it is begun early. The disease is, however, easily guarded against and prevented by observing strict cleanliness. This can be done by careful cleaning. Long hair should be allowed to dry completely after every drive. If it cannot occur readily without, the hair may be clipped to such a length that it may occur rapidly. Should fumes from continuous standing in manure be the cause, the remedy is easily applied. This cleanliness will also add to the comfort and working efficiency of the animal, so it is doubly worth while.

Community Breeding.

WHY?

"1st—Community breeding should be established to elevate the standard of (a) interest—a breeder's interest is always increased when his neighbors and townsmen are engaged with him in the same line of work, thereby affording an opportunity for measuring progress; (b) improved methods, increased interest, and easy means of making comparison is invariably followed by improved methods; (c) uniformity of type. Frequent conferences with other men engaged in raising the same breed of stock will lead farmers gradually to think and to act along the same lines. Appreciation of what others are doing, of stock they are breeding, will lead to exchange of stock, and consequently to a more general breeding along the same lines, and these conditions will bring about greater uniformity of type.

"2nd—Community breeding will establish a reputation for increased interest, improved methods, and uniformity of type, will produce better stock, enhance values, increase numbers, establish a reputation and attract prospective purchasers.

VALUE TO THE INDIVIDUAL.

"1st. Improved stock are close at hand from which to select.

"2nd. A great stimulus is caused by the enthusiasm of others. A man's ambition to excel is aroused and he is more likely to set out on a comprehensive plan of stock improvement.

"3rd. Opportunities for co-operation in the buying, selling, and exchanging of stock are enlarged.

"4th. Value of stock is increased.

VALUE TO THE COMMUNITY.

"1st. Reputation of a community as a distributing center is established.

"2nd. Opportunities for profitable sale of live stock are multiplied and the community at once gains a valuable asset.

HOW ESTABLISHED.

"Several plans, separate and distinct in their organization, have been put in successful operation:

1st plan. The first plan we will outline includes the organization of an association, the co-operative ownership and use of pure-bred bulls, and financial assistance from the government.

"2nd plan. The second plan involves the organization of an association and incorporation of the same; its division into groups based upon the number of cows owned by the members; the purchase of one pure-bred bull for each group, and the exchange of bulls at the close of each two-year period from one group in the association to another group in the same association.

"3rd plan. In the third plan an association is formed for the purpose of promoting a particular breed of stock, and each member pledges himself to use only a pure-bred bull of the particular breed adopted by the association.

"This plan admits of the ownership of pure-bred males, either individually or co-operatively, and is the general plan thus far adapted by the associations already organized in Maine, of which there are six. Plans are now being formulated to stimulate the interest in associated work along these lines to increase the number and to organize more definitely the constructive work of our associations.—Maine Farmer.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

FOR SALE—Fine bred Shorthorn bull, milk strain, 2 (two) years old. WILBERT SMITH, East Mines Station, Col. Co., N. S.

BULL FOR SALE.—Pure Bred Bull No. 84339, Shorthorn, roan 23 months. R. L. PALMER, Berwick, N. S.

FOR SALE.—Two (2) Yearling Guernsey Bulls. Also one unregistered Jersey. Apply to T. D. BLAIKIE, Great Village, N. S.

WANTED—Position as Foreman or Manager of Stock or Dairy Farm, by experienced Farmer. Address Box 28, Great Village, N. S.

FOR SALE.—Registered Guernsey bull, Blossom's Anchor, 2 years old. Very docile, a splendid animal. W. A. Smith, Woodward Cove, Grand Manan, New Brunswick.

PEKIN DRAKE WANTED—I wish to buy a White Pekin Drake. If you have a good one for sale write me. ANGUS M. AVARD, Sackville, N. B.

FOR SALE—Pure Bred Clydesdale Stallion, rising 3 years, great grandson of "Baron's Pride." Apply to F. E. SHARP, Midland, Kings Co., N. B.

25 FANCY EASTER POST CARDS, Birthday, Lovers, Views, St. Patrick, etc., in gold and colors, 25 cents. Also 100 extra free. All postpaid. FARMER EMPORIUM, BEEBE, QUE.

FOR SALE.—A pure bred Shorthorn bull, of excellent milking strain, light roan in color, good average size, two years old in March, 1911. Females always for sale. L. M. ANDERSON, Sackville, N. B.

FOR SALE—1 Holstein Bull, four years; 1 Holstein Bull Calf, seven months; 1 Holstein Bull Calf, eight months. Dams records 13000 pounds. No better stock. Write for prices.—D. R. NICHOLSON, Coxheath, N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

DAIRY COW WANTED.—I wish to buy a good dairy cow. State breed, age. and daily yield of milk in pounds or quarts. Price (cash) f. o. b. Woodstock. If your milk will not make 300 lbs. or more of butter in a year, better not write. S. J. PARSONS, Woodstock, N. B.

MAPLE GREEN FARM HOLSTEINS.—Does 64 lbs. milk per day at 26 months old appeal to you as dam of your herd bull? If so, write for particulars to R. L. HICKS, Dalhousie Junction, Restigouche Co., N. B.

Save Money on Fruit Plants.

Healthy Northern Grown Stock that will produce big crops of Good Fruit.

Read Our Guarantee.

All plants guaranteed to be first-class and true-to-name, packed to reach you in good growing condition, or **Your Money Back.** Fruit and Ornamental trees and Small Fruit plants in many varieties. Strawberry plants a specialty. Lowest prices. Write us to-day concerning your needs inNursery Stock, also Price Lists and Free Delivery offer.

E. L. COLPITTS, - Petitcodiac, N. B.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

CRAIG BROS., Amherst, N. S.

Advertise in The Maritime Farmer

Charlottetown Price List.

Since our last report there has been very little change in price of farm produce. Pork is high, but owing mostly to limited supply offered as packers do not want it at the advance, and if supply should be more than sufficient for local demand and small orders, prices would likely drop back ½ or ½c. but just at present there does not seem mucn prospect of increased supply so that price may hold. Butter is scarcer and price higher and further advance may take place. Oats are in very limited supply and we look for further advance for local use. There is very little oats in store here. Potatoes are offered in very small quantities and no other vegetables are offering at all. The local demand being supplied from stock held by retailers and at retail prices. Hay has been offered more freely and prices are easier but not much lower. Eggs are very scarce in fact there is nothing doing in them except in retail way. Beef is plentiful but quality very inferior and the price has a wide range according to quality. Good beef is sought after at good prices, but the light thin stuff is hard to sell. Cheese is out of the market except a very limited quantity in the hands of the wholesale grocers this is being sold to the retailers at about 15c.

GRAIN—Oats, white, 46c. to 47c.; black, 48c. to 50c.

FEEDSTUFFS—Bran, $1.40 to $1.45 Shorts, $1.45 to $1.50; Middlings, $1.50; Oil-cake, $2.50; Corn Meal, $1.85.

LIVE STOCK—Butcher's Cattle, 3¾c. to 5¾c.; Stockers, $18 to $35; Milch Cows, $25 to $40; Sheep, 3c. to 3½c.

DRESSED MEATS—Beef, (carcass), 6½c. to 8½c.; Beef, (retail), 8c. to 14c.; Mutton, (carcass), 7c. to 8c.; Pork, light, 6½c. to 7¾c.; select, 7¾c. to 8c.; heavy, 6¾c. to 7½c.

HORSES—Drafters, $125 to $225; Roadsters, $150 to $225; Carriage, $150to $225.

DAIRY PRODUCTS—Creamery Butter, 27c. to 38c.; Dairy Butter, 22c. to 25c.; Cheese, 15c.

POULTRY AND POULTRY PRODUCTS—Eggs, 25c. to 26c.; Fowl, 8c. to 10c.; Chickens, 10c. to 14c.

FRUIT—Apples, $1.50 to $3.50 bbl.

MISCELLANEOUS—Hay, loose, 70c to 73c.; pressed, $12 to $13; Straw, $6; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 65c. to 90c.; Lamb Skins, 60c. to 90c.

VEGETABLES—Potatoes, 38c. to 40c. Turnips, 16c. to 20c.

Dates to be Remembered

St. John Exhibition, St. John, N. B.—September 7 to 9, 1912.

Sussex Dairy School Creamery and Farm Dairy Course, March 19—29, 1912.

Sussex Dairy School Cheese Makers Course, April 2—12, 1912.

St. John Exhibition, September 2—7, 1912.

P. E. I. Provincial Seed Fair, Summerside, March 5, 6, 7 and 8, 1912,

Halifax Exhibition, September 11—19, 1912.

N. B. Provincial Seed Fair, Fredericton, March 21 and 22, 1912.

"WILLOW FARM" FOR SALE.

"Willow Farm" is situated two miles from the centre of the town of Amherst, which is a growing manufacturing town of over nine thousand population, and one of the best markets in Canada. There is a good public school within forty rods of the house.

The farm consists of one hundred and twenty three acres, forty three acres of marsh and eighty of upland, sixty five of which are under circulation.

The upland is in a high state of cultivation as a large stock of cattle have always been kept on the place and for several years a short rotation has been followed. The soil varies some but is mostly a good loam quite free from stone and easily worked. The pastures are well watered by springs and brooks.

The house is 28x38 feet, two stories with ell 16x20 with good cellar, heated by furnace. Barn 50x80 feet with basement stable which will accomodate forty cattle and six horses, also root cellar holding two thousand bushels. Carriage and impliment shed 26x36 feet and other out buildings all in first-class repair.

The fencing is nearly all of woven wire and in good order,

A wood lot of 70 acres, three miles from the farm will be included in the sale.

A retail milk trade of about one hnndred and twenty quarts a day will be sold with the farm if desired.

This is one of the finest live stock and dairy farms in Cumberland County; a beautiful home and a splendid opportunity for the right man. Apply to

C. HOWARD BLACK, Owner,
Amherst, Nova Scotia.

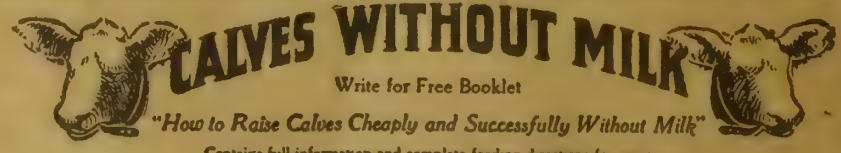
Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

SUNNY SIDE STOCK FARM.

The Ayrshire herd now headed by "Greenslack Great Fortune" (imported), his dam had a record of 12840 lbs. of milk 3.9 fat in 45 weeks. At present I am offering for sale in Ayrshires, one bull 18 months, one 12 months, two 5 months and two young calves. Females any age. In Guernseys, one bull 12 months, one young heifer calf. In Chester White Swine, young sows 3 months old and am booking orders for March litters from two aged brood sows. Inspection invited. Intending purchasers met at I. C. R. Station.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**



Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

No calves can be raised on it at the cost of one where milk is fed.
The only calf meal manufactured in an exclusive Calf Meal Factory
Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

GIVEN FREE.

Use of lands consisting of deserted farms in the Counties of King's and Albert, N. B., also the free use of fence poles for fences for raising of sheep. There would be sufficient area to keep many thousand. Will enter partnership with any man of experience who has proved a successful sheep rancher, and will finance the enterprise.

CHAS. T. WHITE & SON,
East Apple River,
Cumb. Co., N. S.

Poultry Review	.50c
Poultry Advocate	.50c
Both one year	.85c
System in Poultry Practice	1.00
Same with either Review or Advocate	1.00
With both	1.60
Experience in Poultry Keeping	.15c
With either Review or Advocate	.50c
With either Review or Advocate and System in Poultry Practice	1.30
Or both papers one year and both books	1.70

Maritime Poultry Supply Co.,
Moncton, N. B.

BARGAINS

We have several second hand Chatham Incubators that somebody can have a bargain on. Eggs for hatching of many varieties. See our winnings at the big shows.

Hartland Poultry Yards.
Hartland, N. B.

Rocks! Rocks! Rocks!

Eggs for hatching from splendid purebred utility stock. Barred, Buff and White Rocks. I am not in the show business, but in the business for utility, that's what you need. $2.00 for 15 eggs.

J. B. DAGGETT,
Centerville, N. B.

Forest Glen Stock Farm.

Pure Bred Ayrshire Cattle.

Nine Cows. four to eight years. Five Bull Calves, six to eighteen months. Seven Heifer Calves, eight months to two and a half years. Price and full particulars on application to

THE S. H. WHITE CO., LTD.,
SUSSEX, N. B.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWIN—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West, N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

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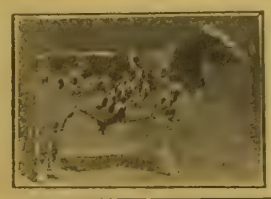

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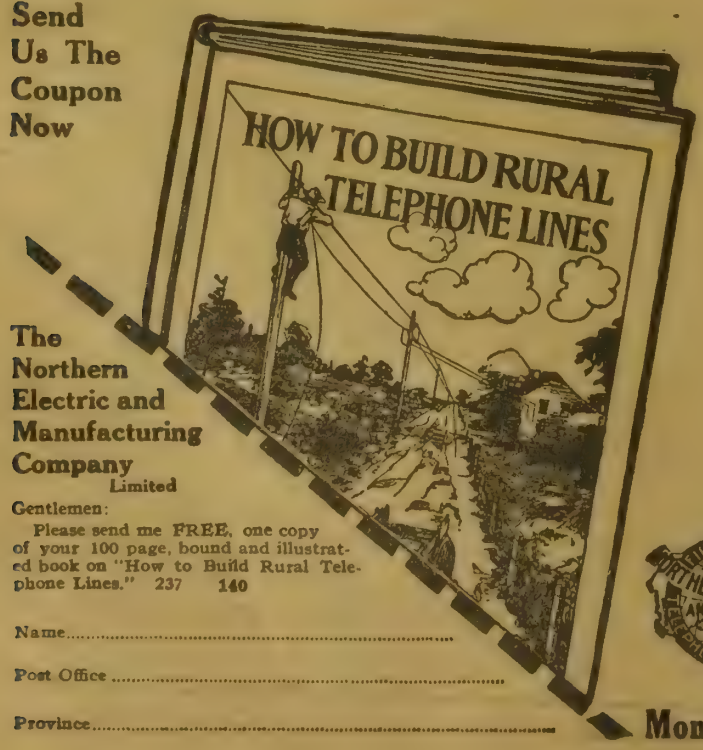

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Now Is The Time For You To Act—Before Someone Else Does It

WRITE in to us and get this book at once. A self-maintaining telephone system will eventually be started in your community. If the moment is not ripe, the time is fast approaching when it will be, and you owe it to yourself to be informed on the subject. If you want the book send us the coupon.

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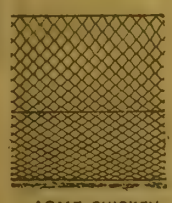
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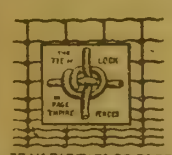
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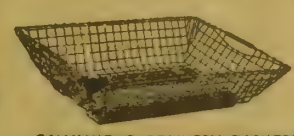
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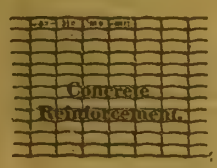

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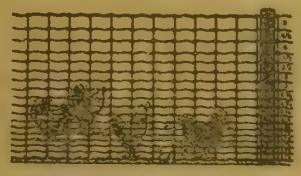
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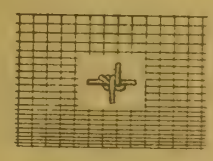
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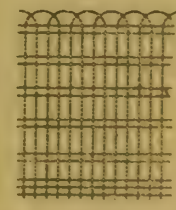
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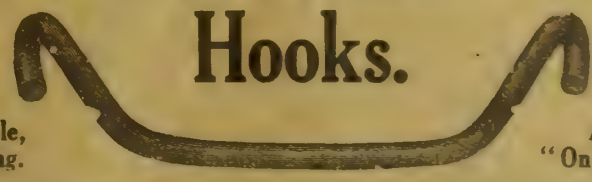

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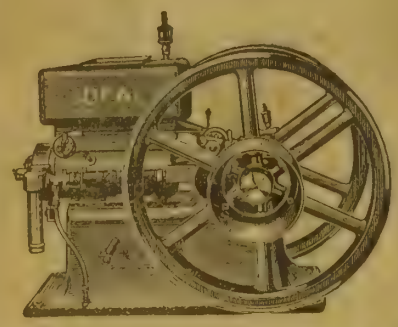

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Good Equipment Pays.

You dairymen who want increased profits from your milk production should look more to the arrangement and equipment of your barns.

The inside of your barn is of vital importance. Through the equipment alone, you may gain or lose hundreds and even thousands of dollars every year.

Dairy farming is like any manufacturing business. Your farm and stock represent your plant. As in any other business, one of the most important means of increasing profits is the cutting down of expenses. In dairy farming, this may be accomplished by correctly planning the barn, together with the use of BT Sanitary Barn Equipment.

Correct planning of your barn, and the proper arrangement inside, will enable you to handle and store your feed more easily. It will enable you to care for more cows in the same sized barn. It will save you and your men time and labour every day, by cutting in half the work in feeding and watering stock, in cleaning the stable and in doing other barn work. It will help you protect your stock against disease, worry and accident, and many other advantages will be brought to light when you investigate every feature carefully.

Cows which are healthy and comfortable give bigger returns.

Exclusive Features on BT Stalls.

There are five exclusive patented features on BT Sanitary Stalls. Here they are:

THE RAISE AND LOWER MANGER—(See cuts below.) Cuts the work of feeding in two. Makes unnecessary the cost of installing water bowls, and allows individual feeding of your cows.

THE ALIGNMENT DEVICE.—(See fig. 191).—It keeps the cows clean.

THE SURE-STOP DEVICE.—It is impossible with BT Stalls for the cow to put her head anywhere but in the stanchion. See how this is done in our catalogue,

THE DOUBLE CURVE PARTITION protects the cow and milker from injury. It is very much neater in appearance than the single curve partition.

THE BT STANCHION.—It is always chosen when its merits are known. It is hung by a smoothworking swivel connection above, so that it turns more freely and without the noise of a chain hanging stanchion. It is two inches to four inches longer than others, giving more freedom to the cow. See our catalogue and learn the reasons why it is always chosen.

REMEMBER, you can get these six features only ON BT STALLS, as they are patented and used exclusively by us.

The Ideal Stall.

A short perusal of the BT Catalogue will convince any one that the BT STALL IS THE IDEAL STALL.

The saving on feed and [illegible] by adopting the EXCLUSIVE FEATURES ON BT STALLS will pay for the equipment in a year's time.

In addition, the perfect freedom and comfort given the cows and the greater cleanliness made possible, will increase the yield and improve the quality of the milk.

No other investment will pay as big dividends to the dairymen as The BT Barn Equipment.

When you install the BT Barn Equipment you will NOTE MANY OTHER ADVANTAGES AND CONVENIENCES and a greater protection to the cows. You will see how this equipment LESSENS ABORTION, and does away with the PRINCIPAL CAUSES OF BOG SPAVIN, RUPTURE, and many other injuries; you will see how the individual mangers PREVENT OVERFEEDING AND UNDERFEEDING.

Our Catalgoue is FREE, and will give you particulars.

It shows the proper measurements for cemennt mangers the length the cattle stand should be for different beeds of cattle, the best size and shape for the gutter. LET US SEND IT TO YOU.

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With a good cement floor, is practically indestructible. Do not use an old-style construction that will soon rot out, that will mean more work, and will not be as comfortable for the cows. A few years from now you would regret it if you did. Toronto and other cities are now passing stringent milk by-laws governing Dairy Barns. All over the country there is a movement for more sanitary conditions. Now is the time to get your barn right, before some milk commission demands it. The cost of good equipment is not greater when everything is considered.

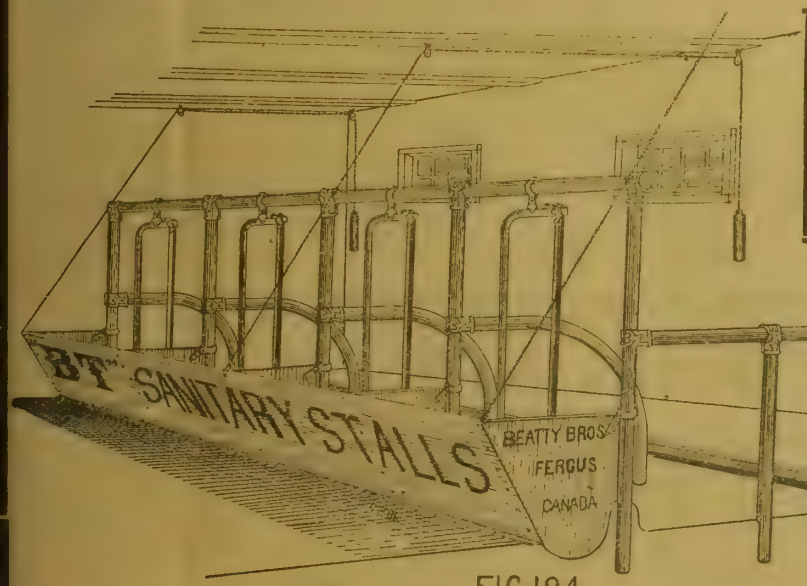

FIG.194

Fig. 194 shows the BT Steel Stalls with manger down ready to feed. Note the capacious manger, with partition between each cow. This manger can be made of either galvanized steel or wood.

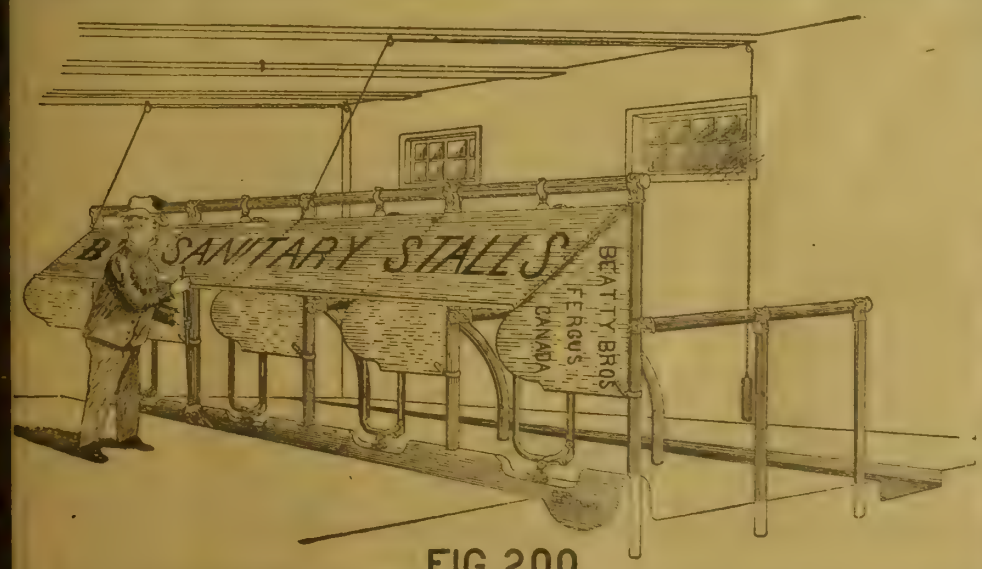

FIG.200

Fig. 200 shows the BT Steel Stalls with manger turned up. Note, the bottom of the manger is the cement floor. It is easy to clean this manger, and you can water right iu the same trough. We furnish the stalls with or without the manger, or we will furnish the stanchion only, to be used with wood frame. Our catalogue describes fully each method of construction.

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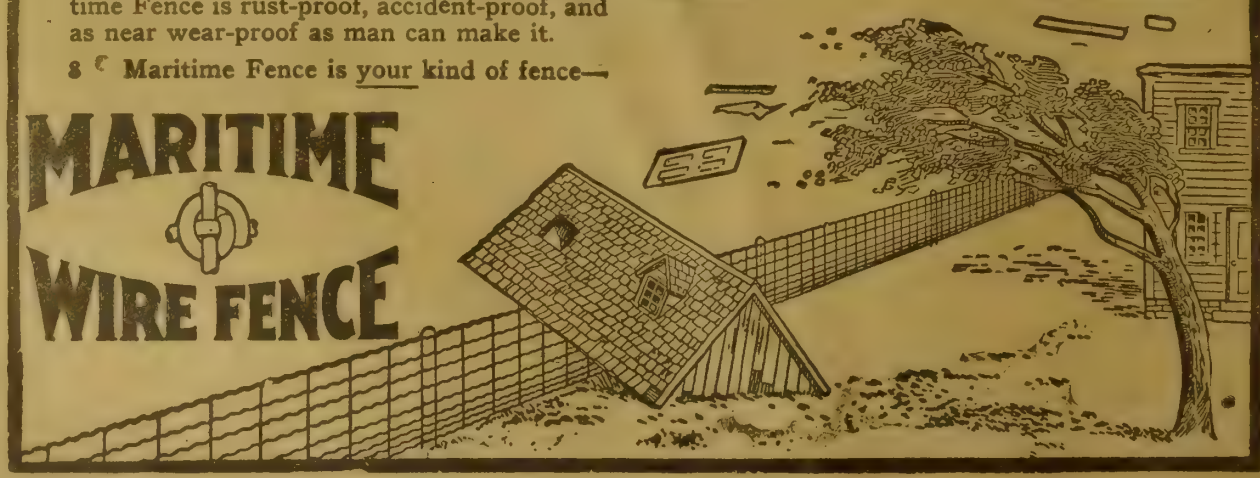

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, FEBRUARY 27, 1912. Number 10.

The Packing of Fruit and Vegetables.

Attractiveness Adds Value.

By E.M. Straight, MacDonald College, Que.

Fig. 1—A Common Tomato Crate.

THE production of fruit and vegetables is one thing, the getting of it on the market is another. It is in the latter that many fail. Many a man has had the satisfaction of producing the best fruit and vegetable in the locality and lots of them, yet his work has has been a failure for the reason that his produce was poorly picked, poorly graded, poorly packed in poor rates and as a consequence sold at a poor price.

Practically half the profit in fruit and vegetable growing depends upon the condition in which these products reach the consumer.

If you visit any of our market places, you will be surprised not so much at the amount of produce going in, as the amount of garbage coming out. This is one of the reasons why the difference between the wholesale and retail price is so striking. Especially is it true of fruit. The retailer is obliged to charge in addition to cost and legitimate profit, a price to cover cost of produce that he purchased but could not sell. The crate, the grading, the packing is at the bottom of much of the trouble.

If you want the best price for your produce three things are essential. 1st, produce the article that the market demands, or in other words, please your customer ; 2nd, make it attractive ; 3rd, see to it that the crate has stability sufficient to protect against all contigencies which may arise, and that the produce is firmly placed in it.

It is foolishness to quarrel with your customers. It is no use to try to convince men that a green podded bean is quite as good as one of the wax varieties if they do not believe it, for they will not believe it when you are through ; nor is it any use to tell a woman that the red onion is no "stronger" than the yellow. You would not convince her and "stronger" onions are the only kind wanted by the next customer.

Fig. 3—Good Potatoes in an Unattractive Package.

ATTRACTIVENESS is another thing which is often lost sight of. It counts for more than we think. Some weeks ago we visited the fruit auction rooms in Montreal. The fruit came from the West. It was an inspiration to look at it. Nothing was too much trouble if attractiveness was added to the package. Thousands of boxes of cherries were there with exactly the same number in all. Care in the grading, care in everything, chartcterized every package, but pre-eminently they were attractive. We have a long way yet to go before we compete with the Western men. They have won the market in many localities because of the package and they will hold it until we meet them on common ground.

Fig. 2
Packing Tomatoes in New Brunswick

Much may be done to make packages attractive by "facing" and still have an honest pack. The face layer should be of the same quality as the others yet there is much in placing it to advantage. Strawberries placed with stems down add much to the appearance of the fruit. In fact the difference is so marked that the fruit in the two boxes seems totally unlike.

I know of one case where a man turned the stems down on the top layer of one crate in five minutes after his load was on the wagon and he had started for the town. It sold at one cent more

Fig. 5—Melon Crate at MacDonald.

The gin box, as seen in the above illustration, is a common tomato crate. It has the advantage of being cheap and is easily obtained, but tomatoes thrown in such a receptacle jam a great deal and are far from being attractive. This other illustration is the common method of putting tomatoes on the market in the Province of New Brunswick The boxes hold five pounds and by placing them in large crates, sixteen boxes or 80 lbs. are easily carried without injury to fruit.

The basket used at MacDonald College is very satisfactory for tomatoes, it is the ordinary fruit basket. A study of these two illustrations is sufficient to convince one that the package is very important. The ordinary consumer is willing to pay a cent or two more per lb. for tomatoes in the attractive package. This usually presents to the grower all of his profit.

The best customer is not anxious to get his potatoes from a barrel as shown in illustration 3. He does not stop to enquire as to quality. The burlap rug was sufficient to cause him to look elsewhere. The other barrel has head removed, showing potatoes. It pleased him better.

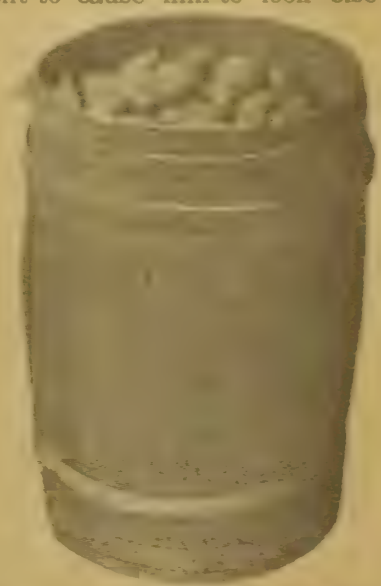

Fig. 4--Potatoes In Attractive Package

per box, and the quality was exactly the same as the others.

This is an honest and perfectly legitimate practice provided the entire contents are fruit of the same grade as those placed on top. Inferior stuff should never be faced with prime specimens. As has been said there is neither cash nor character in such practice.

Stability of package and firmness in placing is perhaps your greatest safeguard. The pressure on the bottom is very great in a car load. If the crates cannot stand the strain there will be loss to the grower. The shipper cannot know which one is going in the bottom, so he must make them all alike, and all overstrong.

See to it that the packed article is dry and cool. Dryness and coolness are the greatest enemies of bacterial soft rots and the work of fungi. When you have secured these conditions, place the produce in as firmly as may be. Loose packing causes bruises, and the general defacement of each specimen; while if too tight, you may still have trouble.

When everything is ready, be sure that you have proper covers and that they are securely nailed down. Covers hanging off, and fruit and vegetables rolling on the deck of steamer or on floor of car are scenes too often witnessed.

The label is also an important factor in the marketing. If the buyer is fortunate in getting a good article he likes to buy again from the man from whom he purchased before. He knows the goods and is willing to pay the price. An instance of this kind was recently brought to my notice. A man bought berries. The boxes were too small and were consequently marked "SHORT". The quality was exceptionally good, however. It was not long before he was back enquiring if he could obtain some more of Mr. Short's berries. The man who puts up an honest pack of first class fruit or vegetables in attractive and suitable package need not fear the expense connected with the labelling. If these simple things were more generally observed, we would hear less about poor markets. The home town demands your produce, if superior.

Figure 7 shows one method of packing celery. Note how each plant is firmly and closely packed. On some markets celery is bunched, with 12 or 14 plants to the bunch.

Figure 8 shows the ordinary method of putting the Montreal Melon on the market. It is attractive but rather expensive. The Crate is being used to some extent. The standard Melon Crate is of no use for the Montreal Melon on account of its great size. Great strength is required, for some of our big fellows weighed 19 and 20 lbs.

A Crate as in Fig. 9 was used at MacDonald College this year. It held 20 of the medium sized ones or one doz. of the larger.

It would seem that the box was destined to take the place of the barrel in the marketing of Apples. It has already done so in the West, and is constantly looked upon with more favor in the East. Both box and barrel are well known on most markets.

Hay is pressed tightly among the fruit so that bruising is impossible.

It is thus seen that each of the various products of the garden and orchard has, to a certain extent, its own particular characteristic, necessitating a different method of handling, and in many cases a different market to please.—E. M. Straight, MacDonald College.

D. I. Mundle has bought a pure bred Ayrshire heifer and bull from McIntyre Bros., of Sussex. The animals are very much admired by judges of good stock.—Review, Richibucto, N. B.

The National Live Stock Breeders' Association.

One of the most important of a series of conventions called this winter by the Minister of Agriculture, Hon. Martin Burrell, was the National Live Stock Breeders' Association, held at Ottawa on February 12th and 13th. It has been a matter of serious comment for some time past that the live stock industry of Canada was at a low ebb, and it was with a view of getting at the root of the cause, to have some light thrown on the matter and have remedies suggested that the convention was called.

Fig. 5 Carefully Picked and Faced.

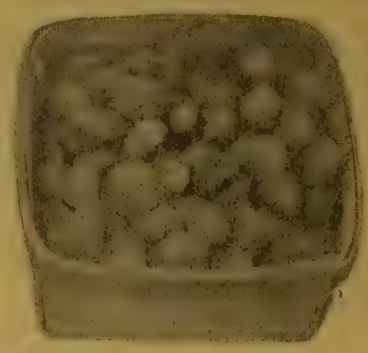

Fig. 6 Carelessly Picked.

Celery at McDonald College.

Montreal Melon Basket.

Some startling figures and facts were brought to light showing that a deplorable state of affairs existed, and many important resolutions were passed which will form a guide to the Minister of Agriculture and the Department under his control.

Every province in the Dominion was represented and the reports of each representative showed that there was need for a call to action. The most serious decadence seemed to be in the beef producing industry, while the sheep industry had reached a level that only immediate and vigorous action could revive.

Inadequate transportation facilities have much to do apparently in discouraging beef production in the West, and this side of the question was discussed at length. It is a significant feature that at the present time the Railway Commission is taking the matter up with the railway companies regarding what was termed the very unreasonable conditions under which the different companies accept live stock for transportation. The horse breeding business is going behind in so far as the production was concerned. The only thriving branch of live stock raising appears to be the dairy industry.

Hon. Martin Burrell, Minister of Agriculture, in a prelude to his remarks, said that the livestock men of this country were to be congratulated. The work that live stock men were doing in breeding, importing and improving the quality of the live stock in Canada was of immense value to the country, and a vital part of the national upbuilding of the country. He said that at the same time there was existent at present a condition of affairs that was a cause for anxiety in so far as the live stock industry was concerned. The beef cattle export trade, for instance, he said, was not in as flourishing a condition as it was twenty-fiveyears ago. It was disappointingly apparent that the live stock industry was not keeping pace even with wheat growing or with any other line of agriculture. There was an occasion for a reasanable call for encouragement from live stock interests, and the Government was prepared to give that encouragement. It was a debatable question just how far a government could go in helping any branch of farming, but as agriculture was the main pillar in the maintenance of prosperity in any country assistance consistent with the functions of a government was quite in order. The basic principle of agriculture was along educational lines, and it was along educational lines mainly that the Government proposed to assist. He did not believe in fraternalism, and while every other industry must receive the same consideration the live stock industry of this country should be established on a better footing. He assured his hearers that the Government was in sympathy with any move for improvement, that any resolutions the meeting might pass would receive every consideration. He made reference to the bill he introduced in the House of Commons on Monday to give the Government more power to assist agriculture.

It was better to move slowly than wrongly, before the Government could move intelligently it would be necessary to have a thorough survey of all conditions existing in Canada. While he was not prepared to make any definite statements, he said that it was proposed to give more assistance to the provinces, and to make more solemn and sane consideration.

He called attention to the constantly increasing proportions of the importations of live stock products into this country. "You can go down Queen street in Ottawa, and buy mutton from Australia, and beef in tins from the Argentine Republic. You can cross the prairies and do the same thing at Regina," he said.

"We hear a lot about the inexhaustible fertility of the soil of the West or of the soil here or the soil there. We have heard of the inexhaustible fertility of the soil of New York State and of the American middle west, but the same thing will happen to any inexhaustible soils Canada may have unless the farmers turn their attention more generally to the keeping of live stock. We must try to get the live stock to the farmer who tries to farm without stock to fertilize his farm from finally landing in the poor house and to husband our natural resources."

Dr. Rutherford gave an address on Bovine Tuberculosis, wherein he made the assertion that it wae his firm belief that bovine tuberculosis was the motherlode of tuberculosis in humans.

Mr. J. H. Grisdale, Director of Dominion Experimental Farms, spoke on the present conditions of the live stock industry in Ontario.

Prof. M. Cumming told of the conditions as they exist in Nova Scotia.

Dr. J. A. Couture gave a resume of how matters are progressing in Quebec.

Western conditions were reported by Miss E. Cora Hind, Winnipeg; Mr. P. M. Bredt, Regina; W. F. Stevens, Edmonton and Dr. F. Tolmer, Victoria, B. C.

RESOLUTIONS PASSED.

Resolutions were passed "in appreciation of the earnest efforts of the Department of Agriculture of the Dominion Government in organizing and

(Continued on page 362).

Nitro Culture, Its Distribution and Value

Again I beg to report on the increasing demand for and the value of Nitro Culture as a means of facilitating and establishing the growth of such leguminous crops as alfalfa, red and alsike clovers, peas, beans and vetches. In former years, these cultures were manufactured in our own Laboratories but, owing to shortage of time and competent assistance, we were obliged to have the work done elsewhere. Mr. F. C. Harrison, Professor of Bacteriology at MacDonald College, Quebec, kindly consented to manufacture these for the year 1911. With recent additions to the College staff, this work will be continued from our Laboratories and cultures distributed as formerly.

This report will deal exclusively with comparative yearly results and financial returns, but I would refer those desirous for further information on the history, methods of inoculation, physiology, and manurial value of nitro culture, to article in Annual Report for 1909. During the year 1911, 596 cultures were distributed.

From this may be seen, first, the keen interest and determined effort of our farmers to raise alfalfa; second, that a large number of farmers would improve their red clover and alsike crops; third, that this effort is due largely to two influences, viz., the good results of previous use of nitro culture, together with the educational influence of the Agricultural College and farm papers, such as The Maritime Farmer; lastly, many farmers have proven the use of all these cultures to be of commercial worth.

Compared with previous years, the results from the use of nitro culture are as follows:

Province	CROP.	Good Results from Culture. Ex. crop	Good crop	Fair crop	Poor crop	Total	No Difference Ex. crop	Good crop	Fair crop	Poor crop	Total
Nova Scotia	Alfalfa	6	31	15	15	67	1	8	3	19	31
	Red	5	11	5	3	24	..	3	1	5	9
	Alsike	..	1	..	1	2	..	..	..	..	..
	Peas	1	1	..	..	2	..	..	..	1	1
	Beans	..	..	..	..	..	..	..	1	..	1
	Vetch	..	..	..	..	..	..	..	..	..	..
	Total	12	44	20	19	95	1	11	5	25	42
New Brunswick	Alfalfa	2	7	7	2	18	1	7	2	5	15
	Red	..	1	1	..	2	..	..	..	1	3
	Alsike	..	1	..	..	1	..	..	..	..	..
	Peas	..	..	..	..	..	..	..	..	..	..
	Beans	..	..	..	..	..	..	..	..	..	..
	Vetch	..	..	..	..	..	..	..	..	..	..
	Total	2	9	8	2	21	1	7	2	6	16
P. E. Island	Alfalfa	6	9	6	2	23	1	2	2	10	15
	Red	1	4	1	..	6	1	1	..	3	5
	Alsike	1	1	..	..	2	1	..	..	..	1
	Peas	1	..	..	..	1	..	1	..	..	1
	Beans	1	..	..	..	1	..	..	..	..	..
	Vetch	..	..	..	1	1	..	..	..	..	..
	Total	10	14	7	3	34	3	4	2	13	22
	Grand Total	24	67	35	24	150	5	22	9	44	80

NITRO CULTURE DISTRIBUTED, 1911.

Province.	Alfalfa	Red	Alsike	Peas	Beans	Vetches	Tot'l for Prov'ce
Nova Scotia	158	57	30	12	5	15	295
New Brunswick	90	12	7	1	..	..	110
Prince Edward Island	50	34	8	4	..	..	96
Quebec	3	1	..	..	..	..	4
Ontario	10	5	..	..	..	..	15
Manitoba	1	..	..	..	..	..	1
Alberta	32	2	1	1	1	..	37
Saskatchewan	14	1	1	..	..	..	16
British Columbia	16	..	..	..	..	..	16
U. S. A.	1	1	1	1	1	1	6
Grand Totals	372	131	48	22	7	16	596

SIX YEARS RESULTS FROM NITRO CULTURE.

YEAR.	No. of Cultures Distributed	Excellent Results p. c.	Good Results p. c.	No Results p. c.
1906	50	50	33	17
1907	75	62	20	18
1908	110	50	20	30
1909	436	59	26	15
1910	524	53.4	18.9	27.7
1911	596	40	25.2	34.8

From a study of the above table, it may be seen that results are, in general, similar to those of former years. However, the exceedingly dry summer of 1911 in many districts not only depreciated, to a large extent, the value of grain crops, but also totally destroyed clover and grass seed; in fact, many report these seeds not even germinated. This explains the higher percentage of those reporting no results from the use of culture. Of the 501 cultures distributed in the Maritime Provinces, over 300 reports have come to hand. The first 230 reports represent fairly the results from the use of culture and the character of the crop. These have been tabulated as follows:

The question of regulating the soil moisture by cultivation and underdrainage has a large influence upon leguminous crops. In gathering above reports, we have acquired much data regarding methods of cultivation and, where present, rotation of crops. We are pleased to note a keener interest in such operations. Although the drought was a great draw-back in this year's results, yet a large percentage reporting almost total failure, mentioned the marked results from the use of culture. Again, we notice a large percentage of dirty seed beds and impure seed. Thirteen percent. of the 230 reports show need of underdrainage; while twenty-one percent. report need of lime; over sixty percent. claim the needs of more fertilizer, particularly phosphoric acid and potash. Reports showing excellent crops, with no difference between treated and untreated seed, state the fact that good catches of this crop have been procured during previous years, thus showing the presence of that specie of bacteria.

The experience of various experiments during 1911 are fairly well represented by the following extracts:

Mr. R. D. Ross, of Bayview, N. S., reports on alfalfa a decided difference in favor of the use of culture, both on old and new land. This is of a dry, sandy nature, a nurse crop of wheat being used and treated seed, especially, making splendid growth until the late fall.

Mr. C. B. Macdonald, Upper Kemptown, on red clover reports that in 1909 he first used nitro culture, with marked improvement; in 1910 having nearly 25 percent. better cut on the treated land. In 1911 he used culture for clover and sowed where he had never been able to get a catch before, with good results, though the land needs draining. He states that he would like to use culture each year as an insurance on the crop.

Mr. Douglas Kemp, of L'Archeveque, Richmond Co., reports splendid results from the inoculation of alfalfa seed. Although on poor land, his treated alfalfa did exceptionally well. The use of nitro culture on red clover increased the height of crop and trebled the number of nodules on roots.

Mr. Wm. J. Baxter, of Dartmouth, N. S., reports similarly on peas.

Mr. Albert MacLeod, of Landsdowne, Pictou Co., and Mr. J. MacLean, Newton, Guysboro Co., report the treated crop of red clover being taller and ranker, more uniform in growth and more nodules on roots. They, too, think that it pays to use nitro culture, even on land where they had formerly obtained fair or good crops.

Mr. Frank Glydon, of Margate, P. E. I., states, as follows:

"There is very much difference be-
"tween treated and untreated alfalfa.
"Never being able to obtain a good
"catch previously. This was sowed
"on a piece of land apparently run
"out and on which we could never
"get clover to grow. In 1909 I gave
"it a good coating of manure on
"sod, cropping it in 1910 with corn
"and potatoes. That fall I gave it
"a light coat of manure, seeding in
"the spring 1911 one-half in clover
"and the other in alfalfa. Where
"treated, both gave an extra catch
"and I think the cultures the beneficial means of success."

These and many other men might be quoted to show the influence of nitro culture throughout the three Maritime Provinces. A general summary would be but a repetition of that contained in the Report for 1910 or in directions as sent with cultures. I would particularly warn experimenters not to open cultures until ready for use and would add that, as a rule, cultures over 2 months old have lost a large amount of their vitality; hence, should not be used. Of the 1790 cultures sent out during the past six years, from carefully tabulated reports, we are prepared to say that great commercial benefit has resulted. Over 45 per cent. have reported a large increase in crop during succeeding years, especially in red and alsike clovers. If we figure this as a 10 per cent. increase above the average crop of 1.5 tons per acre, on each 10 acre field, we would have an increase of 1½ tons. If 600 cultures for these two clovers have given such an increase, as we have every reason to suppose, it means that to these provinces has been added, in the first crop alone, $9,000 increase. The increased value of succeeding crops and the permanent addition of atmospheric nitrogen to the soil would be worth fully as much. I feel sure that these figures are very conservative.

Aside from this, we have many other advantages, as shown by the greater study and interest in relationship of drainage, lime, potash, and other physical and chemical needs of soil toward the production of leguminous crops. Greater interest is being taken in Soil Bacteriology. Finally, the future possibilities of alfalfa raising in these provinces depends wholly upon the above influences, together with seed acclimatization and selection. Hence, nitro cultures should and will play an important part in our Maritime agriculture for some years to come.—N. S. Agricultural College Report for 1911.

Yes! Label Our Stallions.

Editor Maritime Farmer:—

Prof. Cumming's article. "Shall we Label our Stallions" in your issue of Feb. 13th, opens a question which is of prime importance to the horse breeders of New Brunswick as well as those of Nova Scotia.

I hope such an interest will be aroused among the farmers of this Province that it will place New Brunswick in line with the most progressive countries in respect to legislation on the subject.

It is absurd for the Government to bring in and distribute pure-bred stallions and mares for the improvement of the horses of this Province and then allow their efforts to be nullified by any one who may have an entire horse of any or no breed, sound or unsound, travelling through the country.

The Government of New Brunswick has been importing pure-bred stallions of the draft breeds for 30 years at least, and though we have some good horses they are largely in the minority.

In no way can the quality of our horses be improved as easily as by the elimination of the scrub stallion. If the Wisconsin law were enacted here it would do it.

I hope that at the Meeting of the Farmers' and Dairymen's Association this matter will be taken up and thoroughly discussed.—Morris Scovil, Meadowlands, Queens Co., N. B.

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations: The New Brunswick Fruit Growers' Association: The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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FEBRUARY 27, 1912.

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April ..... 16—30

ON THE THRESHOLD OF AN INDUSTRIAL DEVELOPMENT DECADE

The money you spend in improving your surroundings or in upbuilding and boosting industries in your own town or province will come back to you again bearing a good fat interest, triple conpounded. The money you spend on foreign enterprises, helps to upbuild the other fellow's country and impoverishes your own. It may never come back to you again. There is a field for industrial developement in Maritime Canada, that is unexcelled by any other country under the broad canopy of heaven.

Maritime Canada has thousands of miles of sea coast with harbors, in which the fleets of nations can ride at anchor, unmolested by tempests that may rage without. The toll exacted from these briny coastwaters by those who go down into the sea in ships is no mean figure.

The bowels of the Maritime Provinces are rich in minerals of many kinds. Bringing these minerals to the light of day and putting them through the various processes they must undergo before being fashioned and distributed for home and foreign manufacture, gives employment to thousands of laborers and artisans. Although mining has been carried on in the Maritime Provinces for a great many years the industry is, practically speaking, still in its infancy, as large areas of mineral deposits have never been exploited and those that have been developed give indications of almost inexhaustible quantities.

Our forests, everlasting as they seemed a few years ago, have been ruthlessly slaughtered in the past; many areas that should never have been cleared have given way to the sway of the woodman's axe and destructive forest fires. Our supply is, however, not by any means exhausted. There are still thousands of areas of timberlands that have not been properly cruised. Our better thinking and most progressive lumber-tract owners are awake to the necessity of conserving our forests "natures balance wheel" and are arranging their cuts so that, instead of being the agents of destruction they have been in the past, the children yet unborn will call them blessed for the conservation schemes they are now inaugurating.

Our soils are fertile and yeild handsome returns as rewards for industrious toil. The Nova Scotia Agricultural College is doing an inestimable amount of good in teaching our farmers how best to get maximum crops from the soil with the minimun amount of soil depletion. Our farm homes are as happy and contented as those of any other country and well they may for the sons and daughters of Maritime Canada possess a heritage the peer of which is not found in any other clime.

Realizing the importance of the Maritime Provinces as the home of a progressive people and as the gateway and the future workshop of Canada, great amounts of money will be spent by the federal and provincial parliaments as well as by individual enterprise in developing our Maritime resources during the next decade. We are now at the threshold of great industrial developement. Millions of dollars will be put in circulation and no matter what a person's occupation may be, a share of the money is sure to come to each and everyone who will be employed in a legitimate occupation in Nova Scotia, New Brunswick or Prince Edward Island. Brisk industrial developements also call for a lot of extra labor. Extra labor means more consumption of food. A greater demand for food commodities will bring seasons of prosperity to our farmers. Think the situation over. Are you as a farmer going to take your share of the prosperity that is sure to come with any "Eastern Boom." It's up to you. This is a good season to plan and prepare to grow crops during the succeeding seasons that are sure to be in high demand at renumeration prices. Be ready for your share of the inevitable prosperity.

THE GREAT WHITE WAY.

Mr. H. Maxwell Clark of the Canadian Highway Associatiation has been in the Maritime Provinces during the past week in the interest of a movement which object is to build one main trunk road across the continent, from the Atlantic to the Pacific. This "Great White Way" as the proposed highway has come to be called will be conducted as a matter of public utility.

Bad roads are the bane of the farming industry, particularly in the Maritime Provinces. Mr. Clark is securing the co-operation of the provincial governments, mapping out the routes and doing tne preliminary work. The road will begin in eastern Cape Breton, probably at Sydney or Glace Bay and will extend to Prince Rupert on the Pacific coast. The Canadian Highway Association was organized in New Westminster, B. C. last November. It is impressed with the belief that by building a trsnscontinental highway there would be laid the nucleus of a road system unequalled in the world, because it would undoubtedly tend to encourage the building of smaller branch roads, connecting the main highway with all points of importance on either side. Large sums of money are expended on the roads in the Maritime Provinces. Despite this fact, the deplorable condition of many miles of road testify to the fact that the money expended has been practically thrown away.

The greatest result looked for through the construction of the proposed highway is a "back to the land movement." Nothing offers a greater hindrance to the settling of our vacant farm lands by a desirable class of immigrants than bad roads. New towns and new markets do not depend altogether on new lines of railway. The building of the new "Great White Way" will undoubtedly mean the building of new towns Travel will be made easier, access to the markets readier, and transportation charges smaller. The high freight rates are supposed to be responsible in some measure for the high cost of living. While this may be true, the execrable condition of our roads, which makes transportation difficult and therefore expensive, must be held to be equally responsidle for the condition.

Success to the "Great White Way."

FOR A GOOD ROADS MOVEMENT!

At a recent meeting of the Sussex & Studholm Agricultural Society, Mr. J. T. Prescott one of the most prominent and progressive farmers of the district made the assertion that in order to keep rural roads in good repair the present system is wholly inadequate. All railroads have a corps of track or section men whose duty it is to go over their respective sections of track every day and make the necessary repairs as soon as the need of repair is noticed. Cities and incorporated towns also look after their streets by having corps of men continually at work effecting a small repair here and another one there. It is a well known fact that these railways, cities and towns find it a paying proposition to attend to these small repairs early in the game rather than leave them a menace to rolling stock and the general public.

It is an easy matter to critise along destructive lines: to critise along constructive lines is anoeher matter. Mr. Precott's criticism of present road conditions, we are pleased to say is of the constructive kind. He suggests that for every 20 or 25 miles of rural roads a man should be appointed whose duty it would be to take his team and go over his section of road at frequent intervals effecting repairs, by filling a rut here, changing a destructive water course there, filling in the bumps at crossways and throwing all the loose stones from the track. One active man with a horse and cart would be able to keep a long stretch of road in good repair and at very little expense. The wear and tear on horses and rigs obliged to travel over such roads would be much reduced and the trip from farm to town could be made by the farmers much more expeditiously than can be accomplished over roads with which the elements have been playing havoc, maybe for years without a hand being lifted to stop their ravages. We trust the powers that be will look into this matter and see their way clear in instituting a system of road repair along the lines suggested by Mr. Prescott as will redound to the good of the country in general and the farming class in particular

The Septic Tank for Disposal of Sewage

The following article is published in response to the request of a Subscriber, who is interested in the disposal of sewage, where the land surrounding his house is nearly level and where running water is available:

Certainly one of the most hopeful signs of progress, one might almost say of advancement in civilization, at the present time is the widespread desire in the country home for a better and more convenient water supply, for a bath-room, and for those sanitary conveniences (closet, sink, laundry, &c.), which go so far towards making the difference in comfort between the city and the farm house, especially in the winter. The requests for information regarding these matters, and particular,y respecting some simple and effective method for the disposal of the sewage from the farm house, have been very numerous during the past year.

As regards the latter question, these inquiries have been answered by an account of the septic tank system, a comparatively speaking new system, but one that has proved highly satisfactory, as far as the writer is aware, wherever it has been tried. In many instances this correspondence has further led to requests for details, dimensions and drawings. It has, therefore, been thought advisable to insert the following detailed account of this system with illustration in the Annual Report, since its publication in this way will not only bring the matter prominently before a very large number of farmers, but will place on record in an available form particulars which it is almost impossible to furnish in the limited scope afforded by an ordinary letter.

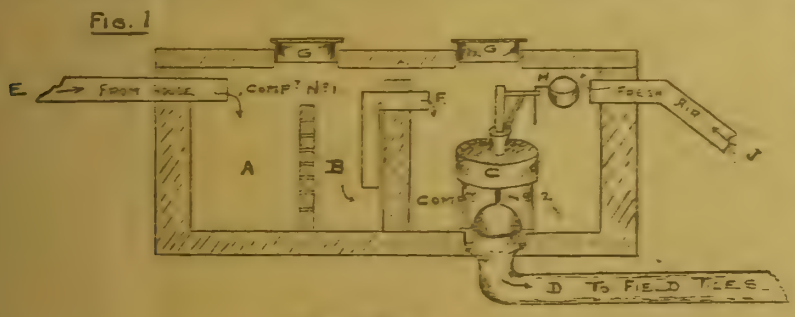
We have no hesitation in saying, at the outset, that there is no method of sewage disposal at once so effective, so cheap, and so simple for the farm house, the creamery and the cheese factory,as that which is known as the Septic Tank System. For its working, a water supply in the house or building is necessary, but there is no good reason now-a-days why such should not be obtainable on the majority of farms. There are many means of bringing water from a safe, and perhaps fairly distant source, into the house and barns, and one or other of these, as circumstances dictate, should be employed. Apart from the question of sewage disposal, apart from the convenience and the saving of labour that would follow, such a water supply must now be considered from the health standpoint most desirable, if not a necessity. Reference to results given annually in these reports show that the shallow well, sunk in the barnyard or about the farm buildings ought to be abandoned. Such wells are always a menace to the health of the farmer and his family, and his stock. With a water supply in the house—even though that may consist merely of a tank in one of the upper rooms periodically filled by a force pump, and from which pipes lead to the bath room and kitchen—there is nothing to prevent the installation of this system which, as one writer or authority puts it, is at once 'inexpensive, absolutely automatic, scientific, simple, and in every way thoroughly efficient and satisfactory.'

Very briefly, the system may be outlined as follows:—The sewage or waste from the closet and sink is conducted by the soil pipe, 4 inches in diameter, into a tank, situated outside the building, in which, without the addition of any chemical or disinfectant, but simply by the action of certain self-sown microbes or bacteria (which accomplish their useful work of destruction largely in the absence of light and air), its organic matter—its filth—is decomposed and rendered harmless, and moreover its disease germs, if any are present, destroyed. The effluent or what might be termed purified sewage is now discharged automatically and intermittently from the tank, either into a filter box containing gravel or sand, or coke, or, better still, into a system of subsurface or distributing field tiles of unglazed ware which allow the effluent to soak into the soil throughout their whole length. The distance from the house to the tank is not a matter of any moment. The tank must be water-tight, and may be constructed of brick or stone cemented or, preferably, of concrete. When this system was first put into use it was supposed that light and air prevented the development of the filth destroying bacteria and, therefore, that it was essential for the tank to be practically light tight and air tight. Further, it was held that the inlet and outlet should be so arranged that the sewage would not be disturbed by currents. According to certain authorities it is still believed that the bacteria can only do their best work under these conditions. More recent investigatians, however, go to show that such precautions are necessary. The bacteria which are engaged in this destruction, or rather nitrification, of the organic matter of the sewage do not all belong to that class which can only thrive in the absence of the oxygen of the air. However, these considerations need not be here further discussed. It is sufficient for our present purpose to know that the system as consisting of the closed tank and distributing tiles, is efficient alike in the satisfactory disposal of house sewage and waste from the cheese factory or creamery.

For practical purposes—that is, for the installation of the system—the following details and the accompanying illustrations will no doubt prove serviceable.

Figure I. represents a tank fitted with the automatic discharge valve. The size of the tank for the ordinary farm house may be 6 feet long by 3 feet wide by 3 feetdeep,or a working capacity, say, of 120 gallons to each compartment. Since it is apparently desirable that the sewage should be submitted to the action of the bacteria for a period of 24 to 36 hours before passing into the second compartment of the tank, it is perhaps better to have the tank a little too large than too small. It is customary to allow a capacity of 12 gallons for each person. It will be seen that by a partition wall, carried within two inches of the top or roof, the tank is divided into smaller tanks or compartments, figured as No. 1 and 2. Into the first of these, near the top, the sewage from the house flows through the glazed tile E. connected with the soil pipe which opens above the roof. The pipes from closet, bath, sink, &c., should, of course, be trapped before entering the soil pipe.

In this tank or compartment (No. 1) there should be a perforated partition, as shown in cut, to prevent paper and other solids entering the overflow and being carried over into compartment No. 2. It is in No. 1 compartment that the bacteria chiefly effect their work of decomposing the organic matter of the sewage, and when in time this compartment becomes full its fluid contents pass over into No. 2 by means of the overflow F. If there is no perforated partition in No. 1 the lower orifice of this overflow (F) is covered with wire netting which may act as a strainer to prevent any paper, &c., passing into No. 2. In compartment No. 2 is the automatic valve H., connected with the discharge pipe D, which carries off the effluent to the subsurface tiles (see figure 2). The success of the system depends largely upon this valve, for it is essential that compartment No. 2 should be emptied as soon as it is full, and then allowed to refill. This can only be satisfactorily accomplished by a self-acting (both opening and closing) valve.* This second chamber should have a 4-inch vent pipe, to allow the entrance of air. Manholes are provided at G, to permit of the examination of the tank at any time. The probabilities are, however, that no cleaning out will be necessary for years, as the action of the bacteria is very thorough and complete in destroying the organic matter.



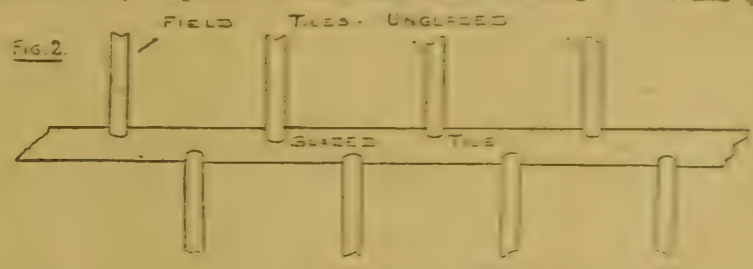
Septic Tank

The tank must be situated that its glazed discharge pipe D. at the point from which the field tiles are led off is not more than 12 inches below the surface of the ground. This pipe as well as the field tiles are to be laid on a level so that the latter will be equally filled when the tank is discharged. If the ground be level, this will necessitate constructing the tank so that a portion of it is above the surface of the land, and in this case it should be banked around, covered with earth and sodded. It is not essential that the tank should be close to the house, but if placed at a distance the inlet pipe should have a fall from the house and be protected from the frost. Unglazed field tiles inserted every two or three feet along the discharge pipe D. finally distribute the effluent through the soil (Fig. 2). If desired, these distributing tiles from D need not commence in the immediate vicinity of the tank, but it is important that they should not be at a greater depth than 12 inches, unless the soil is very light and sandy and has good natural drainage. Since a 4-inch tile holds ¼ gallon and it is essential that there should be the capacity for all the effluent immediately on discharge a tank with a compartment No. 2 of 100 gallons will require at least 200 [illegible] If the soil is heavy clay it should be underdrained. When the soil is of such a character that percolation is very difficult the distributing tiles may be replaced by a 'filter box' of sufficient size, filled with sand or gravel, or coke, the effluent entering near the top at one end and being continued away from the other end by subdrains. However, in practice it is found that a larger tank with ,ess frequent discharge and more tiles is preferable to a filter box.

This system is in operation in many parts of Canada and has proved satisfactory wherever operated, so that it cannot be regarded as an experiment. It is in use in rural homes, in several cheese factories and creameries, in asylums, factories &c. and in every instance, I believe, it is working efficiently.

In the preparation of this article, the writer has consulted Dr. P. H. Bryce Chief Medical Officer of the Department of the Interior, who, when Secretary of the Provincial Board of Health for Ontario, was instrumental in introducing this system into various public institutions. He authorizes the statement that after 15 years' experience this system properly installed has proved the most sanitary and most economical method yet discovered for sewage disposal on a moderate scale.—Frank T. Shutt, Chemist, Experimental Farm, Ottawa.

*An automatic discharge valve is made by the Dominion Valve Co., Toronto. The price is from $18 to $25, according to size and quality.



Distributing Tiles

Clydesdale Association.

The two hundred members of the Clydesdale Horse Association, who met in Toronto February 2nd, were given a very satisfactory financial statement of the year's affairs. There is a cash balance of $14,[illegible], with over $5,000 expended in grants to various exhibitions. Mr. John Bright, the retiring president, delivered an address in which he pointed out that the association was now the strongest of the kind in the world, being even wealthier than the parent organization in the Old Country. The new regulations making it compulsory for every horse to be recorded which were introduced two years ago had proved of great value he said, and had also had the effect of breaking up the older association in Scotland, which was obliged to conform to this rule.

New officers were elected by acclamation, Mr. Robert Graham, Bedford Park, becoming president: Mr. John A. Boag, Queenville, vice-president: Mr. Peter Christie, Manchester, vice-president for Ontario: Dr. Graham also being appointed representative to the Toronto Exhibition. Mr. J. W. Wheaton is the new secretary succeeding Mr. J. W. Sangster.

HORTICULTURE.

When to Spray and What to Use.

Every man should know what he is spraying for and employ means to attain the desired result. Be ready and begin early. It is easier to keep the enemy away than to drive him away. When fighting insects it is necessary to know if the pest chews its food, for if not, contact insceticides or other means must be employed. Sucking insects as a rule, produce a wilting or discoloration of small areas and sometimes curling of the leaves; such attacks must be checked by the use of contact insecticides.

Biting or chewing insects devour portions of the plant and the poison, in order to be effective, must be applied where it will be eaten. If this is done early in the season, most excellent results may be obtained. Young insects usually succumb much more quickly than older ones.

It must be remembered that Insects and Fungous diseases are of entirely different nature. The two most important Fungicides are Ammoniacal Carbonate of Copper and Bordeaux Mixture.

APPLES—(Scab, Codling Moth, Bud Moth). 1st application; Spray before buds start, using copper sulphate solution. 2nd application: Just before blossoms open, bordeaux. For Bud Moth, Paris green when buds open. 3rd application: Within a week after blossoms have fallen, bordeaux and Paris green. 4th application: Eight to twelve days later, bordeaux. 5th application: Ten to fourteen days later, bordeaux.

CABBAGE—(Worm, Aphis). 1st application: When worms first appear, kerosene emulsion. 2nd application: Repeat in seven to ten days if plants are not heading. 3rd application: If worms reappear, repeat if not heading. 4th application: After heads form use Saltpetre for worms, a teaspoonful to a gallon of water. 5th application: When plants are small Paris green may be used to check worms.

CARNATION—(Rust and other fungous diseases, Red Spider). 1st application: When rust is first noticed, bordeaux. For Red Spider, kerosene emulsion. 2nd application: For rust repeat first in ten to fourteen days. For Red Spider, repeat in three to four days. 3rd application: Repeat second, using ammoniacal carbonate of copper if plants are in bloom. 4th application: Repeat second if necessary. ...

CHERRY—(Rot, Aphis, Slug and Curculio). 1st application: As buds are breaking, bordeaux. When aphis appear, kerosene emulsion. 2nd application: When fruit has set, bordeaux. If slugs appear, dust leaves with air-slacked lime. 3rd application: Ten to fourteen days later, if signs of rot appear, bordeaux. 4th application: Ten to fourteen days later, ammoniacal copper carbonate.

CURRANT—(Mildew, Worms). 1st application: At first sight of worms, Paris green. 2nd application: If worms reappear, repeat. If leaves mildew, bordeaux. 3rd application: If worms still trouble, hellebore.

GOOSEBERRY—(Mildew, Worms). 1st application: When leaves expand, bordeaux. For worms, Paris green. 2nd application: Ten to fourteen days later, repeat. 3rd application: Ten to fourteen days later, ammoniacal copper carbonate. 4th application: Repeat in ten to fourteen days if necessary. 5th application: If mildew persists after crop is gathered, bordeaux.

GRAPE—(Fungous Diseases, Flea Beetle). 1st application: Before buds burst, copper sulphate solution. For flea beetle, Paris green. 2nd application: When leaves are half grown, bordeaux. Paris green for larvae of flea beetle. 3rd application: As soon as fruit has set, bordeaux. 4th application: Ten to fourteen days later if any disease appears, bordeaux. 5th application: If necessary, ammoniacal

PEACH, APRICOT—1st application: Before buds swell, copper sulphate solution. 2nd application: As soon as the fruit has set, bordeaux. 3rd application: Ten to twelve days later, repeat. 4th application: When fruit is nearly grown, ammoniacal copper carbonate. 5th application: Repeat last if necessary in five to ten days.

PEAR—(Codling moth, Psylla Leaf Blight, Scab). 1st application: Before buds start, copper sulphate solution. 2nd application: Just before blossoms open, bordeaux. Kerosene emulsion for psylla when leaves open. 3rd application: After blossoms have fallen, bordeaux and Paris green. 4th application: Ten to twelve days later, repeat if necessary.

PLUM—(Rot, Fungous Growths, Curculio). 1st application: As buds start, copper sulphate solution. 2nd application: When fruit has set, bordeaux, Paris green. Begin to jar trees for curculio. 3rd application: Ten to twelve days later, repeat. 4th application: Ten to twenty-three days later, bordeaux. 5th application: two to three weeks before plums ripen, bordeaux and ammoniacal copper carbonate.

POTATO—(Beetles, Blight). Soak seed for scab in corrosive sublimate solution (2 oz. to 16 gals. of water) for 90 minutes. 1st application: When beetles first appear, Paris green. 2nd application: When vines are two-thirds grown, bordeaux. Paris green for beetles if necessary. 3rd application: Ten to fifteen days later, repeat if necessary. 4th application: Ten to fifteen days later, bordeaux if necessary.

RASPBERRY, BLACKBERRY—(Anthracuose, Rust). 1st application: Before buds break, copper sulphate solution. 2nd application: When new canes are one foot high, bordeaux mixture. 3rd application: During eummer if rust appears, bordeaux. 4th application: After crop is gathered remove old canes and spray with bordeaux.

ROSE—(Mildew, Black Spot, Red Spider, Aphis). 1st application: Mildew, keep heating pipes painted with equal parts lime and sulphur mixed with water to a paste. 2nd application: Black spot, spray plants once a week with weak copper sulphate. 3rd application: Red Spider, kerosene emulsioo to under side of foliage. 4th application: Aphis, kerosene emulsion. 5th application: Solution should be very dilute as rose foliage is easily injured.

STRAWBERRY—(Rust). 1st application: Just before blossoms open, bordeaux. 2nd application: As first fruits are setting, bordeaux. 3rd application: When first fruits are ripening, ammoniacal copper carbonate. 4th application: When last of fruit is harvested, bordeaux.

TOMATO—(Rot Blight). 1st application: At first appearance of rot or blight, bordeaux. 2nd application: Repeat if diseases are not checked.

CATTLE—For Lice, Fleas, Ticks or Horn Fly use Kerosene emulsion.

Control of Coddling Moth.

In the laboratory fungicidal tests on spore germination with summer spores (conidia) of the apple scab fungus were made. Lime-Sulphur alone diluted 1-50 reduced germination from 50 per cent. to 12.5 per cent., while with 1-100 and Lead Arsenate added at the rate of two pounds to 50 gallons it was reduced from 66 to 0 per cent.

On the trees apple scab was reduced from 79.4 per cent. to 29.5 per cent. by Lime-Sulphur 1-30 alone, and to 10.9 per cent. by the same concentration of Lime-Sulphur with Lead Arsenate added.—Cornell Bulletin 284.

TRAMPED 60 MILES TO SAVE HIS CHUM

Prospector at Larder Lake Got Back with GIN PILLS Just in Time.

LARDER LAKE, ONT., MARCH 26th, 1911.

"I am writing to tell you the good GIN PILLS did me. I had been suffering for some time with my Kidneys and Urine. I was constantly passing water which was very scanty, sometimes as many as thirty times a day. Each time, the pain was something awful and no rest at night. I began to feel worn out. I heard of your GIN PILLS and decided to give them a trial at once. I sent my chum out to get them (about 60 miles) —and I am pleased to inform you that in less than six hours, I felt relief. In two days, the pain had left me altogether. I took about half a box and to-day I feel as well as ever and my kidneys are acting quite natural again. Thanking you for the pills which I always intend to keep by me. Yours respectfully,

SID CASTLEMAN.

WELCOME RELIEF.

We have never received a letter that pleased us more than this one. When we realize what Gin Pills meant to this sick man, lying on a bed of pain miles away from a doctor in the frozen north, and how they helped him, we feel that our efforts to prepare a standard preparation for Kidney and Bladder Troubles have been crowned with success.

GIN PILLS is a wonderful solvent for uric acid. It instantly neutralizes the hot, scalding urine, allays the burning pain, soothes the irritated bladder and heals the kidneys. Take GIN PILLS on our positive guarantee of a cure or your money back. 50c. a box, 6 for $2.50. Free sample, if you write mentioning this paper, The National Drug & Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS are a positive cure for Constipation, Biliousness, Sick Headache and Sour Stomach. Excellent for Indigestion. 25c. a box. 112

SYDNEY BASIC SLAG

WORKS NOW IN FULL OPERATION
IMMEDIATE DELIVERY CAN BE GIVEN

OFFERED IN TWO GRADES:—

"A" Quality is High grade, bearing **Green Tag, No. 557**
"B" Quality is Medium grade, bearing **Pink Tag, NO. 558**

BOTH REGISTERED WITH GOVERNMENT.

Farmers who want the BEST GOODS should Buy the SYDNEY SLAG with GREEN TAG No. 557

Being produced here and having no ocean freight to pay our prices are much lower than anything previously known. Buyers who can take delivery in carloads and pay cash with order can be supplied direct from Works.

Farmers who get Sydney Slag with Pink Tag No. 558 will understand they are buying a lower grade article.

The CROSS FERTILIZER CO.,

LIMITED

Purchasing Agents Wanted Everywhere. Sydney, C. B.

Russeting of Apples.

Russeting of apples by Lime-Sulphur, is, at least, rare and of minor importance as compared with that caused by Bordeaux. Considerable natural russeting occurred the past season (1910) on unsprayed trees, especially on Baldwins, caused by certain weather conditions. In our experiments there was in both seasons even less russeting on the Lime-Sul-

Tandem Rollers Can't Get Off the Track

No other barn Door Hanger on the market positively and permanently overcomes all the troubles of clogging by either **birds in summer or by snow and ice in winter.** There's no opening in the **Louden Bird-Proof Track,** except a narrow slit. It is made of **one solid piece of steel pressed into shape.** Is rust-proof; will last a life time.

LOUDEN'S Bird-Proof HANGER

is the **only one on the market** having **flexible track** which prevents gathering of trash between track and barn.
If you are going to build a new barn or need new hangers for the old one, get the hanger that will never balk and is always easy to operate. It will ease your barn work greatly and save you time and money to put in **Louden's Tubular Steel Stalls and Stanchions, Feed and Litter Carriers, Hay Carriers and Balance Grapple or Double Harpoon Forks.** See them at your dealer's. If he has not our line write us for Free catalog and send your dealer's name.

Louden Machinery Co.
Dept. 27 GUELPH, ONT.

Exhaustion of Soil Fertility.

Extract from

"Artificial Fertilizers; Their Nature and Use"

By

B. Leslie Emslie, C.D.A. (Glas), P.A.S.I., F.C.S.

"The fact remains that resource must be had to artificial fertilizers if the requirements of the soil for all the elements of fertility are to be satisfied, and the sooner a farmer becomes cognizant of this, the less trouble will he have in restoring a runout soil.

Last fall the writer happened to be discussing the fertilizer question with a farmer, who owns a farm of a very light, sandy-loam character, when the latter made the remark that if it were not for artificial fertilizers, of which he uses large quantities annually, his land would not be worth farming.

The same day, in conversation with another farmer, he happened to inquire whether the farmer used artificial fertilizers, to which question the latter replied to the effect that there was too little money to be made at farming to warrant its expenditure for fertilizers. Here are two different opinions, the one made by a man who had used fertilizers and proved their value, and the other by a man who knew nothing of the benefits to be derived from a judicious use of fertilizers, and who at the same time made the statement that farming was unprofitable."

FREE copies of this and other bulletins, dealing with the important subject of Fertilizing, may be obtained by application to

GERMAN POTASH SYNDICATE,
1102-05-06 Temple Bldg., TORONTO, ONT.

Here is a message of hope and good cheer from Mrs. C. J. Martin, Boone Mill, Va., who is the mother of eighteen children. Mrs. Martin was cured of stomach trouble and constipation by Chamberlain's Tablets after five years of suffering, and now recommends these tablets to the public. Sold by all dealers.

phur sprayed than on the unsprayed trees. We have not yet seen a clear case of russeting from Lime-Sulphur, but such have been reported, and we cannot dispute the possibility. Aside from the russeting, apples sprayed with Lime-Sulphur have invariably been more highly colored and had a finer, more waxy finish than those sprayed with Bordeaux.—Cornell Bulletin 284.

Spraying Mixtures.

KEROSENE EMULSION—For sucking insects, cabbage worms and insects with soft bodies. Coal Oil, 2 gal.; boiling water, 1 gal.; hard soap, ½ lb. Churn thoroughly. Dilute 5 to 20 times before applying.

PARIS GREEN—For insects which chew. Paris green, 1 lb.; water, 200 gal. When used on fruit trees, 1 lb. of quick lime should be added. Paris green and Bordeaux can be applied together if desired.

COPPER SULPHATE SOLUTION—For fungous diseases. Copper sulphate, 1 lb.; water, 15 to 25 gal. Is ready for use as soon as dissolved. This should never be applied to foliage but must be used before buds break.

BORDEAUX MIXTURE—For rot, moulds, mildew and fungous diseases. Copper Sulphate (Blue Vitriol) 6 lbs.; quicklime (good stone lime) 4 lbs.; water 50 gal. Dissolve the Copper Sulphate by putting in a coarse cloth and hanging in an earthen or wooden vessel containing 4 to 6 gallons of water. Slack the lime in an equal amount of water, then mix the two and add enough water to make 50 gallons.

AMMONIACAL COPPER CARBONATE—Copper Carbonate 5 oz.; Ammonia (26 degrees) 3 pints; water 45 gallons. Make a paste of the Copper Carbonate with a little water, dilute the ammonia with 10 to 12 quarts of water, add the paste to the diluted Ammonia and stir until dissolved, then add enough water to make 45 gallons. This mixture loses strength on standing.

HELLEBORE—For insects which chew. Fresh white Hellebore, 1 oz.; water 3 gallons. This poison is not so energetic as the Paris green and may be used a short time before the sprayed portions mature.

FIRE EXTINGUISHER—Muriate of ammonia, 1 lb.; Chloride of Potash, 1 lb.; Salt, 5 lbs. Pulverize and dissolve the above in 3 gallons of water. Next dissolve two pounds of Bi-Carbonate of Soda in two gallons of water. Mix the two solutions together and let it stand over night. A very little of this solution will extinguish a big blaze, for by throwing it beneath the blaze, the heat creates a gas and the fire cannot burn for want of air.

One pound of Baking Soda added to two gallons of water will also do effective work at a fire.

DISINFECTANTS—Carbolic Acid—in the proportion of a tablespoonful of the acid to a pint of water; or Formaldehyde—a 40 per cent. solution.

For contagious diseases and other purposes.

The Need of the Five Sprayings.

In our instructions we have advocated 5 sprayings to be made. Any number less than this would not be in the best interests of the growers. The writer in 1909 grew over 2000 barrels of apples. By omitting the 4th spray on account of dry weather, the damage to the crop by Black Spot was greater than the cost of all the spraying previously done and the estimated cost of the one omitted.

Out of 400 odd barrels of Fallawaters placed in storage, in one packing out of one shipment during the winter, there were 40 No. 1's, 9 No. 2's and 30 No. 3's, whereas if they had been clear of spot there should not have been over 3 or 4 barrels of No. 3's.

Do not fear putting on a late spray. The apple is in a safer condition to receive it. All fruit is more easily effected by spray when younger and still covered with minute hairs, and before its stomates have been changed into lenticels (Geneva Bulletin 287) a change which takes place about 6 weeks after the blossoms fall.

You Get all the Cream

from your milk only when your separator runs freely and smoothly.

This depends as much upon the oil you use to lubricate the separator as upon the separator itself.

STANDARD
HAND SEPARATOR OIL

is the one oil you can depend upon to keep your separator in the best running condition.

Standard Hand Separator Oil feeds freely into the closest bearings. It also has just the consistency or "body" needed to reduce friction between the delicately balanced parts to the lowest possible point.

Standard Hand Separator Oil never gums, never rusts, never corrodes. Your separator will pay better and last longer if you use it.

Ask your dealer for STANDARD HAND SEPARATOR OIL. One gallon cans.

The Imperial Oil Co., Limited.

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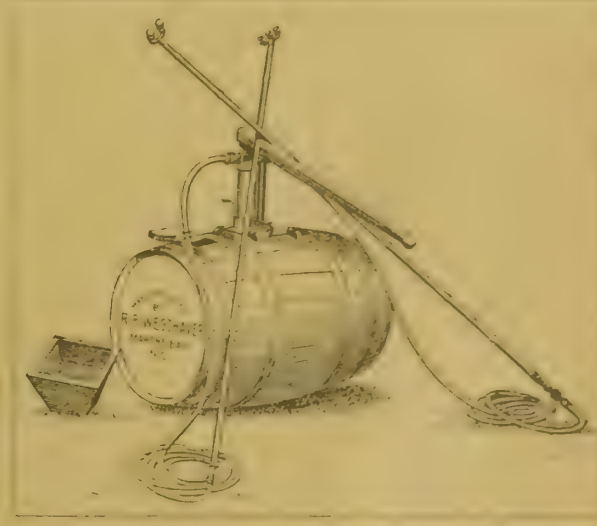


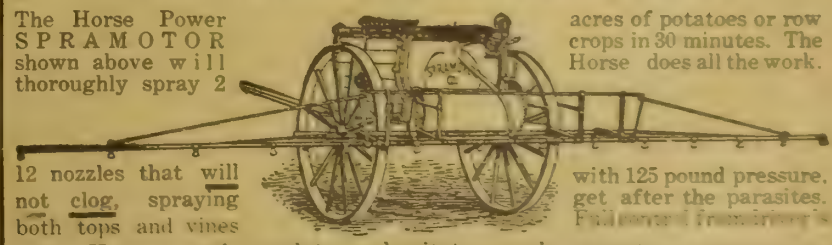
Spray OR Suffer Loss?

"Perfect" Spray Pumps are made by

R. B. WESTHAVER, Mahone Bay, N. S.

THE PEST PARALYSER

The Horse Power SPRAMOTOR shown above will thoroughly spray 2 acres of potatoes or row crops in 30 minutes. The Horse does all the work.



12 nozzles that will not clog, spraying both tops and vines with 125 pound pressure, get after the parasites. Fallawater from trees's seat. Has automatic regulator and agitator nozzle protector, pressure relief, 12 gal. air-pressure tank, draining, air and controlling cocks. Equally efficient on row crops or orchards. Made for 1 or 2 horses or hand. Awarded gold medals at National Horticultural Congress. Write for free treatise on crop diseases. AGENTS WANTED.

W. C. HEARD, 1379 King St., LONDON, CANADA.

DAIRYING.

Care of Milk Necessary for Purity.

I have often made the statement that any ordinary farm dairy, with the care that any good farmer can give it, can produce just as good and pure milk as the most expensive and eloquently equipped dairy. I want to repeat the statemsnt and emphasize it. Any man who is not attempting to keep and take care of more cows than he has any business to, or who does not expect to keep cows without giving them a proper unt of care, can keep his stable and cows just as clean and free from eria, and produce milk that is just ood and pure as the best millionaire dairyman.

This may sound at first like a pretty big statement, but after all, a thing that is clean is clean, and there is no reason at all why cows which are kept in an ordinary frame barn, which is kept clean and well ventilated, cannot be as healthy and clean as cows which are kept in a concrete or tiled stable. Of course this would prelude the use of a dark, damp and unlighted basement of a barn, but of course I do not believe in a basement stable for milking cows under any condition. It can hardly fail to be damp, and of course would be extremely difficult to keep free from bad odors and dirt generally.

It is very probable that a great many farmers excuse themselves from taking even fairly good care of their cows in the way of cleanliness because of their financial inability to build stables and dairy houses of the model sort, such as millionaire farmers, so-called, are building all over the country for the purpose of getting rid of some of their surplus money and for the satisfaction of doing fine things in a large way. But there is one thing that any farmer can do even if he has not a big bank account to fall back upon, and that is keep clean and keep his stables and cows clean. If a man can't and won't do that, he has no business to be keeping animals, anyway.

8 There are only a few things that are essential in producing pure milk, and they can be adapted to any farm by any farmer if he will do so. Healthy cows only can give pure milk, and to be kept in healthy condition the cows must have healthy quarters. The stable must be dry and comfortably warm, and well ventilated. The farmer may say he cannot afford to make the changes that will provide that kind of quarters for his cows. I know some farmers who have not that kind of quarters, and presumably they do not care or think they cannot afford to make the necessary changes. All I can say in regard to this is that such men have no business to be keeping cows and imposing upon the public with dairy products produced under such conditions. They ought to be compelled, by law if it could be accomplished in no other way, to confine their farming operations to the production of those things which can be produced out of doors, in the pure air, where the processes of nature will have some chance at least to produce what nature strives to produce—a pure article.

The next essential for the production of pure milk is to keep the stable clean. Not only should the manure be kept out of the cows' stalls, but the walls and ceilings should be kept so free from dust and dirt that there will be the least possible danger of contamination of the milk from that source. This is not an impossible or an unreasonable requirement. The man who thinks that sweeping down cobwebs and dust is too fussy work for the barn is not the man who will take pains enough to produce really pure milk. Dirt from above the cow is quite likely to get into the milk pail during the operation of milking.

A clean cow is another essentail to pure milk. Naturally any such thing as a caking of manure on the cow's flank should be absolutely tabooed. If the stable is clean and the cow has a clean floor to lie down upon, this will not be difficult. It is absolutely essential, anyway. It is not too much to ask that the cow's body and her udder especially shall be cleaned before the milking, so that no dirt from that source can get into the milk pail. The cow should be so clean that hairs will not be likely to drop into the pail during the milking. None of these things are toe difficult for the ordinary farmer, nor are they unreasonable to ask of him if he is to produce pure milk.

With a clean stable and a clean cow, is it too much to ask that the man who milks shall be clean also.

Clean hands and clothes from which dirt will not be shaken into the milk pail do not seem to me to be too much to ask of a farmer even if the farthest removed from the millionaire.

Too much can hardly be said about the importance of absolutely clean utensils, and for milk which is to be kept for any length of time the matter of cooling is quite important. After the milk is drawn, it certainly should be so handled that it will not receive any additional contamination, and be cooled and kept cool in order to retain its properties of sweetness.

The man who will do these things can produce a quality of milk than which certified milk can be no better. Let the man who thinks that only a rich farmer is able to produce certified milk, study these requirements carefully and see if there is anything here which the ordinary farmer cannot do just as well and just as successfully.--Maine Farmer.

About Dehorning Dairy Cattle.

The reason often given for not dehorning dairy cows is that it will cause them to fall off in their milk flow. If the cows are properly cared for aftet they are dehorned, they will soon recover from the shock of dehorning, and the decrease in milk flow will not be apparent as is often thought.

Twelve cows in the herd at the Kansas State Agricultural College were recently dehorned and a record of the milk production of each cow was kept before and after dehorning. The total production for the twelve cows for five days before dehorning amounted to 1,142.5 lbs. of milk. The total production of the 12 cows for a period of five days after dehorning was 1,100.7 lbs. of milk. The total decrease in milk for the 12 cows during the above period was 40.8 lbs. The average daily loss for each cow for five days was only .69 lbs., or about one-half pint. Two of the cows made more milk during the five days after dehorning than they did for the five days before dehorning; the other 10 produced less milk after dehorning. On the fifth day after dehorning, all except two cows were producing equally as much and some produced more than they did the day before they were dehorned.

TWO METHODS DESCRIBED

The best time to dehorn an animal is when it is only a few days old by using caustic potash. After the horns have made a fair growth they can best be cut off with the saw or clippers. The animals should be fastened securely in a position where the operator can get at the horns. The best method for fastening the animal is to put it in a chute built for this purpose. In sawing or clipping the horn, care should be taken to cut deep enough or the horn will grow out again. The clipping should be deep enough to includ a ring of skin and hair. The base of the horn that is amputated should show a ring of hair.

As soon as the horn is cut off, some disinfectant should be used on the fresh cut. Pine tar or some of the coal tar dips are good for this purpose. Dehorning should be done in late fall or early spring; at this time the weather is moderate and the flies do not bother the animals.—O. E. Reed, Kansas Agricultural College.

Cream Profits That Stay in Your Pocket

Empire Disc.

THERE was a time when the first cost of a separator was a big factor in deciding which separator a cow owner should buy. But now it is different. Men have found it the best investment to pay a LITTLE MORE at the start rather than to be paying the difference constantly afterward in cream profits lost and in repairs necessary. Men have learned that in the

Frictionless Empire

Empire Line
Of Quality Separators

they can get not only the style and size separator they want, but also the one that nets the greatest return for the money invested for the longest term of years—the one that makes profits that STAY in their pockets.

Seventeen Cents a Year was the average cost of repairs on all of the hundreds of thousands of Empire Cream separators in use last year. And the majority of these Empire machines have been in use for many years. It's the TIME test and repair cost that tell whether a separator is a paying investment.

Let us also PROVE that Empires turn easiest, are simplest, most sanitary, highest quality and most satisfactory. Write postal now.

We also handle Gasoline Engines and Rock Island Dry Batteries. Write us for prices first mail.

Empire Cream Separator Co. of Canada, Ltd.

Sussex, - - New Brunswick.

Farmer Agents Wanted in Unrepresented Districts.

Butter With a Bitter Flavor.

Of the various troubles of the butter-making dairy, bitter butter is one which is most commonly met with in winter. This trouble is in most instances due to the manipulation of the cream being at fault. It is only where the cream is carefully ripened by the judicious application of starter that prime butter can be produced in cold weather. Bitterness in butter is caused by specific organisms which perform their functions when the cream in which they are present is maintained at a low temperature. These organisms act on the casein in the cream, and produce substances of a bitter nature, which are imparted to the butter. Bitter butter is most commonly met with on farms where the cream is left in a cold dairy for several days in the winter before churned. In summer the trouble seldom if ever, occurs. In the warm weather any bitter-flavour-producing organisms that were present in the cream would very soon be overcome by the germs thas sour the crerm and ripen it. At many farmhouses it is a common practice to churn only once a week in the winter. This, however, is not to be recommended generally, as, where prime quality butter is to be made, the churning should usually take place at least twice a week. Always get the cream properly ripened, in order to ensure the butter having a good flavour and keeping properties. It is best to keep the cream at a temperature of 68 degrees F., and inoculate it with a little good-flavoured starter. If there are no facilities at hand to maintain the cream at a warm temperature, it would be advisable to warm it to about 80 degrees F., and add a high percentage of pure culture starter.—C. W. Walker-Tisdale.

FREE! HANDSOME IMPORTED DOLL And LOVELY DOLL CARRIAGE
And This Handsome RING Set With a Sparkling Jewel
GIRLS—We want to give you, absolutely without a cent of cost, this beautiful Imported Doll, lovely Doll Carriage, complete with parasol; and this handsome jewelled Ring. This is the greatest offer ever made, girls—Don't miss it. This large, handsome doll is dressed complete from hat to shoes with lovely clothes, lace underwear, shoes, stockings, picture hat, etc. She can move her arms, head and legs, and close her eyes and go to sleep just like a real baby These are the best kind of dolls, and NEARLY HALF A YARD TALL.
The lovely carriage and parasol we give you with the doll, and it is a beauty Made of fine brown reed in the newest style, with strong, real steel wheels and axles enamelled a pretty blue, curved handle and a lovely silk-finished parasol and rod to complete it and protect dolly from the sun and weather. It is just the carriage you would love to have, and fit for the finest dolly in the land.
GIRLS—If you want this beautiful doll, and carriage complete with parasol, and in addition a lovely jewelled ring, send your name and address to-day, and we will send you, postage paid, only 25 of the handsomest jewellery novelties you have ever seen, to sell for us at only 10c. each. They are handsome novelties, everybody wants them and you will surely sell this very small quantity in a few minutes after school. When sold send us the money, only $2.50, and you will promptly receive all 6 presents: the handsome doll, lovely doll carriage with parasol all complete, and the lovely ring exactly as represented. DON'T DELAY.
We arrange to stand payment of all delivery charges right to your door. Remember when we say we will give you all these 5 grand presents for selling only $2.50 worth we will do so. Write to-day and you will soon be the proud possessor of all these grand presents. Address:
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100 YEARS' WORK
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A regular Sharples Dairy Tubular Cream Separator recently finished work equal to 100 years' service in a five to eight cow dairy at a cost of less than 2 cents per year for oil and repairs. Here is the record. It proves that

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Size of machine, No. 4 Tubular.
Capacity per hour, 500 pounds.
Total pounds separated, 2,600,000.
Total turns of crank, 14,352,000.
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Time used in oiling, 15 minutes.
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This wonderful record was made by a regular Tubular—just like Tubulars that are rapidly replacing all others. Write for illustrated account telling all about it.

You will finally have a Dairy Tubular because it contains no disks, has twice the skimming force of others, skims faster and twice as clean. Repeatedly pays for itself by saving what others lose. Wears a lifetime.

Guaranteed forever by the oldest and biggest separator concern on this continent.

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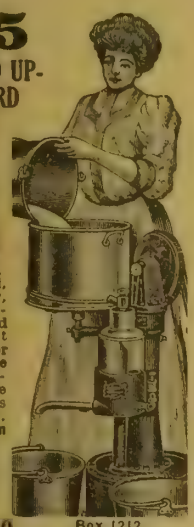

THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for $15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address:

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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

There is no better medicine made for colds than Chamberlain's Cough Remedy. It acts on nature's plan, relieves the lungs, opens the secretions, aids expectoration and restores the system to a healthy condition. For sale by all dealers.

Read the Advertisements in the Maritime Farmer.

Feed Cows Well When Dry.

I often wonder what many of our farmers are thinking about when they allow their dairy cattle to get so badly out of condition in the winter. The excuse usually is that they are in summer dairying only and can't afford to feed their cows when they are not giving milk. "Can't afford not to" would be my view of the matter. I plan to have my cows freshen in the spring, as it is only in the spring and summer that I have a market for milk, but the feeding I do is not discontinued in the winter.

How can one expect cows to do well when they go on grass if they have to spend all the first month getting a little flesh on their ribs and storing up a little vigor with which to make milk. And by the time the cows are getting in fair, good condition, the pastures start to burn up and the result is the 3,000-pound cow of which we hear so much. It isn't the cow's fault. Under different management she would have produced twice as much milk. I try to have our cows in good condition when they freshen. They then start immediately to pile up a good flow of milk, and come nearer 6,000 than 3,000 lbs. in the factory season.

REQUIREMENTS OF THE CALF.

There is another very important reason why we should feed the cow well in winter. It is then that she is developing her calf. This is a great strain on the cow, and she requires lots of nutritious food. Good food is necessary if we are to have strong, healthy calves.

I find that well matured corn ensilage and well aired clover hay, 30 to 40 lbs. of the former and 15 lbs. of the hay, makes a good winter ration for the dairy cow of average size. I feed the ensilage in the morning and follow with the hay when the mangers have been cleaned up. The cows are then left alone till five o'clock in the afternoon, when they are again fed ensilage and their mangers are filled with oat straw. What is not eaten in the morning is thrown back under the cattle for bedding. This feeding is cheap and it serves the purpose well.

WHEN GRAIN IS FED.

As the time for freshening approaches a little ground grain is added to the ration. This helps in the development of a vigorous calf and gives the cow more strength to do her duty as a mother and at the pail.

We hear much of feeding dairy cows when in milk, and the profit is right in our hands. We need to hear more of preparing the cow for the lactation period, when the profits of feeding are none the less real, but not always so easy to see. My experience has convinced me that the great mistake the most of our dairymen are making is in turning their cows to the straw stack during the winter.—Geo. Coleman in Farm and Dairy.

The usefulness of the dairy cow depends a great deal on tne feed and care she receives in early life. It will be found that the cow with a large stomach capacity and good digestive apparatus will make the most economical use of her feed. To develop this large stomach we must encourage the consumption of bulky food, such as hay, bran, oats, and the like, during the growing period

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They all use it—for making delicious butter for their own table. They found out years ago that Windsor Butter Salt dissolves quicker, works in easier, and helps butter to keep better.

Windsor Salt is absolutely pure and every grain is a perfect crystal. 42

If you want to get "top" prices for your butter, use Windsor Butter Salt.

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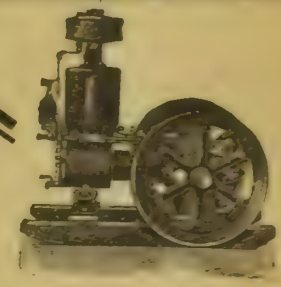

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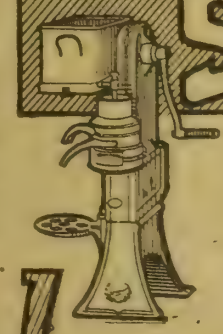

Constructed on approved mechanical principles
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Saves 10 to 25 per cent. over all others.

It will pay you to investigate
Our Catalogue will be sent you upon request.

THE RENFREW MACHINERY CO. LTD.
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LIVE STOCK.

Some Hints on Obstetrics.

The lack of knowledge of owners of live stock in general regarding the simpler laws of obstetrics annually looses them millions of dollars. A cow, a mare, a ewe, or even a sow, may have trouble in parturition at some unexpected moment when a veterinarian can not be summoned and it is necessary that she be given some assistance. Right here is where about one farmer in a hundred is able to proceed with any degree of intelligence. His education along lines of obstetrics has been neglected.

If he knows what is normal and what is not, however, he can be of great assistance and often save both mother and offspring. Nature's plan of delivery of the fetus is to cause a relaxation of the ligaments of the pelvis, the water bag appears through the neck of the uterus, finally appearing outside the vagina. The neck and vagina dilate under the pressure of the fetus which starts through in the shape of a wedge or cone.

There are two normal presentations of the young—anterior and posterior. The nose and two front feet appear in the first with the fetus resting on its sternum, while in the latter the two hind legs and tail appear with the fetus resting as in the first. Variations from these two presentations cause trouble, the difficulty, depending upon the variations from the normal. The cause of trouble may be with the mother or with the fetus, usually the latter.

Premature delivery, narrowness and closeness of the pelvic bones, deformities of the pelvis, tumors within the pelvis, hardening of the uterine neck, closure of the neck or extreme fatness within the pelvis may be some of the causes in the mother. The troubles caused by the fetus are from faulty presentation, excessive size, monstrosities, deformities or dead fetus.

The faulty anterior presentations may be from head doubled back, two feet and legs back, the neck and one front limb, or the neck and both front limbs back. One limb back and doubled at the hock or stifle, both limbs back with one flexed at each of these joints, or both flexed at the same joints are faults of posterior presentation.

To begin with, have a place to work if possible. Some of this kind of work is sure to have to be done on bitterly cold days. If you have the animal in a dry, light place so much the better. This cannot always be had. Get a veterinarian if possible. If you are compelled to do the work alone have plenty of warm water and some linseed oil and antiseptic washes. Have some light, strong cord with loops in the end for pulling, another rope with a hook in the end for hooking into the lower jaw and eye sockets should be handy. An embryotomy knife, a trocar and canula should also be within reach. Wash all tools and ropes as well as the hands with disinfectant before bringing them in contact with the inside work.

Do not interfere until the water bag has ruptured spontaneously unless the water bag has not appeared after several hours of labor pains. If the water bag ruptures spontaneously and the head appears without the feet, or the head and but one foot appears, or if one hind foot presents without the second, or any other evident faulty presentation is apparent, roll up the sleeves and examine. Oil the arm before inserting washing the hands and arm thoroughly first. Have the patient standing, or if lying have head down hill.

When missing members are found straighten and get ready to pull. Work inside while the animal is resting and pull with the strain. Pour plenty of oil in the uterus and rub it on the rough parts of the fetus. When it has lain for some time it becomes dry and does not come easily without oiling. A funnel and rubber tubing will help in getting the oil to the desired parts. In shoving the fetus forward to get a limb straightened a smooth broom stick with a short brad is handy, but the hand must be at the base to guard against injuring the inside of the animal in case the handle slips off and tears the lining. Blood poison may easily set in. When one member is secured and another is sought make sure of your progress by slipping one of the cords over the end. If the patient will not stand keep her lying on the side opposite to where the missing member is sought.

If dropsies of the fetus cause the trouble it may be tapped and the water let off the brain, stomach or skin and the removal of the fetus will be greatly facilitated. Gass accumulates in a dead fetus and can be removed in a similar manner by tapping the body with a large trocar having a rubber tube attached.

Often it will be necessary to remove a limb in order to get the fetus away. Take the limb that is presenting and draw it out as far as possible, slitting the skin from as near the body as possible to the pastern. Peel the skin back from the limb, using the fingers, then cut the muscles at the top, and by twisting and pulling at the same time, the limb can be removed in one section with the skin left as a protection to the mother from the bone and as a handle on which to pull. There is rarely need of removing the head. With one limb out of the way the fetus can nearly always be taken away with little trouble.

Disinfect the uterus of the cow with a three or four per cent. solution of some standard dip and give the mother extra care as regards feed, water and stabling.

That Loose Bull.

There has been considerable agitation and much talk, profane and otherwise, concerning the loose bull nuisance and our Department of Agriculture has done lots of hard thinking in an endeavor to evolve a suitable law to cover the case.

Up to date no very important changes have been made in the old law which provides that any one finding a bull at large may take him up, notify the owner and charge him $5 for his trouble, together with 25 cents per day for the bull's keep. If after three days the owner fails to settle and take away the bull, a Justice of the Peace is notified, who calls a public sale of the animal, after duly advertising it. The proceeds of the sale, after deducting the above charges, besides Justice fees, advertising, etc., are turned over to the former owner.

While this law is by no means perfect, it seems to be about the best we are likely to get for a while, so it is up to us to make the most of it.

If we would all go right at it and enforce the law, as is the duty of every right-minded citizen instead of standing off in thin-skinned terror lest we offend our neighbor, and become unpopular, the trouble would soon cease. But so long as only one or two men in a neighborhood have sand enough to shut up a bull, those men run a very good chance of making enemies and the law is still winked at; whereas if every stockman would do his duty, the very idea of letting bulls run loose would soon become as unpopular as that of stealing or any other violation of law.

Suppose, for instance, you are raising purebred hogs and have a nice, thrifty bunch of pigs. Some fine day your neignbor drives up to your place with a wagon load of miserable little scrub pigs, unloads them into your pen, loads up your good ones and drives off.

Of course, you would not think of stopping him. Oh, no! You might offend him.

But so far as you are concerned where's the difference? His scrub bull comes along, takes away your chance of a purebred calf and leaves you every chance of a scrub in its place.

The man who lays himself open to the charge of giving offense is the one who lets his bull run loose, not the one who takes him up. Of course there is room for a great deal of tact in exercising your rights in this matter.

A great deal more good will generally be accomplished by laying the case before the bull owner in a reasonable way, presenting your side of the case to him rather than by going at it roughshod.

A method that worked pretty well in this neighborhood was as follows:

A copy was made of the law relating to estray bulls, and underneath it "We the undersigned hereby agree to enforce this law in this neighborhood."

It was then taken round to every stock owner in the neighborhood and almost universally signed.

Then when a man's bull was shut up he had no kick coming for he had signed an agreement to shut up stray bulls himself.

There were only two men who shut up any bulls but it soon cleaned up the neighborhood and now instead of every man with half a dozen cows keeping for a bull, a calf that did not look like making a good steer, as they used to do in Texas, he takes them to a good bull.

At first no penalties wete exacted, only a promise to keep the bull up in future.

They kept him up, that is he was supposed to stay inside a two wire fence, if he got out he would be taken up and they could go and get him; it was easier than looking for him.

If the captor collected the $5, of course it was said that that was all he shut the bull up for, so to overcome that the following was tried:

A shut up B's bull and notified him that he had done so and that he must "come through" with the money. When B paid it A gave him his own check for $5, payable to the secretary of the local agricultural society, and told him if he mailed that he'd know where his money had gone.

In another case A shut up C's bull and notified him the same way. C demurred at the $5, saying he was going to castrate the animal anyway. "All right," said A, "come over and I'll help you castrate him before he leaves the place. All I want is a guarantee that he won't bother me any more." And he did.

Castration in the case of nine-tenths of the bulls that are allowed to run at large is missionary work pure and simple, and should always be helped along.—Farm and Ranch.

Sheep on the Farm.

A great deal has been said, and said rightly, on the subject of the advantages of keeping sheep on every farm. The sheep has several good points in which it excels all other domestic animals, and consequently it is to the benefit of every farmer to keep them. It is a refined animal, and not a gross feeher, so that there is not the great amount of labor that attends the growing and fattening of the hog for example. Then too he is a close grazer, and will find a good living where other animals would starve. He will get fat on weeds which would otherwise tax the land heavily. Grains and herbage that would otherwise be lost do not es-

Advantages of a Good Pasture-Replace by Using

HERBAGEUM

Twenty-five Years' Test Without Failure with

HORSES, COWS, FAT CATTLE, SHEEP, PIGS AND POULTRY

IT INSURES GOOD HEALTH AND BETTER RETURNS

It keeps Sheep free from Ticks and Assures better Wool and Heavier Clip.

Flavor of Milk and Butter are improved when Herbageum is given regularly.

MAKE YOUR OWN CALF MEAL

None Better—Costs only 1 1-2c. per lb.

HERE IT IS—100 lbs. Oil Cake Meal; 300 lbs. Shorts; 4 lbs. Herbageum; about 1 lb. Salt. Mix well. Stir about two cupfuls in a gallon of scalding water and feed warm.

Leading Poultrymen Assure Us that Herbageum has no Equal. Now is the Time to Use It.

AND REMEMBER—NOTHING ELSE IS QUITE SO GOOD

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MAXWELL'S
Favorite Churn.
It makes the smoothest, richest, most delicious butter you ever tasted.
The roller bearings—and hand and foot levers make churning an easy task, even for a child.
All sizes from ½ to 30 gallons.
Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.
David Maxwell & Sons, St. Mary's, Ont.
93

cape the sheep. These are all powerful argument in favor of keeping sheep on the farm, and there is no doubt at all as to the profit which they return for a little trouble bestowed on them. Men who have kept both hogs and sheep have expressed themselves emphatically in favor of sheep, saying that they yield a much greater profit in proportion to the attention they require, which is far less.

It is a good thing to start with pure-bred sheep, and to keep up this standard, but failing this, a start with grade ewes is better than no start at all. Pure bred rams should always be used.

The Live Stock Associations.

A number af the various Live Stock Associations operating within and without the folds of the National Live Stock Records held their annual Conventions at Toronto and Ottawa last week. The reports given by the officers of the various associations spell "progress" in their respective lines.

THE HOLSTEIN FRIESIAN BREEDERS.

S. A. Logan, presided at the Holetein Friesian Association meeting which received reports of the most successful year in the history of the Society. The membership now numbers over one thousand and the finances are stronger than ever before. 532 tests were accepted in the Record of Merit during the year. 5924 animals were registered in 1911 and 1912. The total number of bulls now registered is 12,936 and registered cows number 18,961.

A committee was appointed to confer with the National Record Association to determine on what basis they will receive the Holstein-Friesian Society in the Association, and what profit this will be to the Holstein-Friesian Society. The report of this committee will be received at the next Annual Meeting.

The following resolutions were passed:

If an Holstein Cow wins the grand championship at any winter fair she receive an additional prize of $50.

That the grant to the Dominion Cattle Breeders' Association of $150 for 1912 be given under the same conditions as before.

That $5 per cow be paid to any member up to the extent of $25 during a seven or thirty-six day test.

That a grant of $50 be made to British Columbia.

In the list of grants to fairs St. John and Halifax each get $75, Charlottetown gets $50 and $25 for a milk test and Amherst Winter Fair $225. The secretary's salary was increased to $2000.

At the conclusion of the business a nearty vote of thanks was tendered the retiring president, Mr. S. A. Logan who was untiring in his efforts during his term of office to promote the interests of the Black and White Cow.

At the annual banquet, Hon. Martin Burrell, Minister of Agriculture for the Dominion, Prof. Grisdale, Prof. H. H. Dean and G. A. Putnam were the principal speakers.

The officers for the ensuing year are:

President—J. S. K. Herrick, Abbotsford, Que.; 1st Vice-President—J. Rettie, Norwich, Ont.; 2nd Vice-President—R. F. Hicks, Newton, Ont.; 3rd Vice-President—D. C. Flatt, Millgrove, Ont.; 4th Vice-President—M. L. Haley, Springfield, Ont.; Secretary and Treasurer—G. W. Clemons, St. George, Ont.; Directors for two years—S. A. Logan, Amherst, N. S. and J. Mitchener, Red Deer, Alberta; Directors for one year—Neil Sangster, Ormston, Que and J. W. Richardson, Caledonia, Ont.

THE AYRSHIRE BREEDERS.

The membership of the Ayrshire Breeders' Association numbers 785. Registrations during the year have increased by 438 and transfers by 175. The finances increased by $1374.36 during the year.

St. John and Halifax exhibitions will each receive $50 grants and Charlottetown will receive $25.

The members are enthusiastic over the progress that the rustling, hustling Ayrshire cow is making in all parts of Canada and the respective breeders are ready to maintain the standard of excellence already attained.

At the annual banquet, Prof. Arkell, Prof. Day, W. L. Smith, J. Lockie Wilson, Dr. Tolmie and Mrs. W. F. Stephen were the principal speakers.

Among the numerous resolutions passed were the following:—

A resolution was passed asking that Dr. Rutherford be retained at Ottawa, and a committee formed to wait on Hon. Martin Burrell, Minister of Agriculture, asking that mea-

(Continued on page 358).

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IT IS NOT A MEDICINE, REMEMBER, BUT A PERFECT FOOD made from an English moss, to which has been added the STRONGEST and BEST that the VEGETABLE KINGDOM HAS TO GIVE for producing in cattle more and better beef and larger quantities of richer, creamier milk. Fed to sheep, it makes better mutton and a higher grade of wool, while in hogs, it ensures choicer pork and more of it. Horses fed on MOLASSINE MEAL are stronger, healthier, stand more hard work and their coats are always fine, soft and glossy.

IT IS CHEAPER to feed your live stock on MOLASSINE MEAL, because THEY BRING THE BEST PRICES, and are READY FOR MARKET SOONER.

We Stand Behind Every Claim with Living Proofs
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THE HORSE.

Glanders in Horses.

Glanders is one of the oldest known diseases affecting the horse. It is a contagious disease, caused by a particular germ; it occurs in horses and mules, and occasionally in man. It is not a highly contagious disease; it requires rather close and usually prolonged contact to cause its spread. There is on an average of less than thirty cases reported each year in this state and these are nearly always brought in from the western states. Recently there has been an unusual number reported. The danger arising from glanders is often grossly exaggerated.

Glanders is a disease that affects the lymphatic glands of the respiratory system and internal organs and of the skin. When the disease affects the glands under the skin it is frequently known as farcy. The disease may be acute or chronic, that is, run a course from a few weeks to several years.

The disease presents a variety of symptoms depending upon the part involved and the severity of the attack. If acute and involving the nasal and other respiratory passages, there is profuse nasal discharge, with early development of ulcers upon the nasal membranes, usually beginning above and extending downward. One side is likely to be involved more than the other. Hemorrhage from the nose is not unusual. The glands between the angles of the jaw become enlarged. The lungs may show involvement by more labored breathing, shortness of breath and cough; the body shows a rise of temperature, loss of flesh and exhaustion. In the chronic form, there is usually light discharge from the nostril which may be increased at times. The ulceration at first is usually too far up to be readily seen, and when the ulcers are visible they appear to heal and then break down again. The glands between the jaws are nearly always somewhat enlarged and harder than normal. The lung involvement may be so gradual as to present no marked symptoms, or to give the effect of lack of thrift and an occasional cough.

In farcy, the glands underneath the skin become involved, enlarge, and break down with the formation of an open ulcer. In the acute cases, the whole series of lymphatic glands of one or more legs or on almost the entire body may become involved and break down, giving a most disgusting appearance. The animal has a temperature and rapidly becomes emaciated. In the chronic farcy, the glands become enlarged more slowly, only a few are affected at a time, and the ulcers heal after a little time. There is often more or less stocking of the legs and this may be temporary or persist. Cuts or injuries do not heal readily, although the animal may look well. It is from the chronic forms that contagion is especially liable to be spread because the disease goes unrecognized. The disease is one that will not respond to treatment and affected animals should be killed at once.—From Bulletin No. 113, Purdue University.

The Saturation Theory.

The theory of saturation in breeding is ably discussed in an English publication as follows:

The theory of saturation is one which, partly no doubt owing to its incorporation in a book on breeding race-horses, has obtained world-wide credence. In the words of Mr. Bruce Lowe, the prophet, if not the propounder, it is defined as follows:—"Briefly put, it means that with each mating and bearing the dam absorbs some of the nature or actual circulation of the yet unborn foal, until she eventually becomes saturated with the sire's nature or blood, as the case may be." This theory is so nearly identical with that of telegony, or the influence of the previous sire, that we may as well take the two together. Telegony is, as a rule, considered to be the result of influence on the germ cells alone, whereas the definition of saturation implies an actual change in the organs and tissues of the dam. That the first sire, or a previous sire, does exert some influence on the future progeny of the female is universally held and acted upon.

Farmers all over the country firmly believe that by putting a mare first to a thoroughbred they insure "quality" in her future progeny by a heavier sire. Among all classes of breeders, too, the belief that the production of a mongrel or crossbred will spoil a female in future for the pure breeding of her own kind is strongly held. Many instances of the appearance of puppies resembling previous sires could be quoted, but we do not attach much importance to these so-called authentic cases, all drawn, curiously enough, from the kennels, because, owing to the peculiar habits of the dog, the paternity of a litter is often open to doubt. The whole matter is of such interest and importance to naturalists and breeders, and has so recently been the subject of investigation and controversy, that a repetition of the story of the origin of the modern belief in telegony may not be without interest.

In 1820 Lord Morton communicated a singular fact in natural history in a letter to the president of the Royal society. Being the possessor of a male quagga, he mated him with a young chestnut seven-eighths bred Arab mare which had never been bred from before.

The result was a female hybrid. The mare subsequently passed into the hands of Sir Gore Ouseley, who bred from her on two occasions by a very fine black Arabian horse a colt and a filly. These colts are described and pictured as having the character of the Arabian breed, but both in their coloration and in the hair of their manes they bore a striking resemblance to the quagga. Both were bay and possessed dorsal stripes across the shoulders and dark bars across the back part of the legs, and their manes were said to be entirely or partially upright. This seems conclusive proof enough, as far as it goes, that the quagga had "infected" the seven-eighths-bred Arab mare, and until recently it was accepted without question. One point, however, is worth investigation. Could the "very fine black Arabian horse" have been pure bred? It is generally held by those most qualified to judge that such a thing as a pure black Arab does not exist. If this is so, the colts produced by the chestnut mare may have been thorough mongrel instead of fifteen-sixteenths Arabian blood, in which case reversion, or the reproduction of an ancestral type of coloration, would not be surprising. In any case, with this lapse of time, we must not pin too much faith to this example of apparent telegony as proof of the soundness of the doctrine. Such authorities as Captain Hayes, Spencer, Romanes, and Darwin believe more or less firmly in the influence of the previous sire, while against them we find the opinion of Professor Ewart, Weismann, and a number of German breeders.

One would have thought that definite information would have been obtainable from mule breeders in the United States and France, but some accept the infection of the germ theory, while others affirm that they have never seen any evidence of its influence. It is suggestive that, as a rule, certain mares are kept specially for mule breeding alone, and are seldom, if ever, allowed to breed their own species after producing a hybrid.

The thanks of breeders are certainly due to Professor Cossar Ewart, of Edinburgh, for his enterprise in endeavoring as nearly as possible to repeat Lord Morton's experiment. The quagga being extinct, a Burchell's zebra took its place and was mated with a number of mares of different varieties. In some cases the hybrids were the first born of their dam; in others the mares had been bred before. All the mares were subsequently mated with horses, and it might be supposed that if telegony is of such constant occurrence as breeders would sometimes lead us to suppose, some, at any rate, of the progeny of these mares would show signs of the influence of the previous zebra sire. The results were, however, of an entirely negative nature, and the foals produced no characteristics which could not be ascribed to reversion. The result of these experiments has dispelled all belief in the doctrine among scientists, even if it still continues to exist in the popular imagination.

The fact is that many of the strange results which fall to the lot of every breeder are due to reversion, or the appearance of a youngster in the guise of a more or less remote ancestor. Ignorance of the ancestry of the animals we are breeding leads us to attribute these variations to some mysterious cause instead of to the true one, with the result that these strange beliefs get credited and spread among our equally ignorant friends. Every breed of animal has a tendency to produce young with one or more of the primeval characters, but it is only when we have taken the trouble to study the early his-

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevent the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :--I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

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GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

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DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
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And Tickling Sensation in Throat.

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Miss C. Danielson, Bowsman River, Man., writes:—"Last fall I had a very bad cough and a tickling sensation in my throat. It was so bad I could not sleep at night, so I went to a druggist and told him I wanted something for my cold, and he advised me to try Dr. Wood's Norway Pine Syrup which I did, and after taking one bottle I was completely cured. Let me recommend Dr. Wood's Norway Pine Syrup to anyone who suffers from a cough or throat irritation."

Dr. Wood's Norway Pine Syrup is without a doubt one of the greatest cough and cold remedies on the market to-day, and so great has been its success there are numerous preparations put up to imitate it. Do not be imposed upon by taking one of these substitutes, but insist on being given "Dr. Wood's" when you ask for it. Price, 25 cents a bottle; put up in a yellow wrapper; three pine trees the trade mark; manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Seldom See a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

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ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

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tory and palaeontology of the variety in which we are interested that these variations become pregnant with interest and meaning. As we shall touch upon the subject of reversion further on, we will bring this subject to a close with the assurance that the influence of a previous sire, if it does occur, is of so rare an occurrence that it need never be taken into consideration by breeders, and that no mare should be discarded for the future pure breeding of her own kind because she has bred a colt of another variety or even a hybrid. Furthermore, the futility of putting a mare first to a thoroughbred with the idea of influencing her subsequent progeny will be readily understood.

The experiments made in crossing horses and other animals have equally failed to support the saturation theory. No evidence is forthcoming that any female animals are liable to be saturated with the "nature or blood" of the males to which they repeatedly bear offspring.

Foot Markings of a Horse.

How many are there who can describe the foot and leg markings of a horse correctly? The "white-foot," the "zebra stripes" and the "arborizations" are the names used by horsemen who can correctly describe a horse foot markings.

White-feet are described in relation to their number, the extent, form and composition of marking. In describing the marking of a horse with one white foot the member is mentioned. For example, "white-foot, anterior left." Two white feet are identified by "white-feet, right lateral biped," "left diagonal biped," etc. Two white-feet are necessarily diagonal or lateral. Where three feet are white the unmarked one is isolated, as "three white-feet, posterior left." Four white feet needs only the character of the markings for identification.

The extent of the markings are designated by "incomplete" if the member is not completely circumscribed; "interrupted" if the course is broken by black or colored hairs or is not continued to the extremity of the member; "trace of white-foot" when it occupies only a small portion of the coronet; "beginning of white-foot" when the region of the coronet only is involved, it being surrounded; "small white-foot" when the coronet and the pastern are surrounded; "white-foot" when it extends to the hock; "large white-foot" or "half-stocking" when the marking reaches the middle of the cannon; "stocking" when it extends to the knee or the hock; "high stocking" is still higher, extending onto the forearm or the leg, and the "very high stocking" which reaches the vicinity of the body.

As to composition the white-feet may be "bordered," "speckled," "ermined," "trout-spotted," "mixed" or "marbled." The white feet of gray horses are mentioned only when the markings are perfectly apparent. "Bordered" is circumscribed by a mixed border; "speckled" is mixed with black points; "ermined" has larger black points; "trout-spotted" has red specks in the body; "mixed" looks as though the base of the coat were mixed with the white hairs that compose it, and "marbled" is seen when dark splotches and spots similar to those of the leopard are in the body of the white.

Zebra marks are dark sinuous lines directed transversely upon the arm, leg, knee, cannon, and hock. These are seen most frequently on sorrels and fawn colored horses.

Arborizations are the same as zebra marks, with the difference that white hairs are used in their formation. They are located on the outside of the forearm, the legs and the backs of the ears. The color of the coronary band determines the color of the hoof. It may be white, black or mixed.

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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

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Heaves is not, as commonly supposed, a disease of lungs or air passages. It is due to stomach trouble, which, through the close nerve connection, causes a contraction of the lung tissues, and labored breathing.

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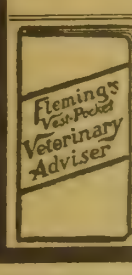

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Fleming's Lump Jaw Cure—the first successful Lump Jaw Cure—today the standard treatment.

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An Advertisement in the Maritime Farmer will sell your surplus stock.

POULTRY.

The Turkey and What He Can Do For the Woman on the Farm.

Editor Maritime Farmer:—

I imagine the majority of us have had enough turkey talk of late, in the newspapers,—but fortunately the following has nothing to do with "The Unspeakable Turk" or "The Sick Man of Europe."

As a starter, why in time don't every farmer's wife, who has land enough to fling a cat around without touching the fences, raise turkeys? All we are absolutely sure of is the fact that they don't keep them, and that settles it. In the majority of farming communities the flocks of these profitable birds are so insignificant, and of such poor quality as to hardly be worth serious consideration. If you would know the reason why this condition obtains the first serious objection that presents itself is: "They are so hard to raise." So are ducks and chickens. Personally I have had far more trouble with the latter than I ever had with turkeys.

When it comes to anything fussy, mussy, and hard to raise, how does a little calf strike you? I have never generated much thought, correspondence, or talk on the subject, but I know I would rather take care of 50 turkeys and 50 geese than cater to one of the mussy little things. With the calf his right to be or not to be has never been called into question; because the cow and her offspring is for the farm, and the farm for the cow, as much indeed as for the farmer and his family themselves. The same should be true of turkeys. If the cow was intended for the farmer, the turkey by a special dispensation of providence, that takes cognizance of the eternally feminine and her infinite variety and her manifold needs and necessities, the extent of which rarely dawns on the average man. I say the turkey, capricious bird that he is, was especially designed for the farmer's wife and her daughters, daughters, forever and ever, Amen, and so be it. With less than one third the patience and about half the good honest energy required in the mothering of the race a woman can do anything within her strength from raising turkeys to voting.

Another objection and a serious one: "They wander all over the place; they won't stay on the property." I am convinced this is merely a bad habit. If your turkeys insist on calling on your neighbours at all times and seasons, teach them better manners. I realize this is easier said than done; but at this writing we have a flock af turkeys, that have never, to my knowledge, been out of sight of the house. The only magic we ever worked on them to achieve this happy result, was in the shape of a good feed once a day, in the morning. That is important, and don't be in a hurry about running out before light. Along in the morning, say nine or half past will do, and when they are once fed that will largely curtail their desire to roam for that hay, as they will merely go a little way to find some grass hoppers and enough greens to balance their ration; and they will roost at home, to be in good time, and on hand the next morning when the treat is passed around. Of course this is applicable to the young birds. I know the worst offenders are the old breeding stock. If you have old hardened rovers of hen turkeys, that insist on stealing their nests far from home, in the most unheard of and inaccessible places, cut their heads off; life is too short to bother with them. Anyway turkeys should be absolutely under control, and should not be permitted to make their own nests and lay and set, wherever and whenever they chose. This is not only a slipshod way in which to attempt to do anything, but wasteful to say the least.

A turkey hen will always lay two or three eggs after beginning to set. Of course the first eggs will hatch, when she will wander off with her brood and leave the latter eggs. I have had such eggs hatch under domestic hens three days after the flock was out of the nest.

The turkey is a despot, a veritable Turk. Before now I have wondered at his timerity as he monopolizes the feed dish, while his patient, long suffering wives take surreptitious bits when they deem it safe to approach near enough. I have witnessed this

(Continued on page 357).

One of the most successful turkey breeders I know anything about is a woman, the extent of whose egg trade alone would make some of our pessimistic farmers sit up and take notice. She has solved the problem of the delinquent hen turkey by means of a coral. Thisis no more than an enclosure, with some small but dence low growing evergreens where barrels were fixed on there sides, around in obscure corners and if one hen can be induced to lay in a barrel nest, the others will follow suit and all will probably select the same barrel. In this way she could collect fresh eggs each day for her egg trade. After she gathered the eggs she fed the flock inside the coral and let them out later, to wander at their own sweet will.

In starting to raise turkeys, the first thing to consider is the health of the flock from which one selects breeding stock. If the breeder has lost a good many before they "shoot the red," (or before their sixth week) avoid them as you would the plague otherwise you will surely purchase trouble for yourself. Avoid petted and pampered birds; a little petting goes a long way with a turkey. If you want something to pet get geese, or get a husband, or if you are already have one pet him and the first thing you know you will begin to find him worth petting and delectable as you thought he was when you married him.

But, seriously, nobody would ever want to pet a turkey. There is nothing very lovable or admirable about him, excepting, as ne is borne in and placed before one delightfully brown and stuffed with good things, during the holidays when no fault can be found with him, shorn of his ridiculous strut and arrogance; we feel that his presumption has received but its just reward, and we "fall to" without a qualm. I never sit down before a murdered goose without feeling like a cannibal.

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This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 58 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set, exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

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of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to introduce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address.

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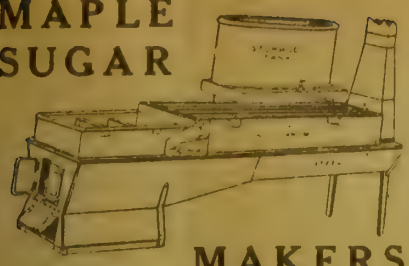

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SMALL BROS. - Dunham, Que.

A SPEEDY CURE

Kentville, N. S., January 1st, 1910.

Messrs. C. Gates, Son & Co.,

Gentlemen,—This is to inform you that I have been a sufferer for the last fourteen years from kidney and stomach trouble, brought on by severe colds. Having been laid up every winter during that time. Last year I was laid up for seven months, so that I could not go out of the house. Dropsy set in, and my stomach swelled so that I was six inches larger than my usual size, had two doctors in attendance, but I grew worse and they were going to tap me—my friends despaired of my life. At this time I was recommended to use

Gates' Life of Man Bitters and Invigorating Syrup No. 1.

and in one week after commencing their use, my size was reduced two inches, and in four weeks was reduced to my usual size, so that I went to work in my mills, and have been able to continue it ever since. By continuing the use of your BITTERS and SYRUP, I hope to get a cure of the kidney and stomach trouble so far as it is possible, as it always helps me when I take it. You may make these truths known for the benefit of sufferers.

Yours very gratefully,
John W. Margeson.

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An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump, and Tools $22.50

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BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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Infertile Eggs.

One of the greatest losses in the poultry yard comes from the lack of fertility and hatchability in eggs used for hatching. We always expect to get out a large number of early chicks, but one thing and another delays, and then when hatching times comes, to find dead germs and chicks dead in the shell, instead of the nest full of chicks, is both disappointing and unprofitable.

To secure fertile eggs, breed from vigorous birds only. We should not expect to get strongly fertile eggs from birds which have been fed and forced for eggs during the fall and winter. A hen can be so worn out by egg production that it is impossible for her to produce hatchable germs.

Breeding birds which begin the work of egg production near the time the eggs are required for incubation will ordinarily give stronger germs and better chicks than can be obtained from hens which have been laying for months.

Some breeders claim to get their best stock from April or May hatched pullets which have been kept back from egg production until nearly time for setting eggs for incubation.

It may be that the reason eggs from hens will hatch, as a rule, better and stronger chicks than eggs from pullets is because the hen does not begin egg production as early in the year as does the pullet, and is in better condition for laying hatchable eggs.

Lewis Wright once said: "It does not seem quite sufficiently recognized that the hens need conservation of their breeding powers as well as the cocks, and should be equally considered in relation to the time when their eggs are desired for hatching."

A great aid in securing fertility is an abundance of wholesome feed. We do not believe in soft mashes seasoned with stimulants for breeding birds. Feed sound grain in litter, give animal food, snell-making food, green food, fresh water, pure air and exercise, and the eggs have every chance for hatchability.

Don't underestimate the importance of exercise for the breeding pen. It is a great mistake to pen the best birds and expect them to give fertile eggs when they should have range and exercise to give vigor to their young and themselves. Far better house the layers, and let the breeding stock run. Confinement with proper feed does not seriously interfere with egg production.

Do not mate too many females with one male early in the season. Do not trust to the service of one male only if it is possible to secure a full brother or a bird of similar type to use with him. Where but one male is kept for each pen, if an accident happens to him, or if he refuses to notice some of the hens, the loss in breeding operations is serious. It is difficult to secure a good breeding male late in the season, so hold one or more in reserve. Two birds nearly related, or of the same type, will make a safer mating used alternately than one male used constantly. See that the male gets enough to eat. A good plan is to coop him at night and feed him by himself in the morning.

There is almost as much danger in under mating as in over mating. Do not leave a male with two or three hens for the entire day. Put him with them for a few hours in the morning or evening only, if fertility is poor. A very vigorous bird may give better fertility with a number of hens than with a few.

Even when yard mating is practiced do not have too many males out at once. The interfering attentions of several male birds is responsible for much infertility. Keep some of the males housed on alternate days out of sight of the females, and feed well.

SHERWIN-WILLIAMS PAINTS & VARNISHES

For spring painting

Make your home and farm look prosperous—there's a money value in well-kept property. Sherwin-Williams Paint, Prepared, covers most, looks best, wears longest, and gives you the biggest value for your investment. Every town has a Sherwin-Williams agent.

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between the Ordinary, Wooden, Wire-hooped Pail or Tub and the Pail or Tub made of EDDY'S FIBREWARE is that the Former loses its Hoops and Goes Back into the Pieces which Formed it, while the Latter is a Solid, Hardened, Lasting Mass, without a Hoop or Seam.

And, besides, EDDY'S FIBRE PAILS AND TUBS have Many Features that you'd Never get the Good of if you Purchased the Inferior Wooden Articles Positively Persist in getting EDDY'S.

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20,000 Trees Like Illustratson, for Spring Delivery, 1912.

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Exercise and Laying Hens.

One of the greatest reasons that hens stop laying in winter is that they do not get enough exercise. If a hen is let alone she has a tendency to go into a hibernating state as many other animals do in winter. If she can be kept out of this her producing qualities as a layer will be equally as good as in more favorable times of year.

A hen should be made to take exercise. One of the best ways to get her to do it is to hang a piece of meat, fresh every morning, by a cord about a foot from the floor. They will jump to peck it and thereby gain the desired exercise necessary for them. This has been proved to be more successful than sprinkling grain in chaff for them to scratch in, yet they both work well together.—John E. Taylor, Maine.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

A Sermon in Rhyme.

If you have a friend worth loving,
Love him. Yes, and let him know
That you love him, ere life's evening
Tinge his brow with sunset glow.
Why should good words ne'er be said
Of a friend—till he is dead?

If you hear a song that thrills you,
Sung by any child of song,
Praise it. Do not let the singer
Wait deserved praises long.
Why should one who thrills your heart
Lack the joy you may impart?

If you hear a prayer that moves you
By its humble, pleading tone,
Join it. Do not let the seeker
Bow before his God alone.
Why should not your brother share
The strength of "two or three" in prayer?

If you see the hot tears falling
From a brother's weeping eyes,
Share them. And by kindly sharing
Own your kinship with the skies.
Why should anyone be glad
When a brother's heart is sad?

If a silvery laugh goes rippling
Through the sunshine on his face,
Share it. 'Tis the wise man's saying:
For both grief and joy a place.
There's health and goodness in the mirth
In which an honest laugh has birth.

If your work is made more easy
By a friendly, helping hand,
Say so. Speak out brave and truly,
Ere the darkness veil the land.
Should a brother workman dear
Falter for a word of cheer.

Scatter thus your seeds of kindness,
All enriching as you go—
Leave them. Trust the Harvest Giver
He will make each seed to grow.
Lo, until its happy end,
Your life shall never lack a friend.

—New York Magazine.

Love's Barrier.

(Continued from last issue).

CHAPTER XVIII.

THE THUNDERBOLT.

"Another letter from Audrey!" said Secretan teasingly. "She is a most faithful correspondent."

"I shall read it presently, when I have attebded to the children. Margot, you must eat that porridge," said Helen, with a quiet, compelling glance at a small, very red and rebellious face, framed by dark curls, sitting at her right side.

"Shan't," said Margot decidedly. "Nasty stuff."

"You know you like it quite well, but you have risen from your bed cross," said Helen quietly. ;'If you don't wish any breakfast, you can go out of doors. You are not to go to the kitchen, remember, and disturb Betty at her breakfast."

"I want some bacon and eggs. Can't I have bacon and eggs, Uncle Claude?"

Claude would have melted, but Helen was firm.

"After you have eaten some porridge."

"Mamma never made us eat porridge; she thought it was horrid stuff, and said it would spoil my complexion."

"I didn't know you had a complexion, Popsy," said Helen serenely. "Come, darling, just this little sauc- erful. Auntie Helen means it, you know; and then, if you wish it, you can have one rasher of bacon and a whole poached egg."

"Eat it, Pops," said Geoffrey commandingly. "You know you like it quite well. It's just pure cussedness."

Secretan himself rose and came round to the wilful child's side, and, taking up the spoon, offered to feed her, making a few joking remarks to her at the same time. She became instantly obedient, and swallowed what he offered without further protest. Helen smiled a little, even while she pretended not to notice. She loved to see Claude with the children, who were wax in his hands. However tiresome the mood, he could melt it and bring them to reason and sunny good will. Helen was not so successful. She was not naturally fond of children, and while she was most kind to them, did not always make sufficient allowance for their childish ways.

They had now been three weeks at Midcar, and were in the seventh heaven of delight. They spent their entire days upon the moor, often picnicking there from dawn till dusk, in charge of the faithful Betty, who, restored to the company of her beloved Miss Helen and her scarcely less adored Jimmy Bates, was almost tearfully happy. Hannah, fully awake to a sense of the responsibility resting on her as the acknowledged head of the Rectory kitchen, had developed all sorts of undreamed of qualities.

Peace restored, Helen poured out tea, and then opened Audrey's letter.

"Wonderful news, Claude, the child is engaged! Mrs. Hayes has engineered it at last!"

"No! Who is the happy man?"

"She does not mention his name," said Helen, turning the page to glance over it. "That's so like Audrey, she is very inconsequent. She calls him simply Gerald. You must read the letter. It is a sort of girlish rhapsody. I wish I felt a little more assured about it. This is the seventh week of their stay, and the first letters did not contain any mention of this man; the acquaintance is very new."

"Mr. Hayes is there. Be very sure he would make every inquiry about the man. He will not give Audrey to any Tom, Dick, or Harry."

"I hope he wouldn't; but it is the woman! She is so overpowering, and so inconceivably stupid about some things. I believe she would marry Audrey to any kind of fool so long as he had the necessary worldly qualifications."

"Audrey herself would not marry a fool, dear. She has too large a share of her father's common sense. Well, kiddies, would you like to go? May they go, Helen?"

Helen nodded, still deep in her letter. She's a dear child," she said soberly, as she passed it over. "And I can't say I feel very happy in my mind about it all. Yes, you may read it, it is not private; you will see she expects you will read it."

Secretan spread out the thin sheet before him and read the first outpouring of a girl's heart over a real lover.

"Hotel Krenzenbad, Marienbad.
"August 28th.

"Dearest Mrs. Secretan,

"It was a great pleasure to receive your kind letter, and I am ashamed that I have been so long in replying to it, but the days seem to glide by so quickly here, and I am so happy, that I seem to have lost count of time.

"At first, you know, dearest, I didn't like this place. It seemed full of nothing but very fat and cross-looking people, who had come for the waters, and who all glared at one another as if they grudged the place to anybody but themselves. If papa had not been here to laugh at them with me, I'm sure I shouldn't have been able to stay.

"The place suited mamma from the beginning, and the only person who is really cross now is Tremlitt, mamma's maid, but even she is recovering. The weather is so lovely here, and every day there is so much that is interesting that can happen and that does happen.

"About the middle of the first week heaps of nice and interesting people began to arrive, and we soon got to know some of them, though mamma is very particular. Quite soon after we came she got to know such a nice English lady, and in about ten days' time her nephew came to join her, not for the cure, of course, because he is quite young, but because he wished to be near his aunt, who has been like his mother, and who brought him up. He is a soldier, and has just come home from India, having been there with his regiment. He is frightfully handsome, even handsomer than Mr. Secretan, which is saying a great deal, isn't it? His name is Gerald, and he admires my name so much. He is always telling me that. He was very kind to me from the first day of his coming, and of course, as there are so few really young people here, I was most grateful.

"We went out a good deal together, and papa didn't mind. He likes him. Everybody does. And—well, dearest Mrs. Secretan, perhaps you have guessed the great secret I have to tell you, that I am engaged to Gerald. I haven't got over the surprise of it yet, because I'm only a little country girl, and he is so clever, and his aunt assures me he could marry almost anybody. And I am sure, by the way the women look at him here, that it is quite true. He is not very well off, poor dear, but one day I suppose he will inherit everything from his aunt. Mamma says she is very rich.

"We are coming home soon. Tomorrow we leave Marienbad, and go into the Bavarian Tyrol for about ten days, so that mamma may get a little mountain air. Mamma sends her love, and I am to tell you we expect to be home on the tenth of September, and will you keep yourself disengaged for the fourteenth, when she will ask some people to dinner? Gerald will be with us by then. He is going to London when we leave Marienbad, and will come on to High Ridges after us.

"I don't quite realise this wonderful thing that has happened yet. Can you imagine a distinguished solhier like Gerald caring anything for a poor little country girl like me, though it is because of that he says he likes me. I am very happy, though sometimes a little afraid. I want to get home soon to see you, and have your advice and sympathy.

"Mamma is very much pleased, because she has got rid of poor John Ridd at last. She was firmly convinced that I intended to marry John aided and abetted by papa. Of course I liked John, but I did not want very much to marry anybody. I am getting used to the idea now, however, and I think so is papa. He is walking up and down the terrace now with Gerald. I do so like to see them together. Gerald wants us to be married very soon, but there is plenty of time, I tell him, and he does not know where his regiment will be sent next. Good-bye, dear Mrs Secretan; I have written such a long, long letter, I don't believe you will have the patience to read it. But try, because it is all about your little Audrey.

"How is everybody—Ann Coyne and Lydia, and dear Miss Jane, and the little boys? And have you got the dear children you told me about at the Rectory yet? Mind you keep them till I come. Give the Rector my love, and tell him he must get ready for the very greatest wedding that was ever seen in Midcar Church. You should just hear mamma talk.

"Ever your affectionate,
"Audrey Hayes."

Secretan laid down the letter, and glancing across the table was surprised by the unusual gravity of his wife's face. He was learning to read its every expression in these days, since the new comradeship of affection was established between them.

"Claude, I don't know how it is, but I don't feel happy about that letter," she said, with a little strain in her voice. "It is not quite natural. I have the feeling that Audrey is being sacrificed, after all, to her mother's ambition."

"Nonsense, dear! I'm sure she writes happily enough, just like a girl proud of her first lover. And, as I said, we may safely leave the matter with Mr. Hayes. He will take good care that the man is worthy."

"She doesn't even mention his name; the fourteenth—why, that is next week, isn't it? They will be here quite soon."

"As he is a soldier you may know something of him or his family," suggested Secretan. "I dare say

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Cured by Lydia E. Pinkham's Vegetable Compound

Fox Creek, N.B.—"I have always had pains in the loins and a weakness there, and often after my meals my food would distress me and cause soreness. Lydia E. Pinkham's Vegetable Compound has done me much good. I am stronger, digestion is better, and I can walk with ambition. I have encouraged many mothers of families to take it, as it is the best remedy in the world. You can publish this in the papers." — Mrs. WILLIAM BOURQUE, Fox Creek, N.B., Canada.

The above is only one of the thousands of grateful letters which are constantly being received by the Pinkham Medicine Company of Lynn, Mass., which prove beyond a doubt that Lydia E. Pinkham's Vegetable Compound, made from roots and herbs, actually does cure these obstinate diseases of women after all other means have failed, and that every such suffering woman owes it to herself to at least give Lydia E. Pinkham's Vegetable Compound a trial before submitting to an operation, or giving up hope of recovery.

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I dyed ALL these DIFFERENT KINDS of Goods with the SAME Dye.

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ONE DYE FOR ALL KINDS OF GOODS

CLEAN and SIMPLE to Use.

NO chance of using the WRONG Dye for the Goods one has to color. All colors from your Druggist or Dealer. FREE Color Card and STORY Booklet 10, The Johnson-Richardson Co., Limited, Montreal.

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Catalogues to any address.

S. KERR, Principal.

The Nova Scotia "Lumber King" says:

"I consider MINARD'S LINIMENT the BEST liniment in use.

I got my foot badly jammed lately. I bathed it well with MINARD'S LINIMENT and it was as well as ever next day.

Yours very truly,
T. G. McMULLEN.

Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparation, and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers.

Audrey has already told him all about you."

"Think of the hundreds of thousands of soldiers there are in the world. The chances are quite against my knowing anything about him," said Helen; but her tone was unconvincing, even to herself. "Well, shall we go on the fourteenth?"

"Why, of course. You will be anxious, doubtless, to see the future son-in-law."

"I don't mind. I have all I want within these walls," she answered with a sudden touch of passion. Suddenly she stood up and looked across the table with a great yearning in her eyes.

"Claude, you are sure you don't regret? It will soon be a year since that day we met first in the gardens of the Luxembourg. Do you regret all that has happened since then?"

"No, I thank God for it every day I live, but most of all for you!"

She lifted her face to his, received his kiss, and was comforted, but from that moment her anxiety did not sleep. She knew that some crisis was at hand, and that out of the new event which had stirred the placid routine of the Hayes's family life some issue was to arise affecting herself. She did not seek to put her fear into words, or to crystallise her anxiety; rather she put it from her as something she could not bear to face.

"You are worrying yourself about something, Helen," said Jane, who popped in one day, bringing her boys to tea. "These children are getting on your nerves. Let them come back with me to the Court. Tom won't mind, and they can run wild like young colts for a week. The harvest is in full swing, and there are heaps of things to interest them."

"Thank you very much, dear, but it isn't the children. I really don't mind them, and Claude is so good with them, you wouldn't believe it."

"They look different children since they have been here. Pity they have to go back to that lowlying Essex place."

"Colchester is very healthy," said Helen listlessly. "But certainly they might be better looked after than they are. I'm afraid we are in for a visit from Mrs. Revell in a week or two. I'm daily expecting a line from Karlsbad, where she is taking the waters, and Claude will insist that she must come. I believe he expects that some sort of revolution would be worked in her nature if she came here. He is a most ridiculous person."

"Well, he may be quite right, Helen. Happiness is infectious, and of course he is ridiculously happy. I couldn't help telling him last Sunday that he looks more like a boy than ever."

"I want to keep him like that. I didn't want these Colchester children. I don't want their mother. I don't want anything to come in here from the past," cried Helen passionately. "Claude does not understand that; more than ever now I want to be quite done with it."

Jane looked a little puzzled, not exactly comprehending the point of view.

"There! I'm selfish, as usual, talking for ever and ever about myself. How are you getting along, dear? Aren't you tired of the Court Farm yet?"

Jane was silent a moment, leaning back in the low veranda chair, her face wearing a strange look.

"Helen, I hate to say it. It is silly, and it hardly seems decent, but I want to ask you something. I'm afraid Tom is beginning to regard me as something not quite like a housekeeper. It's silly at my age to be thinking or hinting at such a thing, but I'm afraid it's quite true, and that he will want to marry me."

Helen laughed a little hardly.

"Any donkey, as I said to Claude, would have foreseen that contingency. What could you expect when you went there, the only woman about the place, and so delightful as you are? Don't redden so furiously. Does that mean that you are going to accept him?"

Jane sat up very straight in her chair.

"No, it doesn't mean that. I couldn't marry Tom Courtney, Helen, if it was save my life or his."

"I'm so glad to hear you speak so decidedly, because, honestly, I've felt a little afraid. There are no lengths to which a woman like you will not go in pursuit of a mistaken idea of duty."

Jane laughed a little ruefully.

"When it comes to marrying a man oneself, Helen, it makes a little difference. It is a pity, I think, that this sort of thing should intrude everywhere. Why, it interferes with one's proper work. I haven't patience with it."

"Has Courtney taken to stopping in the house, then, to talk to you?" inquired Helen a little amusedly.

"He would do it if he got the smallest encouragement," replied Jane, truthfully enough. "I shall be very sorry if he says anything which would make it difficult or impossible for me to stop on, because I'm really quite happy there, and I love the children dearly. Ann Coyne's niece is a great success as a daily governess, and I think Tom might do worse than ask her to become resident. I've suggested it to him. It would make it more comfortable for me, just at present at least, if there were a third party."

"Yes, it would. I should insist on it, if I were you. A woman like you could easily get your own way in a small matter like that."

"Helen, don't tell Claude about this. It would make me feel so silly, and I should not like to lose his respect."

"Lose his respect, you foolish woman! Why, you would gain more of it. Men are like that, I assure you. It would be excellent for Claude if you had a great many suitors."

"I shall never have that," replied

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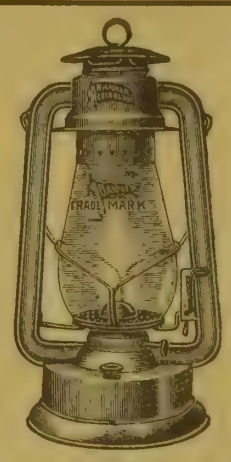

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Write to-day Dept D

Jane, quite literally and soberly. "And, of course, it is only because Tom is grateful to me, and because he feels lonely, and I have tried to take an interest in him, especially about the drink. He hasn't really touched a drop for over two months."

"That's quite a triumph."

"And it has made such a difference to him as a man. I often think of poor Emmy, and how happy she might have been if he had pulled himself up in her lifetime. He very rarely has these bursts of temper now. Upon my word, if you saw him in one you would compare him to nothing but a hysterical child. The last time it happened it was at one of the maids, over quite a trifle, and I spoke up sharply, and said I could not go on managing his house if he were to upset everything like that."

"Oh, you have been excellent for Tom Courtney all round! I can see that, Jane. But please, please don't end in marrying him. Claude and I should both hate it. I shall come over and abduct you whenever I think there is the remotest chance of your relenting."

"I shan't relent on that head, Helen, so you needn't make abduction arrangements. I'm glad to say all the legal part of the farm business has been settled up quite amicably, and the new lease signed. Sir Anthony offered to sell him the land, on very advantageous terms, but I'm afraid so much drink has killed any ambitions in that direction Tom might ever have cherished. Sir Anthony comes about the Court a great deal; he is always riding over on some pretext or other, and he takes the greatest possible interest in Tom. I'm sure he has helped more than anybody to keep him straight."

Helen's eyes danced a little.

"So Sir Anthony comes to the Court often, does he? Does he always see Tom?"

"Oh, not always, but he comes in and sits a little, talking so pleasantly to me. One quite forgets who he is. I think it such a blessing for Mardocks and the district that he bought the place. If you had known it in the Graysons' time you would say the same thing."

"I expect Sir Anthony is missing the Duchess."

"I think he is, but he does not think she will come back for another Yorkshire winter. It tried her a good deal. He will go out to Algiers to spend Christmas with her."

"So!"

Helen sat silent, her face very inscrutable, regarding her sister-in-law with a mixture of admiration, humour and affection.

"Jane, do you know you are refreshing, nearly as refreshing as a cool drink on a sultry day; you are so different from every other woman that has ever lived, or that ever will live. Well, Mrs. Hayes has got Audrey engaged at last."

They were quite half an hour discussing the fresh piece of news, which would soon make so much talk in the parish, and Jane returned to her homely duties at the Court Farm helped and cheered as she always felt by a talk with her brother's wife, and quite unconscious of all the undercurrents which were running swiftly towards the whirlpool.

The cloud did not lift from Helen's heart during the intervening days, and she dressed herself for the dinner party at High Ridges on the appointed evening with a very distinct sense of apprehension. She made a careful toilet, dressing herself with her usual taste. Her gown was black, simply fashioned of some soft transparency over a shimmer of satin. It had a square opening at the throat, with a little chemisette of white which did not shame the colour of her neck. A great bunch of warm red damask roses—the last on the tree on the south wall—gave the necessary hint of colour, and were arranged with the clever touch which characterised all Helen's dealings with flowers. She was always an artist there, never committing the mistake of massing or overcrowding, but able to give just the right effect to every bloom. When she came down the stairs with her white gloves in her hand and her cloak of flame-coloured velvet falling back a little from her shoulders, Secretan, waiting for her, came forward with a little gesture of pride.

"My dress is quite right, isn't it, Claude? I don't want to be overdressed, but I haven't much choice. I will take away the flowers if you think it is too pronounced."

His answer was to fold her in his arms without a moment's thought given to the flowers. There were moments when her beauty, even while it enchained him, made him a little afraid. For now that happiness had opened the petals of her heart, Helen was a peerless creature, and the new humility which is ever the accompaniment of a genuine love, had given the finishing touch to a most charming personality.

"I can't think, my darling, how you ever stooped to me," he cried passionately. "You were made for something better than this poor little moorland home."

She answered him with her hand on his lips.

"Treason, treason! This is my kingdom. Let me possess it to my heart's content. I want no other."

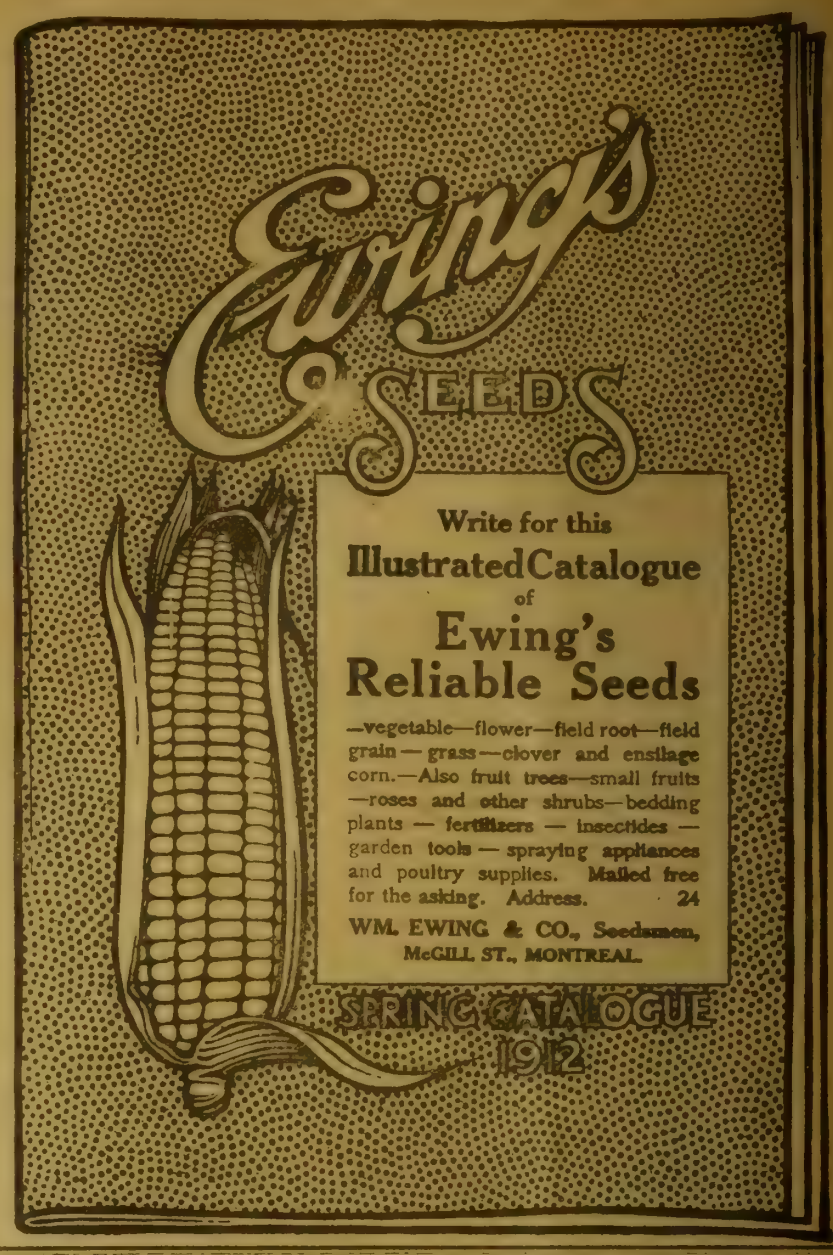
He had never known her more responsive to his love. As they were carried over the moorland road by the swift horses from High Ridges she nestled close to his side, and told him in words which had never been so clear and unrestrained that her heart was wholly his. And when the carriage stopped in the darkness at the door of the great house she turned to him once more.

"Kiss me again, Claude, and tell me that nothing will ever come between us."

When she had received his assurance she was ready to face the ordeal which her heart now more than ever assured her was in front of her.

She was in no way surprised when they entered the spacious drawing-room, and she saw at the far end of the room, standing by Audrey's white figure, a man she knew well—her old lover, Gerald Hunt.

(Continued in next issue).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SPRING CATALOGUE
1912

Odds and Ends.

I wonder if everyone is as glad of new ideas as I am? Every week I find many things in our "Home Department" that are very helpful I have a few I will pass along. They may not be new to many, but woll hope there may be someone to whom they may be helpful.

I find that when baking apple or berry pies, a short piece of macaroni inserted in the vent of top crust will prevent the juice from running out as it will bubble up in macaroni.

If when making jelly it does not "jell" as it should, a pinch of alum helps.

One Monday I had a pair of heavy pants to wash, and not being able to make much impression on them, I happened to thiuk of a scrub

bing brush. I tried it and found it a great help in removing dirt.

When a tablecloth begins to show wear, it will last much longer if one or two inches are cut from one side and ends, as then a different part of cloth falls over edge of table.

If ono's closet room is limited a strip of strong cloth firmly tacked to inside of closet door is a very convenient way for disposing of dress skirts, as they may be pinned by band to strip.

If eggs become stained in nest a bit of cloth wet in vinegar very readily removes all discoloration.

An apple placed in bread jar helps to preserve the moisture of bread; and one placed in jar containing fruit cake or cookies imparts a most delicious flavor to contents.

I have for many years kept hanging in a closet several bags, with openings in front large enough to permit contents to be easily examined. I have one for each member of family, plainly marked with his or her initial in outline. In each I keep rolls of pieces like garment then being worn. Besides these I have one each for white goods and colored linings, etc. When a garment needs mending, I know exactly where the pieces needed are and so am saved the trouble of hunting for them.—Farmer's Wife, Maine Farmer.

Does Your Husband Need this Lesson.

A farmer's wife was tired all the time, when she got up and when she went to bed. Everything worried her; she scolded the children and her husband, and then cried because she had scolded. She couldn't remember what she read: even the minister's sermons were but a string of words. So her husband took her to the doctor, who examined her as carefully as a machinist examines a fine piece of machinery. "Come and see me at the office" he said to the husband, when he had finished his examinatiou. The husband went. The doctor showd him a card from his filing cabinet on which he had diagnosed the case, as follows: "Mrs. Blank—Age 40, looks 50; complexion sallow; eyes dull; figure stooped: children three; appetite poor (usually eats after family are through), food doesn't nourish; sleep disturbed, looks after children in the night, and gets up from 4 to 6 A. M.; intersts, none outside of home, has no diversions in home. Worries—Children are growing away from her, think her dowdy and old-fashioned; husband wonders why she doesn't look as yonug as her older unmarried sister. Disappointments—Has no way of getting away from home; would like to join neighborhood club; rats destroy chickens; pigs and chickens destroyed flower beds. Remarks—Fine women being spoiled for lack of cultivation; good start for case of melancholia. No organic trouble. Worn out."

"Well?" queried the husband.

"What'd you put up that silo for?" asked the doctor. "To get good feed in convenient form for winter eh? How about the manure spreader? To save work and get plant food to the ground in good condition, you say? I suppose you use your cultivator to put the ground in shape for feeding the plant? Looks as if you put lots of time and money getting food to your ground and cattle. Did you ever think of the food your wife gets?"

He confessed he hadn't, but the doctor had and told him so. "It's bad for the digestion to eat what's left when everyone is through," advised the doctor. "Couldn't you take a little more time at the table and eat with her?"

"I saw you taking down some machinery today; what were you oiling it for? So it wouldn't rust and get out of running order! That's right; take care of your tools; but, say, did you ever think what a fine piece of machinery the body is? It would be worth a lot to you if you'd keep your wife in as good running order as your machinery. Yes, I know you work hard, and there's lots of work to be done, but you don't expect a two-horse engine to do the work of a four-horse, even in a besy season, do you? you'd find some way out of putting a mare with a colt in the harness too early, even in harvest, wouldn't you? your wife has worked too hard and brought you a fine family, besides.

"What were you doing with that trotting colt the other day? Trying to get the best you could out of him by good feed and careful grooming and housing? Did you ever try to get the best possibilities of living out of your wife? Have you helped her cultivate the faculties God gave her making a home and being a mother?

When she married you she was a musician. Did you tell her you wanted her to keep that talent in wroking order to make life sweeter for you both? She loves beauty. Did you ever stop with her to enjoy the beauty of the sunset or the smell and sight of wild flowers? Have you made her a flower garden, and fenced out the pigs and chickens?

"You hate to see your machinery exposed to the weather or a good tool dulled. Have you sheltered your wife from unnecessary exposure; have you by your indifference to them, dulled her senses to the finest expressions of life—the subtle charm of childhood, nature, art and music.

"You want your wife to look neat. Did you ever think you don't look overly neat yourself sometimes when you sit at the table in your overalls, and perhaps keep on the boots you wore around the barnyard?

"Your wife wants to go to church and visit the neighbors. Have you provided her with a driving horse? If you haven't done all these things, you had better. Your wife is worn out; she has tried her best, but she hasn't had enough to look forward to. Women must have some purpose to lift them out of the grim farm life, or they break down. Study your wife, make more of her, and she'll get well; otherwise, I won't answer for the consequences."

In after years the formerly worn-out women told how a loving husband, garden fence, a flower garden and a driving horse saved her from a sick spell; her husband told how a three-dollar doctor bill saved him a million-dollar wife.—Ex.

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and he uses every sort of housekeeping convenience used by his city cousin. Moreover, he generally owns his house and so equips it permanently. He can and does buy better grades of merchandise for this very reason. When he buys a piece of furniture there is no thought of buying cheap "because it may not fit in the next flat."

When he buys a stove, he does not want one that will do for a year or two only "because the next house may have one installed," or have no room for a range of good size.

He wants a stove that will last him for years and which will not keep him sending to town everyfew months for repairs. He wants one that is modern and up-to-date—and yet a reliable range, not a faddy one. In short, he wants an—

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Why is Mortality Greater in Winter than in Summer?

Why is it that the death rate in winter is from ten to forty per cent higher than in summer in spite of the fact that cold air is a tonic and therefore should be a season of vigor? Winter is generally known as the season of sickness and the majority of people guard themselves against it by practically hermetically sealing their nouses.

NO FRESH AIR.

Double windows, furnished with slits a few inches long supply all the ventilation and the furnace is kept going night and day, the dry heat absorbing the necessary moisture of the air. Delicate women and children go on breathing the same air day after day and by the time spring comes they complain of languor and of being tired out after the long winter. Is it any wonder that it is so?

A POISONED ATMOSPHERE.

Air that has been breathed over and over again becomes really poison. It affects digestion harmfully and destroys the health-giving properties of our blood. But as the impurities cannot be seen we go on, with unconcern, breathing in what is really filth. Houses stuffy with used-up air and the smell of cooking, cars reeking with foul air, churches and stores in the same condition, is it any wonder we feel used up when spring comes.

THE INDIAN EXAMPLE.

As an example of the effect of closed houses, take the American Indians. They have given up living in wigwams and have been provided with tight frame houses. Now 60 per cent. of the children of these Indians are tubercular and half of these reaching maturity die of consumption. The closed house did it.

SAME WITH ANIMALS.

Even with animals the closed house is equally harmful. Seven years ago the authorities of the Zoo in Chicago left four of their monkeys out of doors during the winter. Up to that time they had been buying fifty a year to replace those that died. No one thought that a monkey could live out of doors in a climate such as that of Chicago, but it was tried as an experiment and to the surprise of everyone they not only lived but throve. Now the monkeys live out of doors the year round and seldom die except from old age. Formerly autopsies were held and about one every fortnight died of tuberculosis.

"Warm, dry air says Dr. Watt, makes children dull as well as ill. It causes headache, stupidity, bad temper." A child's body is affected by it in the same way as lack of moisture affects a plant, and if continued long enough makes him a weakling and robs him of his chance in life.

THE MOISTURE NEEDED.

The proper degree of moisture in a house should be from 40 to 70 degrees. In the school rooms sometimes falls as low as ten degrees. The lowest relative humidity found to exist on the earth is 28 degrees,and in this kind of air it was found impossible for plants and animals to exist, "and yet" says Dr. Watt, "they try to teach children in an atmosphere that is three times as dry as that which killed the hardest cactus that God ever planted on His footstool.

OPEN THE WINDOWS.

Charity begins at home. Let us always be sure that the air is fresh and sweet, and kept so by opening the windows wide at frequent intervals. The best way to get good air is to have the room warm and to let outdoors indoors—to open the windows top and bottom whenever the room is empty and keep it so until everything is fresh again.

False Ideas About Bathing.

In many homes there is a mistaken idea that if any member of the family is suffering from the effects of a cold, bathing is very injurious. In some homes children are not bathed for three or four weeks at a time in midwinter, because there is grave fear that the operation will result in disaster.

Often the undergarments are not removed for several weeks for the same reason, and every precaution resulting from this wrong impression is taken to keep the little folks healthy. And often grown people are under the same restrictions, so that the air of closely shut houses—and that class of people fear fresh air as much as water in winter—is far from pleasant to noses used to fresh oderless atmosphere.

CLEANLINESS VS. DISEASE.

It may take some time for the idea that cleanliness keeps away disease, instead of inviting it, to penetrate the minds of these persons, but in the end it is bound to come. The closely shut house is a survival of the old draughty houses, when no matter how many cracks were closed there was still plenty of fresh air in the rooms, and the no-bathing comes from the same period. No doubt it was a perilous proceeding to bathe a croupy child in a log house before a fireplace that scorched the face and chilled the back, but nowadays in comfortable homes the danger is that we will not have enough air and cleanliness.

The first thing a trained nurse does in taking charge of a patient is to administer a warm, refreshing bath, and get the tired body into fresh, sweet garments; so it is easy to take that lesson without paying a nurse for the information. A tired, fretful, sickly litile invalid will fall into sweet, refreshing sleep after a warm bath, and be ten times more able to throw off disease than if permitted to go unwashed for fear of harm.

BATHE AT BEDTIME.

The bathing should always be done at bedtime with plenty of hot, soapy water in a warm room, and then the person should go to bed at once. In our comfortable, well warmed homes of the present, winter bathing is almost as enjoyable as summer bathing, and certainly more necessary, for in summer perspiratisn and friction help rid the skin of its poisons, while in winter the heavy garments retard Nature's work.

By all means get away from the false notion that cleanliness is all right in summer and dangerous in winter. It is all right all the time and highly necesssary to health and comfort.—Indian Farmer.

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Child and Visitor.

How the visitor is to be received by the child of the house is one of the most telling points in the code of juvenile manners, for any rudeness or roughness at such a time is disagreeable for the caller, says Baltimore American. It is correct to teach the child that hospitality is one of the most exquisite of qualities, and that, therefore, the little lady and gentleman ahould show their most gracious manner when receiving the visitor. The children must not run in a band to the door when the bell rings, for if there is no maid, one child can open the door. The child gives the caller her first greeting. "How do you do Mrs. Blank" and she must reply, when asked as to her health, "I am very well, I thank you" or say the opposite in a manner equally polite. Mrs. Blank is then asked, with the same pleased manner, to walk into the parlor, where, if the mother must be called,a polite "Excuse me, please, and I will get mamma." must be given before the temporary hostess leaves the room. If the mother is out, Mrs. Blank may be asked if she would like a glass of water, or maybe lemonade—if the child knows how to make it—

and then the little miss sits down and does her best to entertain the visitor, who may want to wait until the mother returns.

But if the mother is at home, the little girl who opens the door must not foist her company upon the caller unless she is invited to do so. And when there, she must answer simply, wait until she is spoken to, and refrain from keeping her eyes glued too tightly on the visitor's countenance. If she stays out of the room entirely, it is her place to see that the visit is not interrupted with childish complaints of any sort. These little warnings are by no means unneeded, for the child nuisance has spoiled many a visit, and no conduct receives such scathing criticisn as that of the unpleasant child who makes itself a nuisance during a brief call.—Ex.

Eggs for Children.

Eggs prepared in the following way are excellent for children and invalids:

POACHED EGGS.

Never boil a poached egg. Have ready the boiling water and slip egg carefully into it. Draw the pan to a safe place where egg will slowly turn to a white jelly with the yolk perfectly soft. Serve at once on a square of toast. Tough poached eggs that have been boiled are just as difficult to digest as fried ones.

EGGS IN BROTH.

Have the beef broth very hot and stir into it a well beaten fresh egg. Serve at once. Do not cook too long; a minute or two in the liquid close to boiling point will do.

SOFT BOILED EGGS.

Into boiling water put the eggs and set them aside in a safe place at once. Allow them to stand four minutes and then serve at once in a hot cup. Never boil an egg for an invalid.

BAKED EGGS.

Break the eggs into a granite pan; then gently pour over them a hot white sauce, made by heating together one tablespoonful of flour and a little cold milk. Have ready some boiling milk (one-third of a pint for two eggs) and into it stir the thickening. Season and add a teaspoon of butter. Pour the hot sauce over the eggs and set them in an oven until they are of the consistency of poached eggs. Serve with thin bread and butter.

Different Methods of Washing.

It is astonishing the number of methods there are of washing clothes. If the subject comes up, you will find a woman ready to detail all her procedure, ending up almost certainly with the remark—"And you won't find whiter clothes than mine anywhere." One pins her faith to the dissolving powers of ammonia, another of paraffin; one sticks to Sunlight, another tries in turn all the new soaps; different soap-powders all have their clients; one woman thinks it the easiest plan to steep the clothes with soap and powder, and let them "wash themselves"; another pops them dry straight into the boiler, and counts that her washing day is shorter than her neighbour's, and her table-linen whiter. There is no regson why any woman should change her method for another, unless it promises a shorter process and less work—and the two go together. The hardest and most tedious way of all is to rub and scrub the dirt out—that is still practically the way of the ordinary washerwoman. The mistress who superintends her own wash strives to find out the quickest and surest way of dissolving the dirt out of her clothes.

Don't let repairs eat up your profits

Whether they represent actual cash outlay, or only the time of yourself and your help, repairs are *waste* just the same. When you make an improvement—no matter how small its cost may be—let it be *permanent*. Then it is a real investment, something on which you can realize in *cash* should you decide to sell your property; and something that will pay you constant dividends in convenience, sightliness and comfort as long as the farm remains your own.

Concrete Improvements Are Permanent

They last as long as the very hills themselves. They do not require experts to build them. Their first cost, in most cases, is no more than for inferior materials.

Aren't you interested in the subject of permanent, modern farm improvements?

Then write for the book that describes hundreds of them—

"WHAT THE FARMER CAN DO WITH CONCRETE"

It isn't a Catalogue. Every one of its 160 handsomely illustrated pages is interesting and instructive. They tell how to mix concrete, how to place it, what can be done with it. The book was printed to sell for 50 cents, but we have a copy for you, free.

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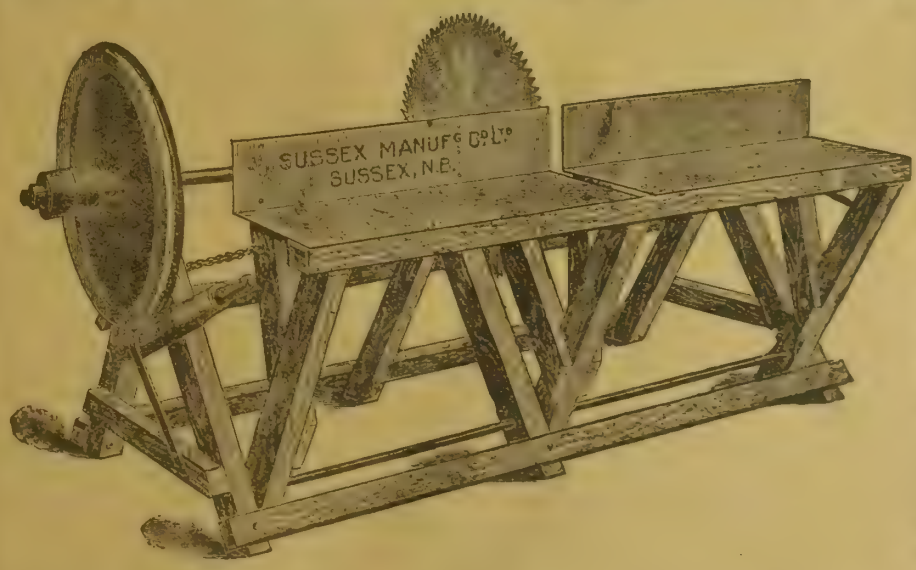
Wood Cutters Made in Three Sizes.



We make the best Wood Cutter on the market. The length of table on our Long Swing is 8 feet, 3 inches; distance between balance wheel and saw 4 feet, 3 inches. Heavy substantial frame and well braced. Steel plate table.

Length of table on Flat Rolling Machine is 8 feet, 3 inches; distance between balance wheel and saw 4 feet 3 inches. The table of this machine moves on grooved rollers and vd. track, which holds the table in position, making it move very easily to and from the saw.

Our Short Swing is built on the same principles as the Long Swing, the arbor and frame is shorter; length of frame 4 feet, 3 inches; distance between balance wheel and saw 3 feet. 6 inches.

On all our machines the arbor is the same size, made of the best turned steel and runs in bearings of the best babbitt. The balance wheel is a solid web and weighs 180 pounds.

We have a large number in stock and can ship promptly. All enquiries will have prompt attention.

The Sussex Manufacturing Company, Ltd., Sussex, N.B.

Had Palpitation of the Heart

Weakness and Choking Spells.

When the heart begins to beat irregularly, palpitate and throb, beats fast for a time, then so slow as to seem almost to stop, it causes great anxiety and alarm. When the heart does this many people are kept in a state of morbid fear of death, and become weak, worn and miserable.

To all such sufferers Milburn's Heart and Nerve Pills will give prompt and permanent relief.

Mrs. John J. Downey, New Glasgow, N.S., writes:—"Just a few lines to let you know what your Milburn's Heart and Nerve Pills have done for me. I was troubled with weakness and palpitation of the heart, would have severe choking spells, and could scarcely lie down at all. I tried many remedies, but got none to answer my case like your Pills. I can recommend them highly to all having heart or nerve troubles."

Price 50 cents per box, or 3 boxes for $1.25. For sale at all dealers or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Soup Making

For the family that is fond of soup, but whose palates are tired of the ordinary vegetable soup, these suggestions may prove of interest:

Puree of Tomato—Boil and mash in two quarts of water four large white potatoes, one small cooked onion; press through a sieve and return to the fire to cook. Add salt and pepper to suit; then pour gradually into another saucepan where three tablespoonfuls of butter have been mixed with three of flour, as for tomato cream soup; stir until creamy then add one cupful of hot cream and serve. If an onion is not at hand and there is a bundle of chives or a bunch of parsley, mince some of these herbs and sprinkle into the soup after pouring it into the tureen As some flours thicken more than others, the cream soups and purees must be diluted to form the consistency which the family likes best.

Swiss Soup—Pare and slice one turnip if large, two if small; cut into very thin slices and cook in salted water until tender enough to press through a sieve. Add the puree to a thickened milk soup, and when serving, sprinkle over the top a tablespoonful of rich American cheese.

A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 809, Windsor, Ont.

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Personal attention given to sales of utter, Eggs, Hogs, Beef, Poultry, Fruit. Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.

TELEPHONE 906.

Tomato Soup—Place one level tablespoonful of butter in a saucepan, and when it bubbles, stir in one rounding tablespoonful of flour and mix to a smooth paste; then pour in gradually, while stirring constantly, two cupfuls of strained tomato and two cupfuls of boiling water, to which has been added a teaspoonful of beef extract, stirred until dissolved. Cook for not less than ten minutes, which will prevent any taste of raw flour; add salt and pepper to suit, and then serve. If the taste of onion is liked' a small one may be sliced and browned in the butter before adding the flour.

Tomato Cream Soup—Place a pint of milk in a double boiler, and when it is scalding hot, stir into a saucepan into which has been melted two tablespoonfuls of butter and two level tablespoofuls ot flour smoothed to a paste; cook until the milk is creamy, then return to the double boiler to cook until the mixture coats the spoon instead of running off; then add two cupfuls of strained, cooked tomato. Salt and pepper to suit.

Baked Bean Soup—Press enough baked beans through a sieve to measure one pint, then add one quart of hot milk. Fry a medium-sized onion, peeled and sliced, in a little butter until it is tender, but not browned; then add to the soup and cook for ten minutes counting from the time it is hot. Serve with small cubes of stale bread browned in hot butter.

Carrot Soup—After scraping, cook one large or two small sized carrots until tender, cutting them into slices to do the work quickly. Press the vegetable through a sieve and add this pulp to a quart of milk thickened as given above.

More Courtship After Marriage

Some men seem to consider their marriage certificate as a sort of paid-up policy of happiness. They act as if the courtship days were those of paying premiums of compliment, cheerfulness, courtesy, consideration and chivalry, and that marriage cuts all of these premiums of lover-like attention. The only way to get an absolutely guaranteed insurance on matrimony is to keep paying the premiums. Many first-class matrimonial policies lapse just because of these suspended payments.

There is a tendency to assume that this love is known and recognized, so why speak of it? This is a dangerous taking for granted of what should be made real, pulsing and vital in thought, word and deed. There is little danger of over telling this story; it is often the wine of life and inspiration to one hungering and thirsting for the little tendernesses of affection. There are more people on this great, big, rolling earth hungering for sweetness, tenderness, and words of appreciation, genial confidence and generous affection than are starving for bread. With husband and wife these delicate messengers of affection cost so little—sometimes only a thought, but it is the thought that is all.

Continued courtship after marriage preserves the lover in the husband and the sweetheart in the wife. But courtship is not solitaire; like a quarrel, it requires two to make

it a success. It is not the wife alone who needs the gracious sweetness of concentrated comradeship, for husbands who are built on the right lines have the same hunger for loving kindness and kindly loving.

Courtship is a vessel of promise that is often wrecked on the shoals of matrimony. Courtship means two mates without a captain; marriage sometimes becomes two captains without a mate.

The Bedroom

If your bedroom and sitting room is one and the same apartment, and you do not wish your bed to appear for what it is, get a regular bedstead with four solid metal legs, good springs and a good matress. To cover it in the day time, get cretonne or some other goods that will harmonize with your other furniture, make a covering exactly the size of the bed, enveloping the head and foot with fitted pieces of the material, This will make the bed look like a big settle in the daytime.

Be sure that your bedclothes are thoroughly aired and your nightgown as well and if for sone reason the bed must be made up at once after getting up in the morning, put the outer covering over it, having removed the sheets to give them a chance to air at the window. Fold them up in the daytime to be replaced at night in the regular way.

Household Suggestions.

For gloss, kid shoes that have become sunburned and parched, cold cream off the dressing table will prove a restorer.

Varnish the linoleum on kitchen, bathroom and hall floors to insure its lasting qualities. The varnish should be thoroughly dried before the floor is stepped on.

Cut newspaper sheets into four pieces, put astring through one corner and hang near the sink. If a sheet of paper is placed under any cooking utensils that are set in the sink after being taken off the stove, much scrubbing and cleaning will be saved.

To set the color in cotton dresses that are to be washed, dissolve three gils of salt in four quarts of hot water, put the material in while the water is hot and let it remain until cold. In this way the colors are rendered permanent and will not fade in the washing.

A new feature in the way of table appointments that is decidedly practical is the asbestos spread. These covers take the place of the old-fashioned silence cloth of flannel and are much more sensible, as they may be bought in sections that are folded up when put away.

Belcher's Farmers' Almanac.

We have received a copy of the 1912 Belcher's Farmers' Almanac for the Maritime Provinces. As usual its make-up presents a high standard of excellence and contains a fund of information on a great many subjects. As a ready reference book it should have a place in the library of every progressive farmer in Maritime Canada. A copy may be procured by sending your name and address accompanied by 25 cents to the McAlpine Publishing Co., Ltd., Halifax, N. S. The Almanac is well worth the money.

FREE $100.00

WIN A PRIZE

8	21	14	4	18	5	4
4	15	12	12	1	18	19
7	9	22	5	14		
1	23	1	25			

WIN A PRIZE

GIVEN AWAY

And many other Prizes according to the simple Conditions of the Contest (which will be sent).

Each one of the above four lines of figures spells a word. This most interesting puzzle can be solved with a little study, as follows: There are twenty-six letters in the alphabet, and we have used figures in spelling the four words instead of letters. Letter A is number 1, B number 2, C number 3, etc., throughout the alphabet.

USE YOUR BRAINS. Try and make out the four words. **ACT QUICKLY.** This is a chance for clever persons to win **Cash** and other **Prizes** with a little effort. Write the four words, with your name and address, neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. **Act Promptly.**

DOMINION PREMIUM CO. 210 St. James St. (Dept. 91a MONTREAL

FLORICULTURE.

H. B. A., St. John, writes:—In making some changes to my house this fall, three large Honeysuckle plants had to be removed and, as the ground was partly frozen, very little roots were left on the stalks. Should the stalks be pruned, and to what extent? Would you kindly give me the botanical name of the Calla Lily?

By all means prune the top of the vines severely, if roots have been partly destroyed. If one half the roots have been removed prune off three-quarters of the top. The botanical name of the Common Calla Lily is Arnm aethiopicum.

Carlton, N. S., Correspondent, writes:—What is the best sort of shrub for a small lawn, one that will not grow too large and that will not require much attention? How is a plant called the Sultana grown? I mean whether from seeds or slip and will they stand frost?

Probably the best all round hardy blooming shrub is the Hyderangea paniculata but of course the nature of the soil and situation, as regards sunlight, etc., should be considered, in planting shrubbing of all kinds and of which you omitted to give any information. But, probably the Hyderangea would give the most satisfaction under the most varied conditions. By "Sultana" I presume is meant that free blooming plant the Impaticus Sultani. It is grown from both seeds and cuttings and while presenting much the appearance of the Balsam, as regards its wood, it is as easily grown as a Geranium but unlike the Geranium it likes plenty of water.

Mrs. S. H. A., St. John, writes:—I have several rose bushes in my garden that were neglected last fall and were not given any protection so that the tops now seem all brown and dead. Do you think they will grow again from the roots and should the tops be cut off? If so, when should they be given fertilizer? I omitted to state that they were English budded roses and bloomed profusely last season.

If the stalks are killed back to the bud the sprouts that will come up next spring will be worthless, being almost sure to be from the wild rose stalk. If, however, they break above the bud they will be all right and all shoots below the bud should be nipped off. Do not prune until you find out how much is dead, which will not be for some weeks yet. A little well-rotted manure is the best fertilizer and should be spaded in around the plant.

H. P., of St. John, writes:—Kindly give me some idea of the best way to prepare a flower bed. I want to know in time so I can order my shrubs, roses and plants. The soil is rich, being at one time an old garden in which vegetables grew luxuriously. It is now a mass of grass and weeds and there is considerable Burdock growing in it. How shall I get rid of the latter? It is a sunny spot and sheltered from the winds. Would I require any fertilizer and if so what sort? Would super-phosphate do?

Dig up the sod and weeds thoroughly shaking out all soil and cart them away. You will have to dig down deep for the Burdock roots but try and get as much out as possible. Form the soil into beds the size you desire, raising them about three or four inches. From what you say about the growth of vegetables the beds might do witnout manure. Don't use super-phosphate. If you can get some well rotted manure you should use some of that but if not better wait until next seasan. You will probably have a crop of seedling Burdocks all summer intermittingly but by pulling them up as soon as they appear you will conquer them all right.

A Correspondent, writes:—I had a fine bed of Hyacinths that came up nicely, buds well formed and healthy but to my surprise I found them all wilted and, in some cases, rotted off. When I looked at them the first of the week the foliage was all right and the buds that were opening but the new ones, about two inches high, are all destroyed. There is no sign of a worm or insect. What was the cause?

Please tell me what to plant in a shady place as I am anxious to get my young seedlings started as early as I can?

The heavy frost of that Sunday probably was too much for the tender bulbs. I do not remember such a heavy frost so late in the spring. With us it killed our Dielytra spectabilis which I never saw done before. Several cases of Hyacinths being frozen as you describe came to my notice that spring.

Plant Pansies, Fuchsias, Tuberous Rooted Begonias, Lobelia Daisies, Forget-me-not, seeds and slips, the first of March for very early ones, in the home. The Tuberous Rooted Begonias are the finest flowering plants I know of for a shady spot. They bloom freely from frost to frost, with beautiful foliage and the tuber is better another year.

Manure Memo.

Quite often we are asked by farmers, agriculturists and theorists, if we are not manure cranks, "humus cranks," some express it. We do not shy at the word "crank" for we have discovered that it is used as a word synonymous with "enthusiast" "believer-in" and is in no way, manner or form in the caregory of fighting language. Our answer to the question is always the same, boiled down it is—"we are humus cranks," because practical experience of several thousand years has proven it to be the one absolutely reliable, always the same, never-failing friend to growing plants of every description. Back comes another question nine times out of ten,—"Do you know of any others who have found manure a good thing?" Of course the answer to this question when time is plenty, if put in print would look like the directory of a big city for it would contain the name of every successful grower. Being rather limited as to space we will have to sort out a bit and simply use a few items, instances and individuals.

Down in Maryland, we have a friend who pays $2.90 a ton for manure on the railroad tracks. He spends thousands of dollars annually for manure and gladly hauls and spreads it. He is the most successful grower in his district.

In Massachusetts we have a friend who pays from $3.50 to $5.00 per t n. on the railroad tracks. He knows no tough years, the worst drought has not caused him to lose a crop and his bank account is proof positive that the use of manure is a glorious financial success.

We have a friend on Long Island who does not find time to handle his manure during the Summer when he can get it from 90c. to $1.00 per ton. He waits till Fall, when the crops are all in and finds it pays him well to buy it for $1.85 per ton.

Prof. Watts, of the Pennsylvania State College is a double-barrelled agriculturist. He has made good at the practical end of it, and he is everlastingly making good at the theoretical end. He is the ideal agriculturist; he is not addicted to hobbyisms and consequently does not let good things get away simply because they don't jibe with some pet mathematical combination. He is not working to prove that x equals y. Here's a quotation or two from him:

"Manure is the best of fertilizers for vegetable growing, because if used in large quantities the supply of

The Best Built Roller

Is the "Bissell," with DRUMS of heavy steel plate, hard in temper, riveted up close, having pressed steel heads.

With AXLES of 2 inch solid steel revolving on cold rolled Roller Bearings.

With the MALLEABLE CAGE in one piece, holding the Roller Bearings in line on the axle.

With DRAW BRACKET under the Pole, making the draught down low.

With the FRAME all of steel and the improved steel plate bottom.

You may be told that other Rollers are like the Bissell—but there is only one original Bissell Roller and to save our customers disappointment, we put our name on every Roller we build. Look for the name "Bissell" and ask Dept M for catalogue describing the "Best Built Roller."

Several styles and a variety of widths to choose from, 6 ft. up to 12 ft. Grass Seeder Attachment also furnished if required. 65

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STEELE, BRIGGS
CLOVER AND GRASS SEEDS

THE KING OF ALL SEEDS
"LION"
RED CLOVER
SUREST - PUREST
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AND
"ERMINE"
TIMOTHY

These two brands embody the best values produced in seeds. Ask your merchant for these brands; he'll have them, or send for them.

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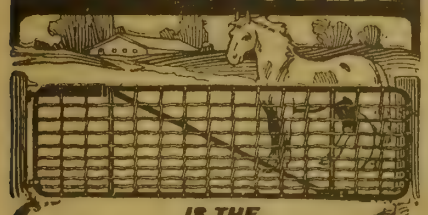
THE GATE THAT SERVES YOU BEST



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Peerless Extra Long Extra Strong Gate

Gates should no longer be looked upon as mere holes in the fence where a bar or any makeshift of an obstruction sufficient to keep the stock will do. **A good gate is as essential as a good fence.**

Insecure gates are a menance to the lives of stock and crops and should be promptly replaced with **Peerless Wire Mesh Gates.**

These gates are built of the best materials. Have a frame-work of extra heavy pipe filled with the very best grade of wire mesh. The frames are electrically welded and are air tight so no water can get in and rust out. They are braced with one diagonal and a short horizontal brace and two vertical ones, thus making a very strong rigid gate which will not sag.

The frame and mesh is heavily galvanized and will not chip, flake or rust.

Peerless Gates are strong, durable and satisfactory, will look best, wear best, and serve you best. We especially recommend their use with **Peerless Wire Fencing.**

Write for our Catalogue

We also manufacture a large and reliable line of farm and poultry fencing, walk and ornamental gates and fencing.

Agents almost everywhere.

Want live agents in unoccupied territory

Banwell-Hoxie Wire Fence Co.

Winnipeg, Man. Hamilton, Ont.

humus is maintained and it is then possible to follow an intensive system of annual cropping. Manure keeps the soil loose and friable retains moisture, furnishes plant food, provides favorable conditions for nitrifying bacteria. An application of 50 tons per acre is a large one, but even larger amounts are sometimes used. It is a fact that those who use manure most freely are apparently the most prosperous."—L. I. Agronomist.

Making a Hotbed.

For those who wish to start their vegetables early, the hotbed, which is merely a nursery for the tender plants until they are ready to take care of themselves in the outdoor climate, is of practical value. There is little work and expense to making a hotbed that any person may operate successfully with a little experience.

Manure is usually the heat supplier in the ordinary hotbed, though if hot water or steam pipes can be connected for more extensive work without too much extra cost it is an excellent source of the bottom heat for the hotbed. Early radishes and lettuce may be grown entirely under glass, getting a crop an the table before the ordinary garden crop is in the ground.

The manure that goes into the hotbed should be of uniform age, horse manure from a livery stable being the best source as a large supply of manure that is of practically the same age can be obtained. This manure should be about half straw or litter. Too much straw allows the heat to escape too fast, while manure having too little straw packs down soggy and "burns out" without getting the heat up to the plants.

To get the manure started to ferment, pile it in a long pile 4 to 6 feet deep, and under cover if possible. If the weather is too cold the manure will be slow in starting to ferment and may have to be started with a little warm water. When it gets to fermenting it is highly essential that it ferment evenly and it will be necessary to mix it from four to six times during this process, being careful to break up all chunks. When it is steaming uniformly it can be placed in the pit of the hotbed and covered with the layer of earthin which the plants are to be grown.

A layer of one to two inches of some coarse material should be spread evenly over the bottom of the pit before the manure is put in, followed by 12 to 30 inches of manure, a layer of leaf mould or other coarse material to serve as a distributer of the heat, and finally four to five inches of soft garden loam on top.

The manure should be put in in layers of four to eight inches and thoroughly tamped down before the next layer above is put on. This gives a uniform heat. For early starting in cold climates deeper beds are better. The bed will heat up vigorously for a few days at first. A thermometer should be kept under the frame. When this registers about 90 degrees F. tomatoes should be sown. As the heat subsides a bit to 80 to 70 degrees, sow cabbage, lettuce and other cool plants. The frame should be kept tightly closed the first week, no matter what the weather outdoors. When the plants come up, however, it will be necessary to watch them closely. Water in the morning and raise the rear of the sash a bit in the middle of the warm, sunny days to keep the plants from getting too hot. The sun's rays come through glass, carrying all their heat no matter how cold it is, remember, and it will get much warmer in midday, under the frame, than [illegible] night, and during cold nights and severe weather it may be necessary to spread carpets or matting over the frames.

Principles of Ice Storage.

In order to keep so perishable a commodity as ice it is necessary in the construction of a storage structure to consider carefully those physical and mechanical principles which underlie its preservation. (1) To keep well, ice must have a minimum of surface exposed to the air or to the packing material. This is most easily accomplished by piling the ice in the form of a cube. A mass of ice 12 by 12 by 12 feet exposes less surface than the same tonnage piled in any form less nearly that of a globe. (2) The keeping of good ice depends upon the completeness of its insulation; whereby it is protected from external influences, such as heat and air. (3) Drainage is important because the lack of it interferes with the insulation. (4) The ice itself must be packed so as to prevent as completely as possible the circulation of air through the mass. The more nearly the mass of ice approaches that of a solid cube, both in shape and texture, the easier, with good drainage and insulation will be the keeping of ice, then, depends upon the shape of the mass, its insulation its drainage, and its solidity.

The Na-Dru-Co. Almanac for 1912.

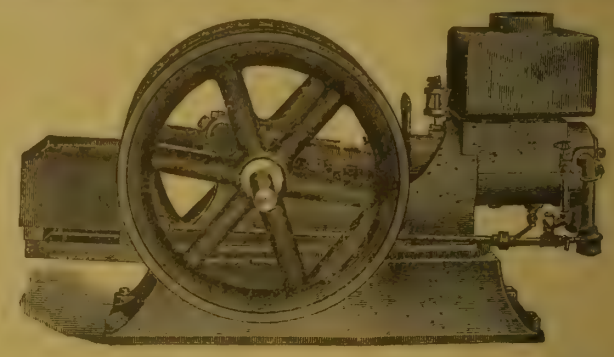
A good almanac is ever welcome. The annual number of the Na-Dru-Co Almanac, the 1912 edition, now out, is if anything more interesting and more useful than its two predecessors.

Besides the usual solar and lunar tables and dates of eclipses, the Na-Dru-Co Almanac gives much information which it would be difficult to find elsewhere. Examples of this are the Map of Altitudes, Time Tables of the World, Figures on Area, Population, Exports and Imports, Records of Canadian Premiers, Governors-General, etc.

Nearly all leading Druggists have copies of the Na-Dru-Co Almanac for their customers, or it may be had by writing the National Drug & Chemical Co., of Canada, Limited Montreal.

Your dear old tea-cup is to carry a keener delight, a new tea joy to your lips! For into tea flavor—the very essence of tea joy—an even richer fullness, a more zestful vigor has been blended. The result is King Cole Tea With your very first sip you marvel that such flavor-improvement could be possible! It tastes so unusually good. And it never varies, year in, year out.

YOU'LL LIKE THE FLAVOR.



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Vegetable Matter in Sandy Soils.

The addition of vegetable matter to sandy soils is very important since it is needed to increase their water holding capacity as well as to add fertility. Water is often the limiting factor in the production of sandy soils, due to their coarse texture and lack of vegetable matter. The average sandy soil contains only one-third to one-half as much fertility as clay loams. Legumes are beneficial to sandy soils, because they supply the much-needed nitrogen as well as humus. Rotations for sandy soils must be chosen, so as to increase the amount of vegetable matter and provide a legume crop to cover the soil at least once in every three years.

The Turkey and What He Can Do For the Woman on the Farm.

(Continued from page 346).

exhibition until I have run him off the place in sheer disgust, when his worthy dams took after him as though anxious to share his disgrace as well as his bad temper.

No it cannot truthfully be said there is anything angelic about a turkey. I have always maintained he shares the character and lovable disposition of the American Indian with whom the Pilgrim Fathers found him affiliated. But as a money making proposition for the farmer's wife that is where he scores. If a woman longs for Haviland China, Cut Glass or perhaps she aspires to a real Oriental Rug, Saruk, Antique, Sehma, Khorassan Joshghan, or the Yambud-Bokharas; it may be she would send the clever son or daughter away to school but lacks the means—well the solution of the problem is within her reach—a word to the wise is sufficient. It is a fact in presenting the turkey as a money maker you may often, among the audience, see an incredulous head shake, but the turkey as a money maker has everything his own way: we all give him our unanimous vote, with the proviso of the faint hearted "If you have good luck and can raise them." One thing in favor of the turkey is the fact that no elaborate outfit is necessary after securing the breeding stock, and one had better get good birds as one can afford of a hardy strain to insure success and good returns from the investment. No farther expense is necessary.

I raised all my turkeys last season in dry goods boxes about 4 x 5 and two feet high, with a roof of tarred paper, that one can buy for a few cents a pound. I cut out a board in one side and substituted wire netting about three inches wide, running the whole width of the box and tacked on securely. This with scrupulous cleanliness made a splendid roosting place for the domestic hen mother and her brood. I confined them rainy days, and they seemed to be very comfortable in these boxes. I did not lose a turkey by drowning last season. Speaking of domestic hen mothers, I have never used a turkey hen to hatch my young birds and never expect to. I sometimes think the turkey father is justified in his treatment of the turkey mother. She is certainly an aggravating bird. Then, another and a very good reason, if a turkey hen is not permitted to set she will lay twice as many eggs, yes two-thirds more. Our motherly old Rhode Island Red hens leave nothing to be desired, as I consider they are reliable and steady as incubators. Now, this brings us to the lice question. The louse indigenous to the turkey, appears to be no serious problem; but let your turkeys come in contact with the domestic hen louse, and you may look out for breakers ahead, as they seem to raise the particular mischief with them. I use the ordinary Dalmatian fly powder on my setting hens without stint, and as often as once a week at least. It is best to be sure that the hen mother is absolutely free from lice at hatching time, and then use the powder hereafter merely as a precautionary measure, and never at night, or any time you think the mother is apt to hover her birds, immediately after dusting, else the powder may get into their eyes from her feathers, and you will have some little blind poults, and excessively unhappy birds.

As the turkey is so much given to passing away swiftly and mysteriously, the desire to preserve their profitable lives until the holidays tempt one to fuss over them altogether more than is good for their health and the future of their children's children as breeding stock. There is not one of the feathered tribe for which domestication has done so little or robbed of so much as the turkey, and in the end the confinement in close stuffy houses in winter or any time in fact, will prove fatal to him. Very few have the courage to treat a turkey as he should be treated; for my part it never rains hard but I find myself nervous and over anxious thinking about them and wishing fervently I could get them all indoors and shut up until the sun gets out again. As they stalk around miserably with every now and then an impatient flirt of their wet feathers, it's not likely they are half so unhappy as they look, or nearly so much concerned as the ones who have so little wit as to put in many bad half hours worrying about them.

Right here I must take up a little eulogy to the memory of a man who bred turkeys, and to my mind raised them as they should be, in a way to add to their value and vigor, rather than detract from it, and rob them of the little vitality that remains to them after the vicissitude of domestication. My first pair came from this flock, a fact for which I am profoundly thankful. The location of his home was greatly to his advantage. It happened to be a large island, with an acreage of about two hundred acres. For something over a hundred years sheep have been raised there, and this man and his people, for several generations, had been engaged in this industry. To my certain knowledge no new blood had been introduced for a long term of years and the flock had never known what it was to be sheltered in a building of any kind. They were never fed in winter, but lived entirely on the sea weed, and the beach at low tide was their feeding ground. By intelligent selection, and the breeding together of the best specimens in his flock, and by mercylessly weeding out undesirable lambs, by a kind of survival of the fittest his flock came to be unsurpassed for size and hardiness. This same principle he applied in later years to his flock of turkeys. My brother, who often visited this island; that always proved a kind of mecca for gunners, since Black Duck and Eider Ducks were nearly always to be had, told me how the turkeys selected their own particular tree, and no difference how the storm whistled or the snow blew about their ears, they merely hopped a few branches nearer the top, and hung on for dear life. I admit this makes me shudder. My heart warms every time to the man who regardeth the life of his beast. But when it comes to practical results I believe this flock of turkeys were among the hardiest ever known. With him a sick turkey was about the same as a set of "sure enough" hen's teeth. The barrels of dressed turkeys he shipped from that island would stagger some breeders who have had flocks afflicted with blackhead and the results of improper feeding, and care of the breeding stock. When this man died, the results of his life long endeavor to improve his sheep and turkeys was scattered abroad; about all the turkeys came to grief on the block. A remnant of the sheep survive, and so it is one generation builds another tears down. Of course about the only means by which one judges the success of an enterprise is the result and even if his methods were open to rather severe criticism, this breeder produced "the goods" every season. One season I remember the price of turkeys soared, because of the cold backward season; there did not seem to be half as many as usual on the market, the price went to thirty cents and even better in some places. A friend in the west was offering a young mule for sale and could not seem to place him. An acquaintance called her up on the 'phone and suggested that she exchange the mule for a turkey. But even in an off season Mr. Cheney turned off a profitable flock. I believe it was because he had pretty nearly reverted to natural conditions, and the health of the flock had improved in proportion. Altogether for a flock of, say ten breeding birds he would scatter perhaps one quart of oats a day, and they eked out a living someway in their wanderings round their island home. But one thing certain he never lost a bird from overfeeding, as a man of our acquaintance, lost half his breeding hens last winter. On opening one, he found the liver of white spots, and he knew he himself was to blame for their death, although he was sure they were getting only enough to sustain life. Truly a turkey is a queer bird.

I believe much of the cooking "Johnny cake" and preparing special mixtures to feed the poults is a great mistake. Up to within a few weeks ago I thought I had blazed a trail among the labyrinth ways of turkey feeding, but on looking over the old files of some poultry journals I found an exceedingly interesting statement from a woman who declares she followed exactly the same method with completo success. This is nothing more or less than plain

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simple rolled oats mixed for the first week or two with hard boiled eggs. One can reduce the eggs gradually until they are getting but one a day, better give it in one feed in the middle of the day. This would be about right for a flock of ten youngsters. I feed three times a day. Don't feed until they gorge themselves, and lie around listless. After a little experience one can soon tell about the right amount. I keep this up until about the sixth week, when all their troubles are practically over, for after the head turns red, the turkey is one of the hardiest birds known, that is if he is given a chance and is not killed by overfeeding.

One thing I have found of greatest importance and applies to turkeys of all ages and conditions, never change the food suddenly. If your turkeys are doing well don't make a change on any account. If this must be done go about it gradually. I begin getting mine from oatmeal to middlings mixed with milk after the sixth week—mixed crumbly, not sloppy. They thrive and do extra well on this. Then, after a bit, as small potatoes can be had for a song in the digging season and for some time after to boil these and mix while hot with middlings, this makes a good feed. It is economical as well as making quite a saving in the feed bill. It is always best to economize a bit if one can in feeding, if it can be done without risking the birds, but this potato-middling mash is a winner if fine birds are any proof of it. I would not be ashamed to compare my flock with any I have seen. They are good sized, well developed with a springly, thoroughly healthy appearance. When I feed them I usually pick up some of the young toms and stroke them, a process that fills them with indignation unspeakable; they seem to take it as a direct thrust at their pride and arrogance.

The question of inbreeding is a salient one. Very few have the courage to breed as did the man of whom I have spoken. There are some who go so far as to introduce new blood into their flock every year. Perhaps a good rule would be to introduce new blood if one's turkeys seem to require it, that is if they are undersized, and seem to lack vigor, and if one does not raise a satisfactory number of young birds. I believe the possibility of only one good turkey hen is seldom realized. I have raised twenty-one birds from a single hen. I had twenty-five hatched, but lost four from trivial accidents, for instance when they were tiny: one wandered into the coop of another, hen mothering a flock of ducks, and the old wretch dealt the little fellow a death blow before I could rescue him. It is hardly worth while to go into a discussion of breeds. The White Holland is a fine bird, the Narragansett as well, but the Mammoth Bronce is "the bird." He is the largest as the standard weight for an adult bird is thirty six pounds. He is a splendid bird and seems to have been especially designed for a money maker on the farm. One can do no better than keep the Mammoth Bronze as he is in every way a thoroughly practical bird, and a very handsome one. With the wonderful metallic sheen of his plumage in the bright sunlight with all his sails set in his comical absurd strut, he's certainly impressive to say the least.

And now by all means let the woman on the farm secure a pair of fine breeding birds and be ready next season to raise turkeys. The weeks and months will slip by and she will find herself possessed of a snug sum of money, all her own, the result of her own industry, and its purchasing power will put her in possession of many little comforts and luxuries, dear to woman and not always within her means. Verily the turkey is a good friend of the woman on the farm.—Sarah E. Moses Smith, Woodward's Cove, Grand Manan, N. B.

The Live Stock Associations.

(Continued from page 343).

sures be taken to insure Dr. Rutherford's further work for the live stock interests of Canada.

That the secretary be authorized to procure record of performance diplomas for bulls as well as for females.

That bulls be admitted for registration after four of their progeny have qualified in the record of performance, each from a different dam.

That where a female has qualified in the record of performance test, that her certificate be returned to record office for enrollment of her record thereon, and in case of a bull qualifying, the number of qualified progeny be also inserted.

That a strong memorial be prepared by the secretary of the society to be sent to the Minister of Agriculture for the various provinces in regard to the payment for milk by the percentage of butter-fat, that legislation be made making this compulsory.

That a grant of $200 be made to the Ayrshire classes at each of the three Winter Fairs at Guelph, Ottawa and Amherst. That if the amount of 50 cents per member paid to the Dominion Cattle Breeders' Association for the Ontario members does not equal $200, that this amount be made up out of the funds of the association and be given to the Ayrshire classes at Guelph Winter Fair.

That the fee for registration to members for bulls under two years of age be $2, and for over two $4 for non-members. That transfer fees to members be fifty cents, and a fee of $5 be charged for every cow or bull that registers in the record of performance test.

The officers for 1912-13 are:—

President, Hector Gordon, Howick, Que.; Vice-President, W. Stewart, Menie; Secretary, W. F. Stephen, Huntingdon, Que.; Directors: Messrs. A. Hume, Menie; J. McKee, Menie; W. Ballantyne, Stratford; A. Kains, Byron; W. Stewart, Menie; A. H. Tremble, Alberta. For the East: R. R. Ness, Howick, Que.; Hon. W. Owens, Montreal; N. Lachapelle, St. Paul l'Ermite, Que.; J. Bryson, Brysonville, Que.; Hector Gordon, Howick, Que.; P. D. McArthur, N. Georgetown, Que.; G. C. P. McIntyre, Sussex, N. B.

THE JERSEY BREEDERS.

Everything is in ship shape in the Jersey Cow circles. 715 registrations were made during the past year and 336 transfers were granted. The membership list numbers 174.

A resolution was passed asking that the services of Dr. Rutherford be still requested for the interests of the live stock future of the Dominion.

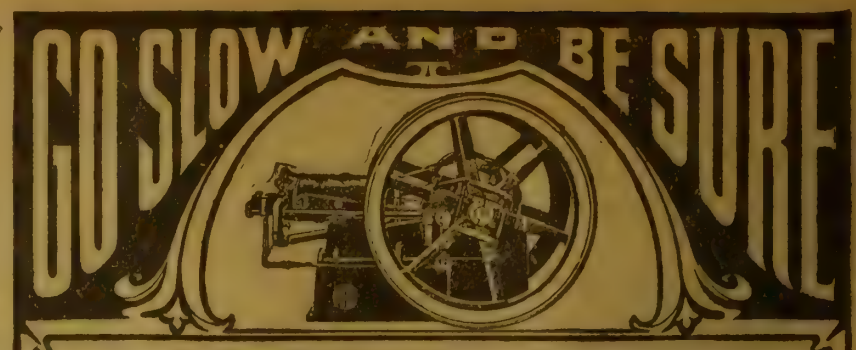
It was suggested that the record of performance test be of a dual character, taking into account the cost of feed and value of manure.

Following are the officers for 1912-13:—

President, D. Duncan, Don, Ont.; Vice-Presidents, D. O. Bull, Toronto, Ont.; T. Porter, Toronto, Ont.; H. W. Edwards, Coaticook, Que.; W. V. Edwards, Souris, Manitoba; H. S. Pipes, Amherst, N. S.; Sec. and Treasurer, R. Reid, Berlin, Ont.; Directors: F. L. Green, Greenwood, Ont.; R. J. Fleming, Toronto, Ont.; S. J. Lyons, Norval, Ont.; B. A. Bull, Brampton, Ont.

THE GUERNSEY BREEDERS.

The Annual Meeting of the Canadian Guernsey Breeders was held in Amherst, N. S. during the Winter Fair; a report of the proceedings appeared in last issue of the Maritime Farmer.



It's wise to decide that you need an engine. But don't spoil your good intentions by buying a cheap one. Don't be blinded by a low price or by wild claims. Go slow and be sure. Buy an engine that has proved its worth, from a concern that has proved its integrity. You can't afford to make a mistake—it's much costlier than the price of an engine.

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are in use on thousands of farms throughout the country, running the many farm machines, such as the cream separator, churn, feed grinder, pump, fanning mill, thresher, washing machine, electric light plant, etc. They guarantee you reliable power for every requirement at a surprisingly small cost.

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Don't you think it would pay you to investigate an I H C engine before you buy any? They are made in so many sizes and styles that you can select just the right size and style for your work: Vertical type—2, 3, 25, and 35-H. P.; horizontal—1 to 50-H. P.; semi-portable—1 to 8-H. P.; portable—1 to 25-H. P.; traction—12 to 45-H. P.; sawing, pumping, spraying, grinding outfits, etc. Built to operate on gas, gasoline, kerosene, distillate, or alcohol—air-cooled or water-cooled. Ask the I H C local dealer for catalogue and all information, or, if you prefer, write nearest branch house.

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I H C Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizers, etc., write to the I H C Service Bureau and learn what our experts and others have found out concerning these subjects.

THE SHORTHORN BREEDERS.

Steady progress and increased interest on the part of the general public marks the past year's work of the Dominion Shorthorn Breeders' Association. A pleasing feature of President Peter White's address was the intimation that the champions at the prominent Canadian fairs are Canadian bred or from sires and dams of Canadian birth.

There has been a great demand during the past year for "farmers' bulls" indicating that Shorthorns still maintain the premier place in the beef classes.

President White also paid a high tribute to the milking Shorthorn and said she was the type of cow the farmer must produce. There was bound to be an increase in the price of good beef and breeders would do well to put their house in orher and be prepared to reap their share of the high prices.

The 1911 receipts amounted to $14,-121.36 of which there is a substantial balance on hand. A grant of $100 goes to the Ha,ifax Exhibition and $50 to the Maritime Winter Fair.

Probably the most important part of the business transacted was the passing of the following resolutions:

That all grants to exhibitions made now and hereafter be upon the following conditions:

That each society or association obtaining a grant shall offer as much prize money (not being in equivalent to a grant from any breed association) for Shorthorn cattle as for any other breed of cattle, and in addition, duplicate the grant made by this association.

This resolution shall not apply to winter fairs. Resolved that the money shall not be paid over until the executive committee are satisfied that each animal (except grades at winter fairs) winning prize money has been recorded in the Dominion Shorthorn Herd Book on or previous to the day of exhibition, and that each is the bona fide property of the exhibitor at the time the prize is won.

That in the event that the whole prize money actually awarded and paid out by the exhibition association for Shorthorns is not equal to or greater than twice the amount granted by this association, the grant of the Shorthorn Breeders' Association shall be made proportionate.

Robert Miller cited this resolution as a basis for making out prize lists. John Bright insisted that transfers be kept up to date. Transfers are the only proof of ownership.

Resolved, also that the Hon. the Minister of Agriculture for the Dominion be requested to introduce at the present session. of Parliament a bill embodying the draft of a new live stock pedigree act, prepared by a representative committee appointed to represent the Canadian breeders, and that each member urge on his representative in the House of Commons the necessity for the passing of such an act.

The following officers were elected: President, Peter White, K. C., Pembroke, Ont.; Delegates to Halifax Exhibition, Messrs. F. L. Fuller, Truro, N. S. and R. S. Starr, Port Williams, N. S.; To St. John Exhibition, Harold Etter, Westmorland Point, N. B. and A. E. Trites, Salisbury, N. B.; To Charlottetown Exhibition, C. C. Gardiner and John Richards; To Maritime Winter Fair, E. E. Crowe and A. E. Trites.

"Real Problem is High Selling Cost, Not That of Living."

"Last year's agricultural products were worth $9,000,000,000 to the farmers. The government used farm values in getting figures for this total. Assuming that the farmers kept one third of the products for their own use, the consumers paid more than $13,000,000,000 for what the producers received $6,000,000,000. The cost of getting the year's products from producers to consumers amounted to the enormous sum of $7,000,000,000. The real problem to deal with is not high cost of living. It is high cost of selling. In the last twenty-five years our agricultural exports have increased 60 per cent. while our commercial exports have increased nearly 400 per cent. This is certainly a bad showing for the farmers.

"The business end of husbandry has been sadly neglected, and that is the chief reason why agricultural growth makes such a poor showing in comparison with other national developments. The farmers of this country, to receive better prices, do not have to experiment with untried theories. They only have to copy what others are doing successfully. For instance, the people of Denmark thirty years ago received $12,000,000 for their butter, eggs and bacon. Then they began organization of market societies. Now the same character of products brings in more than $100,000,000 a year. Nearly all their dairy products are marketed through co-operate creameries, and their egg export societies have 25,000 members. There is no talk of high living in that little country, because they have a system of economical marketing. The farmers there have organized under trust methods.

"Advanced methods in handling the business of the farm are bound to come. What we must realize is the cost of delay. We nave already waited too long. We should now work for prompt improvement in marketing facilities. All well managed creameries properly located are profitable. In most cases the creamery is the first step in co-operation or neighborhood marketing. Co-operation in marketing fruits, vegetables, grain, cotton and other products is just as sure of success when practised under correct business rules.

"It will be urged by some city people that the development of thousands of these farm market places to the limit of their usefulness will result in damage to existing business. This alarm is not warranted. Commerce is always aided and not retarded by labor-saving machinery and reductions in cost of distribution.

"The government should assist in finding a way for better farm marketing. There should be a market bureau of the Agricultural Department devoted to accumulating and distributing information on best methods and best markets for selling. This market department should be broad enough to reach all the farmers of the country. It should give the country the benefit of a thorough investigation of improved selling and marketing systems, including all means of distribution and handling. Results will be immediate.

"Strong business combinations have grown up in our country, in some cases probably too strong for healthful conditions, but they are the result of the work of business men who have taken advantage of their opportunities for organizing their forces and working for a common purpose toward good prices, cutting out useless expenses in distributing their goods to the consumer.

"These strong so-called trust organizations have taught us a lesson of distributian. They have shown us that one executive head can direct the distribution of a commodity where under old methods it required hundreds of men. Twenty years have changed our entire system of distribution through organized business combinations, except farm products, which are not handled under organization until they are sold by the producers.

"Within a few years we will have big results from organized farm marketing and our farm products will be sold and distributed under the same general combination of interests as other large business of the country are now handled. Conservation of the agricultural waste between the grower and the kitchen is of greater importance than any other, and is the one most neglected. All farmers are interested in the $2,000,000,000 of annual waste which cannot be turned into farm dividends."—B. F. Toakum, Chairman, St. Louis and San Francisco Railway.

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There are many other exclusive advantages I have experienced in using "EASTLAKE" Steel Shingles that I have no room to mention here, but if you are interested in building or roofing write to-day for free booklet and full information.

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No Disgrace to Her Breeder.

Minnie Poetess 11824, a two-year-old Holstein heifer, bred by Logan Bros., Amherst, N. S., and sold to the Mental Hospital Colony Farm, Mont Coquitlam, B. C., has made a record in the dairy test at Coquitlam of 18¼ pounds of butter in seven days. This heifer is sired by Mercena Posch and is out of Minnie Rooker's Poem 7099. Both sire and dam also belong to the Colony Farm, and the three animals were noted prize winners at all the western shows last summer.

It requires many years of patient work to build up a profitable dairy herd. It can be done only by knowing precisely what each cow is producing.

Never let the heifer become more than three years old before breeding. Cows which have been bred young are usually good milkers.

Keep the heifer intended for the dairy in thrifty, growing condition.

Milk quietly, cleanly, quickly. Cows hate haste.

Sprained Tendon.

A. B. W.: I have a valuable mare, eight years old, that two weeks ago sprained or bruised the back tendon of her near forleg. She was a little lame the first two or three days. Since then she has had no lameness, but the parts have been highly fevered. I have used cold water and flannel bandages, under which treatment the swelling will go down but as soon as I take it off it will swell again. I have bathed it with alcohol and water, tincture of myrrh and water, and laudanum and water, but nothing appears to do it good. I now have swamp moss and vinegar on. She stands in a box stall day and night.

Please let me know what is best to do.

Answer: You are too impatient. You say the mare is suffering from sprain of the back tendons. Now the cure of a severe sprain of these tendons, under the most judicious treatment, is not a matter of days or weeks, but often of months. A sprain consists of a lesion or rupture of more or less of the fibres of the tendon, and the reparative process is always tardy in proportion to the extent of mischief. Absolute rest and the use of cold and hot baths, alternately, until all sign of inflammation has disappeared, will be the safest treatment.

Homesickness.

A. W. B.: I have a horse that seems to be perfectly well, but will not eat, He is a new purchase. He felt well at his old home, but will not eat with me notwithstanding I change his food with a view to encouraging an appetite. I had occasion to stay away from my stable one night, and he ate well enough while away, but on returning absolutely refused to eat. Is there such a thing as homesickness in horses, and do you think he could be a victim to it?

Answer: We believe horses are sometimes affected with homesickness, and loss of appetite is a prominent symptom of the same. After he gets used to his new surroundings the the trouble will be gradually overcome, by kindness, etc. Cut down his quantity of food two-thirds for a few days, until he becomes a little hungry, and in the meantime place 25 drops of tincture of nux vomica in a quart bottle, fill with spring water, and give him one-half ounce on his tongue three times a day, one-half hour before feeding time, as an appetizer.

Acute Pneumonia.

J. W. B.: I had a horse recently die under rather peculiar circumstances and I would like te know your opinion in regard to the cause. He apparently contracted a cold, was a little feverish anp slightly sick for four days, then seemed to get well, at least, he ate and acted well for three days, then suddenly began to breathe hard, appeared very sore about the chest, assumed a disturbed appearance and refused to eat, This appeared in the morning, and during the night he died.

Answer: He simply had an attack of pneumonia; the lung cavity filled and he died from suffocation.

Excision of the Ergot.

Old Subscriber: Will you inform me if there is any harm in cutting off that bad substance a growth, that projects from the center of the horse's fetlock in the midst of the long hair that grows from that part?

Answer: This being a non-sensitive, semi-ebony growth, it can be removed with impunity and without any risk or inconvenience to the patient.

For a sprain you will find Chamberlain's Liniment excellent. It allays the pain, removes the soreness and soon restores the parts to a healthy condition. 25 and 50 cent bottles for sale by all dealers.

Side Puller.

I have a mare that pulls upon one rein and to an extent that makes it unpleasant to drive her. Can you give a cause for it, and the remedy?

Answer: There is always a cause for this pernicious habit, but not always apparent to the observer, sometimes being due to a badly-fitted bit, and again to pressure upon a soft part. The mouth should be carefully examined by a competent person and whatever may be found wrong made right. A frequent source of annoyance is found on the under jaw and where the lip usually rests. If a horse has a tendency to pull, the bit may, and, in fact often does, bruise the bone under the mucous covering, without showing any external evidences of the same. This may, however, be determined by pressing upon the parts with the fingers, when, if painful, the animal will evince it by resisting. We have remedied this by cutting boldly down on the bone, washing the opening out, and using antiseptics for a few days. If, however, after a careful examination you fail to find anything wrong with the mouth change the bit and the chances are you will find one more to the liking of the animal.

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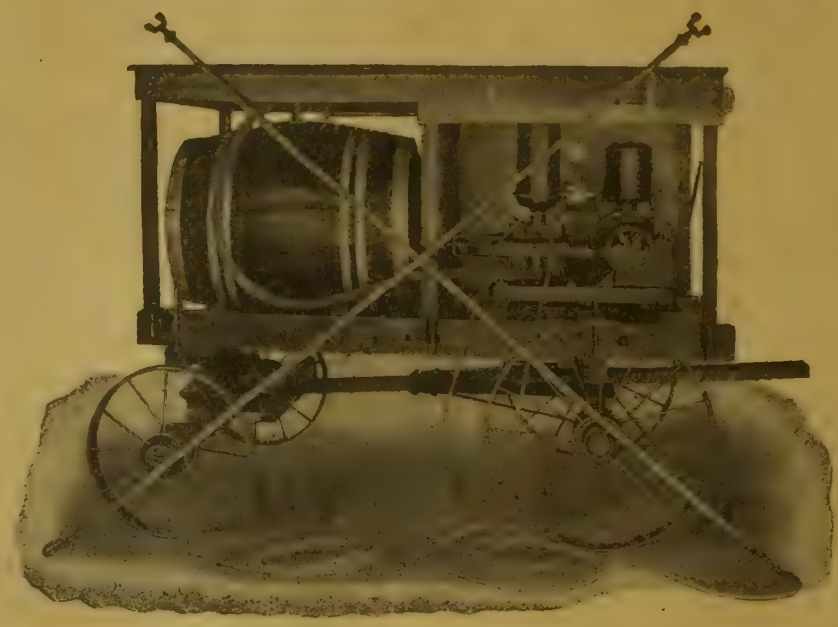
J. A. SIMMERS LIMITED
SEEDS, BULBS, PLANTS
TORONTO, ONT.

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

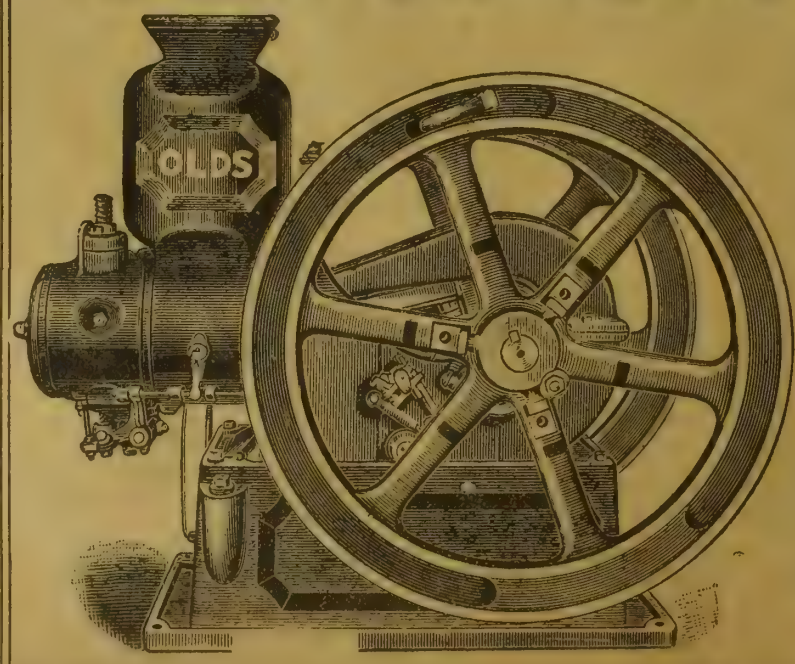
Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,
Limited
Port Williams, N. S.
Catalogue Sent on Application.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

In the March of Agricultural Progress.

IN THE MARCH OF AGRICULTURAL PROGRESS.

As time rolls on and the great question of how to feed the ever increasing population of this great country confronts us, the ready answer and solution to this vital problem is embodied in the few words, "Improvement of Agricultural Conditions."

The mere acquisition of a section of land means little unless the proper equipment is put with it to concentrate the productiveness of the ground. One of the first and most important features of the up-to-date and profitable farm is proper fencing. This is not a trivial matter by any means, but a hard, cold fact that only properly fenced farms are the exclusively profitable ones.

It is just as necessary for a farm to have proper fencing as it is for a river to have banks, the house to have walls, the corn crib to have sides or the barn to have stalls, not mere fence but real fence.

Now you ask if fencing is to vital what kind of fence should be used, and why aren't more concerns laying greater stress on the importance of this article and manufacturing it? We will deal with each phase of the question for you.

It is only natural in some localities to pile up stones gathered up and make a stone wall because the stones happened to be there. But what have you when your hard work is done? A boundary it is true, and also a very comfortable home for weasels, skunks, rats and other destructive animals to propagate and rank weeds to grow in the crevices. And besides, the ordinary stone fence is three feet wide and so wastes enough land to plant at least one row of roots and even more of small grains and then the stones are continually falling or rolling into the field to be struck by the plow share or harrow blade and injuring them, and sheep and cattle will climb over stone walls.

We are confronted with similar conditions in the use of stumps witn their protruding prongs and rotting hollows.

Then, take rail and board fences, they are always needing repairs, the wind blows them down and the rain and snow rots them. You go to bed and during the night a stray spark from a locomotive has nestled on your board fence and lo! your farm is fenceless, your cattle and sheep miles away and your crops trampled to destruction. You have to round up stock and stop work when your harvesting is at its height. Lumber is getting higher in price and poorer in quality each year and does not give real fence service.

Then the logical and only material for fencing purposes must be wire—not just so many feet of mere wire hitched to a few posts, but steel wire properly galvanized and constructed into a fabric of horizontal and vertical wires that will withstand the elements, turn attacks of cattle and restrict the roaming of the smaller chick.

The manufacturer of dependable wire fencing must consider the article he intends to produce from all angles.

The first consideration that must be made is the kind of wire to use.

It is conceded that steel wire is the thing but as there are numerous grades and qualities we must select the kind that will fulfill all requirements. It must be strong enough to withstand strains and attacks from cattle and elastic enough to adjust itself to sudden changes of temperature, and not snap from quick contractions. Then, the wire must be smooth so as to galvanize thoroughly and permanently.

Galvanizing is a very important part of wire fence construction because if for any reason this coat of galvanizing chips, peels, or flakes off, the wire rusts and breaks.

Now that we have the wire, next comes the method of construction. Dependable fencing must be vertically rigid as well as literally strong. This means upright wires so joined to the horizontal ones that the completed fence can be erected on rolling ground without buckling or cutting the wires. These are the things that are not considered by the average manufacturer.

Fortunately for Canadians, several concerns in this vast domain have made a thorough study of fence conditions and produce a grade of wire fencing that meets every requirement of the up-to-date farm. These concerns will gladly furnish you with complete information and catalogues of any kind or style of fence for all purposes if you will address them. You will find their names and addresses in their respective advertisements in the columns of the Maritime Farmer.

The Residual Effects of Fertilizers.

Extract From

"A Farmer's Field Tests"

By B. Leslie Emslie, C.D.A. P.A.S.I., F.C.S.

The residual effects of fertilizers seem to be rarely taken into consideration by experimenters, and yet how important they are, as we shall endeavour to prove. How frequently we find the efficacy of a fertilizer measured only by the results produced in the season of its application, whereas if means were taken to ascertain its after-effects, it would be found effective for at least three subsequent seasons. This is certainly true of the mineral fertilizers, although not in the case of Nitrogen, which gets leached out of the top soil.

Now, the "Agricultural Holdings (Scotland) Act," which provides compensation for unexhausted improvements being paid to an out-going tenant of a farm, assumes in its scale of compensation that fertilizer materials are exhausted at the following rate:—

Fertilizer Applied.	Rate of Exhaustion.
Nitrate of Soda. Sulphate of Ammonia.	On arable land entirely exhausted by first crop.
Acid Phosphate, and all Potash Fertilizers.	On arable land half exhausted by first crop, and quarter of remainder by each succeeding crop.
Basic Slag Dissolved Bones.	On arable land one-thire exhausted by first crop, and quarter of remainder by each succeeding crop.

From this table can be seen the estimated period of efficacy of some of the more popular fertilizer materials in a moister climate than ours, so we would naturally assume that in this country the effects would be even more prolonged.

FREE copies of this and other bulletins treating of the important subject of Fertilizing may be had on application to

THE GERMAN POTASH SYNDICATE,
1102-1106 Temple Building, Toronto, Ont.

BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete,
12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton, Ont.

A SMALL CROP IS A WARNING

A small crop is proof that your land is run down—it is a warning to fertilize promptly.

Manure is the ideal fertilizer because it contains the very elements that crops have extracted from the soil. To get 100 per cent value from the manure you spread, you must use a good manure spreader. The pitchfork method is wasteful, entails hard, disagreeable work, and takes too much time.

When buying a spreader, be sure you get one that will last. You can make sure of the quality, efficiency and durability, by investing in one of the

IHC Spreaders

Corn King Cloverleaf

These spreaders are used on thousands of farms. Their strength, simplicity, and durability are matters of record. Why not look into the matter?

When investigating, remember that the power transmitting mechanism used on I H C machines is the most durable used on any line of spreaders. This results from the fact that the beater gears are held in a single casting which prevents them from springing out of alignment and cutting the teeth. The teeth are long and chisel-pointed to insure positive pulverizing of all manure. There is no wedging of manure against the beater bars. The teeth do not rim the bars. The beater is large enough in diameter so that it does not wind. You will find many other striking advantages which will convince you of I H C superiority.

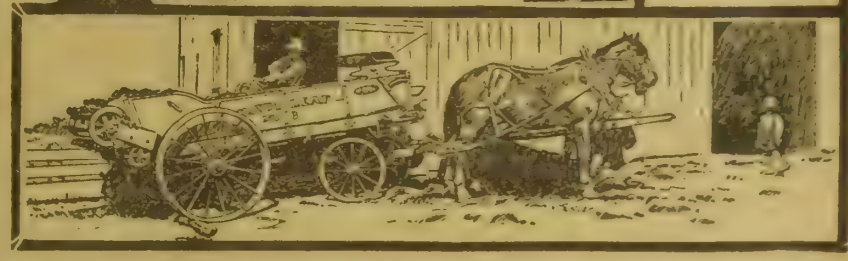
Why not see the I H C local agent at once? I H C spreaders are made in different styles, in many sizes for every need. If you prefer, write nearest branch house for catalogues and full information.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

International Harvester Company of America
Chicago (Incorporated) U S A

I H C Service Bureau

The Bureau is a clearing house for agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.



BRUCE'S SEEDS

THE STANDARD OF QUALITY SINCE 1850

An experience of over sixty years in the seed business in Canada, and our long connection with the best growers of the world, gives us an advantage which few seed houses possess: added to this our careful system of testing all our seeds for purity and germination, and the great care exercised in every detail of our business, brings to us every season many pleased customers to add to our already large list of patrons.

SHOPPING BY MAIL

is a most fascinating, enjoyable and profitable pursuit. You can, in a few days with perfect safety, though far removed from the source of supply, have delivered at your door Bruce's Seeds—The seeds that satisfy. All you require to do is to send us a postcard asking for our handsomely illustrated 112 page catalogue of Seeds, Plants, Bulbs, Implements and Poultry Supplies which we will mail FREE OF CHARGE and on receipt of same send us your order. Write for it now to

JOHN A. BRUCE & CO., Limited
HAMILTON, ONTARIO.

The Pioneer Seed House of Canada. *Established 1850.*

The National Live Stock Breeders' Association.

(Continued from page 334).

carrying out the Record of Performance tests";

"That whereas the express rates in various sections were excessive, especially on the rates for shipping sheep and swine from one province to another committee to be appointed to approach the railway companies with a view of securing equal rates for all sections of the Dominion";

"That whereas legislation in regard to stallion registration has already been effective in improving the standard of the stallions in the four provinces in Canada and the system is improving the service of stallions for breeding purposes in these provinces, it be recommended that the government of the remaining provinces be urged to pass legislation re the control of stallions kept for public service";

"That the Minister of Agriculture be commended for his suggestions in a recent address where he stated that he proposed dividing his department between two deputies, one to have charge of the live stock exclusively and that it is the wish of the association that he will complete the work as he suggested. That he appoint a bureau of live stock industry comprising a permanent chairman and four members, one to represent the West, one the East and two to represent the central portions of the Dominion, and whose duty it shall be to regulate, encourage and foster in every way the interests of the live stock industry, subject to the sanction and approval of the Minister of Agriculture";

"That whereas it is greatly in the interests of the horse breeding industry in Canada that every opportunity be given to enable farmers to breed their mares, both grade and pure-bred, to pure-bred stallions and, whereas the only opportunity of accomplishing this is by shipping mares to these centres where such stallions are kept that the association urge upon the management of railroads in Canada to make such provision that mares shipped to be bred to such stallions be returned free":

"That it is the opinion of this committee that the Dominion Government should at the earliest date inaugurate a policy having for its object the control, as far as possible, the eradication of Bovine Tuberculosis on the lines recommended in the report of the International Veterinary Commission";

"That the present act as it stands be amended to in regard to importations of stock that the privileges of lower rates of duty be extended to British subjects residing in Canada."

The election of officers and directors took place at the evening meeting of the association, and the following is the list:—

President, Andrew Graham, Pomeroy, Manitoba; vice-president, John Bright, Myrtle, Ont.; executive committee, Hon. W. Garneau, P. M. Bredt, Regina, Sask., and Capt. T. M. Robson, London, Ont.; Secretary-treasurer, A. P. Westervelt, Toronto; directors, British Columbia, A. D. Paterson, Ladner; Alberta, John A. Turner, Calgary; Saskatchewan, Robt. Linton, Regina; Manitoba, A. McPhail, Brandon; Ontario, W. W. Ballantyne, Stratford; Quebec, Victor Sylvester, Clarvaux; New Brunswick, Lieut.-Col. Campbell, Apohaqui; Nova Scotia, M. Cumming, Truro; Prince Edward Island, Hon. M. McKinnon, Charlottetown.

Flax Growing.

At the recent Nova Scotia Farmers' Association held at Yarmouth, N. S., a letter was read from a gentleman who is interested in the growing of flax and the manufacture of oil. Prof. Grisdale, in referring to this subject said:—

"The subject which has been introduced in this letter is one of considerable importance in Canada. The production of flax seed in Canada has been increasing quite rapidly of recent years and is likely, in my opinion, to still further increase in the next few years, but I may say that the production of flax has not been increased in the Eastern Provinces, but rather in the new provinces on new soils. The flax seed industry, which has for its object the extraction of linseed oil and the crushing of the cake and selling for stock feeding purposes, is a most profitable one, if one may judge from the companies which are already interested in this line of work. If you have a club of men or capitalists interested in this line, or interested in introducing some new line that would be of advantage to the town and of value to the district and of interest to the farmer in Nova Scotia, I do not know of anything that is more likely to meet with success than this same oil expressing industry.

You, being situated on the seaboard, have opportunities of securing this seed at a lower cost for transportation. Ships reach many points where the seed can be produced cheaply and by means of these ships, transportation to these shores is very cheap. Once the oil is expressed, the cake is of much greater value here than in most countries where the flax is produced, hence the transportation charges might as well be saved, because many of the shipments are handled some two or three times between the producer and the consumer on the dairy farm. I am of the opinion that a great deal of flax can scarcely be grown here, but I am still of the opinion that such an industry would be profitable and could be carried on to great advantage in view of the great market that does exist and is likely to be still further created.

Flax is not likely to be grown to any great extent in these Maritime Provinces, not because of climatic and soil conditions, but due to the effect that flax has upon the soil. Flax is one of the most exhausting crops that can be grown as far as soil fertility is concerned. On the Western prairies where none of the fertility which has been gathering for ages has been used, it is only the first plowing that is used for flax. The idea is to plow fairly deep, and then harrow with a disc harrow and sow the flax. These conditions supply an immense amount of food for the crop and help the sod for the ensuing crop of wheat. Sometimes it is introduced further on in the crop season.

Flax has been found to be rather an exhaustive crop and is not extensively cultivated in the West, even though it is as profitable as wheat. We grow it in greater or lesser quantities on our experimental farms, particularly in the prairie provinces. We have found it quite as profitable as any other grain crop grown, but not more profitable than wheat or oats because the straw is of small value. No way has been found of utilizing straw on the Western farms to any appreciable extent. A movement of men think they have invented machines for taking the pulp out of the fibre in the flax straw and using this fibre for the manufacture of fibre twine. I do not know that they have made a real success. If they could, the production of flax would be increased because there would be a market for the straw as well as the grain. The returns are fairly good. Sometimes the price is $1.50 per bushel, and next year $2.50 or $3.00 according to the crop in other parts of the world.

FREE TO MEN

You Yourself Can Restore Your Vitality

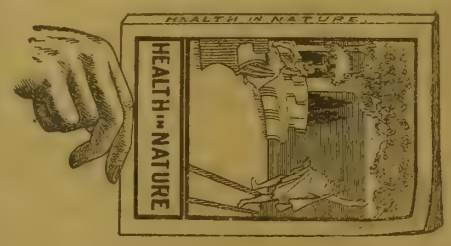
VITALITY is the greatest power in the world. If I renew your VITAL VIGOR I restore you to full and complete manhood. No matter what your age, whether you are young or elderly; no matter what early indiscretion may have sapped your courage. If I resupply you with new VITALITY I give you the strength that all healthy, vigorous men possess. I know the source of this VITAL SUPPLY. My HEALTH BELT, with suspensory attachment, pours a great stream of VITALITY into your system hour after hour all night while you sleep. Thousands have said it immediately benefits and takes the pain and weakness out of the back from one night's use. No drugs, no medicines, no restrictions of any sort excepting that all dissipation must cease. The man who indulges an excesses and unnatural practices can never be other than a weakling, but if you promise me as man to man that you will be decent, take ordinary care of your health and then use my HEATH BELT every night for 60 to 90 days, I should then be able to do in your case exactly what all these other thousands of men have said I did for them. Please write for my booklet to-day. Never mind about purchasing a Health Belt now; first get into communication with me, read what my book says, then later, if we decide between us that you should have a Belt and if you decide that you want to use it, I will arrange for you to have one to wear until you are cured. My Health Belt is the greatest vitalizer the world has ever known. With special attachments it is a remedy for kidney, liver, stomach, bladder disorders, rheumatism. etc.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man, young or old, who would be strong in manly vigour. It is a word of hope, a carefully written, interesting booklet which should be in every one's possession. Therefore, send to-day. If in or near the city, call at my office. Hours 9 to 6

DR. M. F. SANDEN CO., 140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free.



NAME.....

ADDRESS.....

A New Industry Opening at Sydney.

The Cross Fertilizer Company of Liverpool, London and Glasgow have opened and are operating a fertilizer factory at Sydney, N. S., for the manufacture of Basic Slag. Mr. Walker, the director in charge of the works, is from the Old Country, but has come to make his home in Canada. The parent house has been established for 100 years and their entrance to the Canadian field began with a visit of the senior member of the firm, Mr. Alex Cross and Mr. Walker to Sydney in 1910. In the following May they commenced to erect their plant and warehouses and to-day they have everything in running order to produce 1,000 tons of Basic Slag fertilizers per week. There should be a market in the Maritime Provinces for all the Sydney works can produce and once the farmers realize its worth they will not permit a pound of Basic Slag to be sold outside these provinces.

The raw material for the Cross Fertilizer Company is obtained from the Dominion Iron and Steel Co., Sydney. It is a by-product of their plant. The new company has expend-

ed nearly a quarter of a million of dollars in their Sydney works and warehouses so they must have considerable confidence in the future of their industry in this country or they should never have done that. As an evidence of their storage capacity for the finished product they have a warehouse 365 feet long and 150 feet wide, a very large building, but small enough, Mr. Walker thinks for the business that is in prospect.

Mr. Walker is now opening a sales connection with the different agricultural centres of the provinces. Any of our readers who think they could handle a car of the Sydney Basic Slag should drop Mr. Walker a line to Sydney.

The N. B. Provincial Dairy School.

The next session of the New Brunswick Dairy School will open at Sussex on March 19th next, when there will first be a ten days course in butter making both for creamery and home butter makers, with a full course of lectures upon the production and care of milk and cream, covering the selection, testing, care and feeding of dairy cattle as well as the prevention of and remedies for common ailments. Instruction will be given on the care and operation of hand and factory separators and for those who desire it, there will be training in soft cheese making for home dairies.

During this course, to which ladies are especially invited, lectures upon the production and marketing of poultry and eggs will be given by Seth Jones, Provincial Poultry Superintendent. Lectures upon animal and field husbandry will be given by Prof. E. S. Archibald and on Veterinary Science by Prof. John Standish, both of the Nova Scotia Agricultural College. This course will close on the 29th March, and on the 2nd April a course in cheese making will begin continuing till April 12th. During both courses, instruction in milk testing will be given. It is expected that all those who are intending to operate creameries or cheese factories will attend one or both of these courses. Tuition is free and board can be obtained at reasonable rates.

The staff in addition to the special lecturers above mentioned, will consist of C. W. McDougall, Superintendent and Lecturer; L. C. Daigle, instructor in milk testing and cheese making; George Ransom, instructor on Hand Separators; Albert Conrad, instructor in butter making. Applications stating which course the applicant desires to take, should be sent to C. W. McDougall, Supt., Sussex, N. B. from whom all information may be obtained.

The Co-Operation of Federal and Provincial Departments For Agriculture.

C. C. James, for some 25 years Deputy Minister of Agriculture for Ontario, has been appointed by the Dominion Government a special Commissioner to inquire into the whole question of Federal and Provincial co-operation in the encouragement of agriculture.

It is probable that, after this duty has been fulfilled Mr. James will be appointed Deputy Minister of Agriculture for the Dominion.

In introducing a bill in the Dominion Parliament for the appointment of Mr. James as special commissioner in the meantime, Hon. Martin Burrell, Minister of Agriculture for the Dominion, said there had been a lack of full co-ordination in practical agricultural work and legislation between the Dominion and Provinces. A maximum of harmonious co-operation and a minimum of friction between the various parts of Canada would be impossible until means had been secured for laying a sound foundation for permanent legislation. It appeared to the Government that this purpose could best be attained by securing the services of a man of practical experience and broad grasp of agricultural questions, whose duty it would be to become thoroughly conversant with the conditions and methods of the different Provinces in regard to agricultural work, so that the Government might be placed in a position to formulate a scheme which would be truly co-operative, which would eliminate duplication of effort and promote efficiency and progress all round. The Government believed it had found such a man in Mr. James. "His reputation," said Mr. Burrell, "is more than a Provincial one, and I think the House wil, agree that substantial benefit will accrue to the country as a result of appointing Mr. James Special Commissioner for this work."

For the present, and until a general policy of co-operation with the Provinces has been worked out, it was proposed that the Federal Government should make money grants to the various Provinces on the basis of population. No Province would be favored above another. "We recognize," said Mr. Burrell in conclusion, "that in every Province a Government has been placed there by the people, and I am voicing the sentiments of the Prime Minister and his colleagues in saying that the sole purpose of this measure is to do what the title declares it is designed for, to aid and encourage agriculture."

The Ontario Government has made its choice of a successor for Mr. James. The mantle has fallen on J. Lockie Wilson, Superintendent of Fairs.

How Much Does it Cost By the Year?

The first price of a cream separator is no basis for figuring its cost. Suppose you paid $2 for a pair of shoes which, with $1.00 worth of repairs, lasted 12 months, making an average monthly cost of 25 cents. At another time, you paid $3 at the start, only 50 cents for repairs, and the shoes lasted 24 months—an average cost of less than 15 cents per month. Which was the better buy?

The same principle holds good in cream separator buying. You may pay a low price at the start—but such a separator will need frequent repairing—and won't last. The cost per year will be double that of a good separator.

I H C Cream Harvesters
Dairymaid and Bluebell

are famous for their durability. They skim close and run easy for years. They are built for long, hard, steady service. Here are some of their advantages:

Milk and dust-proof gears which are easily accessible—a feature found on no other separators; a patented dirt-arrester which removes the finest particles of dirt before the milk is separated; frame entirely protected from wear by phosphor bronze bushings; large shafts, bushings, and bearings.

I H C Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes. Let the I H C local agent tell you all the facts, or, if you prefer, write nearest branch house for catalogues and any special information you desire.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

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I H C Service Bureau

The Bureau is a clearing house for agricultural data. It aims to learn the best ways of doing things on the farm, and then distribute the information. Your individual experience may help others. Send your problems to the I H C Service Bureau.

Vanco Did it

When the Buds on your fruit trees are swelling, spray the trees from the top to bottom with

"Vanco" Lime Sulphur Solution

Clean trees mean sound fruit. Spring spraying means fall profits.

San Jose Scale, Apple and Pear Scab, Aphis, Fire Blight, Mildew and other Fungi attack fruit trees before the leaves come out.

The time to attack them is before they can damage the tender buds.

One spraying before the leaf buds burst, and another just before the blossoms come out—with perhaps a third when most of the blossoms have fallen—will mean hundreds of dollars profit when the fruit is ready for packing.

"VANCO" LIME SULPHUR SOLUTION is a true chemical solution of uniform strength and efficiency. It is prepared by scientific men in a scientific way—with the specific gravity on every barrel.

It does away with all guess-work—saves the trouble of home-boiling. It is ready for use after mixing with water—has no sediment—sprays easily—and does not clog the nozzle.

You get results when you spray with "VANCO" LIME SULPHUR SOLUTION—because it is strong, uniform, clear, efficient.

FERTILIZERS—We are the only house in Canada selling only the straight Fertilizing Chemicals—Nitrate of Soda, Muriate of Potash, Sulphate of Potash and Acid Phosphate.

YOU CAN SAVE FREIGHT by buying your Fertilizers and Spray Chemicals together, and have all come in one shipment.

WRITE FOR THE "VANCO" BOOK, and turn the information it will give you into dollars. We'll gladly send you a copy, free.

CHEMICAL LABORATORIES LIMITED, 138-148 Van Horne St., TORONTO.

How to Keep the Boys on the Farm.

Editor Maritime Farmer:—

It is my object to show how we may lessen the growing tendency in young men and boys to abandon the beautiful and ennobling cares of the farm for the dangerous excitement of city life and trade. If we would keep our boys on the farm we must attempt to do three things:—Abate the task work of farming; raise maximum crops at a profit, and surround the work with the exhilaration of intellectual progress.

It is often the case, among the smaller farms that they cannot raise large enough profits from the surplus farm products to buy all the necessary requirements of the family. The boy, as soon as old enough to hire out, engages with some neighbor for a month or so to earn the money needed for clothing or other necessaries. He soon becomes more interested in his neighbor's work than his own and eventually "leaves home" as soon as he is old enough to get steady work.

Try and make the small farm produce surplus enough to meet the requirements of the home. Do not let the boy hire off the farm for one day. Even one day may prove long enough to sow the seed of discontentment in his heart. Buy him the things he needs and spare him a little pocket money.

Many a son, of a stern parent, leaves home because he is not allowed a day with his companions. The father denies the boy a day's freedom and the boy in his anger and disappointment deserts home. I would say to every father to allow the boy a day's pleasure once in a while; the son will come home a happier and more contented boy.

Give the boy something on the farm that he may call his own, something to encourage and interest him. Show him he is not working for nothing.

It is a common occurrence among our farmers to refuse to give their sons any portion of their property until long after they have attained their maturity. This is not conducive to the multiplication of farmers, and by this we lose not only many of our farmers, but very many leave our country. Let me give you one of Howard Trueman's illustrations: "Farmer Jones has a grown up son, steady and industrious, who suddenly becomes morose and dispirited. His father cannot tell what is the matter with John, but

"The mother with a woman's wiles
can spy
What makes the youth so bashful
and so grave,"

and very soon is in possession of John's secret, which in substance is, he has taken a liking to Squire Smith's daughter, and would like to start in life for himself, wife and all. In due time Mrs. Jones informs Mr. Jones of the nature of John's ailment and what will cure it. The very idea of John wanting a wife! of John wanting to settle! pshaw! Thus the matter ends with Mr. Jones but not with John. Very soon it is reported that John Jones is going to the States, and when our Johns go to the States they don't very often return."

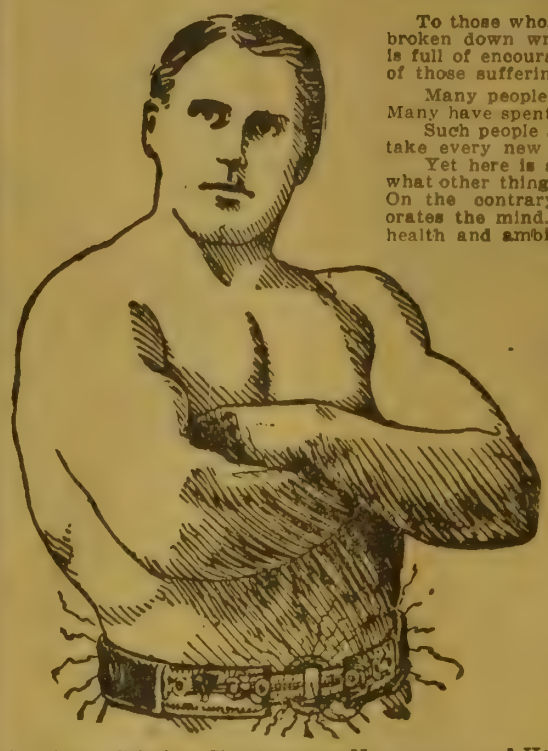
Another thing, do not isolate the boys from companions; no young person of intellect is contented to remain at home with his parents. If he cannot have company come to his own home he is going to go to "Squire Smith's" and find it. Invite those to your home in the evenings whom you think proper associates for your young people and permit your son to go to convenient places of entertainment.

Let the country boy be as well educated for the farm as his city cousin is for the bar or counting room. But the farmer's son must not receive his education in an art college, boys trained in these institutions very soon lose their interest in the farm; the student thus favored usually finds that his increased knowledge and power to think enables him to earn a larger income in some other business. Let him be trained in an Agricultural College, where the education of mind and muscle are carried on simultaneously and any taste previously acquired for the cultivation of the soil shall be intensified.

Farming and farm life have always been popular, but so long as the young look upon farm work as a sort of drudgery and as not over respectable and so long as the returns in money are small, how are the new fields to be made to smile into harvest and the worn out fields to be restored to fertility? Of all occupations, that of agriculture is best calculated to induce love of country, and rivet it firmly on the heart. No profession is more honorable, none as conducive to health, peace, tranquility and happiness. The farmer stands upon a lofty eminence and looks upon the bustle of the city, the din of commerce, and brain-confusing, body-killing literature, with feelings of personal freedom, peculiarly his own.—Hazel L. Baxter.

DR. McLAUGHLIN'S ELECTRIC BELT

IS MADE FOR YOU



To those whose vitality is exhausted and who find themselves, young in years, broken down wrecks of what they ought to be, the Dr. McLaughlin Electric Belt is full of encouragement, It it the success of the age in elevating the condition of those suffering from a loss of vitality.

Many people would give all they possess to regain the health they have lost. Many have spent their last cent in its pursuit—and thrown their money away

Such people are misled by custom and the well-meant advice of friends. They take every new drug under the sun andfind them useless.

Yet here is a simple, natural remedy, Dr. McLaughlin's Electric Belt, that does what other things fail to do. It does not poison the system nor depress the spirits. On the contrary, it starts the life current anew and produces health. It invigorates the mind. Without knowing how, the patient jumps from despondency to health and ambition.

There is nothing wonderful in this change. It is all so natural. Think what the effect would be if you were suddenly deprived of all the electricity in your body. You could not live an instant. No mental or physical life could exist without Electricity. Naturally, when the amount is below normal you are less vigorous, less ambitious.

Then is the time my Belt does great things for you. It recharges your nerves with life-giving current. Soon strength and vitality are restored. You feel the old, stimulating glow of health. You now have the right amount of Electricity, and you feel "equal to anything."

What is my Belt? It is a body battery, made for the purpose of applying Electricity to the human system in the most scientific and effective way. It is made on an entirely different plan from the worthless devices known by "Electric Belt." Its current is of guaranteed strength and constancy. It is provided with a regulator. This enables you to change the current to suit varying needs. You wear it at night. Its soothing currents send you to sleep. You wake up refreshed and invigorated. Before long you feel like a different person—and you are different. Your friends tell you so.

The benefits of my Belt are being daily demonstrated by thousands of patients, and it is heartily endorsed by those who have been cured.

If you are sick or weak, and your doctor isn't helping you much, you ought to try my Belt. It's a grand remedy. All such troubles as Indigestion, Constipation, Torpid Liver, Tired Feeling, Weak Kidneys, Rheumatism, Neuralgia, Lame Back, Lumbago, Sciatica, Sleeplessness, Nervousness and Headaches are cured completely with Electricity applied with my Belt; it overcomes all signs of weakness or breakdown in men and women. My Belt not only cures the sick, but gives the well a greater zest in life.

If you haven't confidence in Electricity, let me treat you at my risk. I will give you the Belt on trial, without one cent of risk to yourself. Give me reasonable security; and I will take your case, and you can

PAY WHEN CURED

Dear Sir,—I have had your Belt in my home for some little time; my family have used it, also myself; and I find it a great cure. We could not do without it.

Yours with much respect, Mrs. R. E. McElroy,
Arcola, Sask.

Dear Sir,—I beg to report that the Belt I received from you some time ago is doing good work, and wish to say that I am feeling better in every way. My stomach is very much better; also my nervousness is rapidly leaving. I can now sleep quite soundly and get up quite refreshed. Sincerely yours, C. E. Scantlebury,, Supt. Ry. Mail Service, Calgary, Alta.

Dear Sir,—I have felt no pains in my back since I discontinued to wear your Belt some months since. I must say it was a marvel how quickly it effected a cure on me and I shall have great pleasure in recommending your Belt to any one who suffers from a bad back. Thanking you, I beg to remain. Wm. Butters,
Gull Lake, Sask.

Dear Sir,—I am glad to say that I am completely cured of my Rheumatism by the use of your Belt. I certainly felt the benefit of it and am glad to say I am quite clear of Rheumatism and my Belt is worth more than what I paid for it. You can refer any sufferer to me who is in doubt. Wishing you every success, I remain,
Ed. Johnson, 109 Elmwood Ave. E., Winnipeg, Man.

FREE BOOK.

If you cannot call and see me personally, you can write for my book. It will cost you nothing, and will tell you lots of things you ought to know. Send coupon for this beautifully illustrated 84-page Free Book to-day, "Electricity is Life." I know best how to apply the remedy, and thousands of men owe their health and happiness to-day—their success in life—to DR. McLAUGHLIN'S ELECTRIC BELT.
Office Hours: 9 a.m. to 6 p.m.; Wednesday and Saturday till 8.30 p.m.

M. K McLAUGHLIN,
214 St. James Street, Montreal Can.
Dear Sir,—Please send me, postpaid, your free book.
NAME .....
ADDRESS .....

Wire Fencing Bargains

We have just purchased from one of the largest makers, their surplus stock of about 25,000 Rods Wire Fencing at a reduction of 25 p.c. to 50 p.c. off regular prices.

This Fencing it all made of the best quality, extra heavy No. 9 gauge galvanized steel wire, with a standard lock and is guaranteed to unroll and hang perfectly.

NOTE THESE CUT PRICES

No.	Line Wires	Inches High	Stays Apart	Spacing between line wires,	Price per rod
949	8	49	22 in.	4, 5, 5 1-2, 6, 6 1-2, 7, 8 in.	29c.
748	7	48	22 in.	5, 6 1-2, 7 1-2, 9, 10, 10 in.	23c.
		These two sizes in 20, 30, 40 Rod Rolls			
544	5	44	22 in.	8, 12, 12, 12, 12 in.	18c.
542	5	42	22 in.	6, 12, 12, 12, 12 in.	17 1-2c.
		These two sizes in 60 Rod Rolls only.			

All delivered freee to the cars here. Also a number of rolls of other sizes. Please note this stock being limited, send your order with amount enclosed at at once, give shipping instructions plainly, orders filled as received.

Also Galvanized Staples 3 1-4c per lb. First class Fence Stretchers, Heavy Chains and Clamps $6.50 each.

SPECIAL OFFER—One stretcher Free with every order of $100.00 and over.

Also enormous stock of Belting, Pipe, Rails, Pulleys, etc., at bargain prices,

The IMPERIAL WASTE & METAL CO., 3 QUEEN STREET. MONTREAL.

When writing advertisers please mention the Farmer.

IN THE MARKET PLACE

St. John.

GRAIN—Oats, 55c. to 58c.; Buckwheat, $2.50 to $3.00.

LIVE STOCK—Butcher's Cattle—$60.

DRESSED MEATS—Beef, (carcass), 5c. to 7½c.; Beef, (retail), 10c. to 20c.; Mutton, 6c. to 9c.; Veal 6c. to 11c.; Pork, 8½c. to 9c.

DAIRY PRODUCTS—Creamery Butter, 34c. to 36c.; Dairy Butter, 32c. 34c.; Cheese, 14c. to 15c.

POULTRY AND POULTRY PRODUCTS—Fowl, $1.25 to $2.00; Chickens, $1.25 to $2.00; Geese, $1.50 to $1.75; Turkeys, 28c. to 30c.

MISCELLANEOUS—Hay, $12.00 to $14.00; Wool, 14c. to 21c.; Beef Hides, 11½c.; Calf Skins, 16c.; Sheep Skins, 30c. to 90c.; Lamb Skins, 30c. to 90c.

VEGETABLES—Carrots, $1.35 to $1.50; Potatoes, $2.80 to $3.00; Turnips, 90c. to $1.00; Beets, $1.25 to $1.50.

Market conditions have not been very brisk during the past week. The price of butter and eggs is moving upwards. Prices of all kinds of meats are holding their own. Potatoes are steady at $2.80 per bbl. of 180 lbs. The cargo of Irish potatoes landed this week is holding the prices down. Eggs are scarce and selling from 35c. to 40c., fresh, per doz. Mutton is moving upwards as the cold storage stock is about done.

Halifax.

GRAIN—Oats, 57c. to 58c., bagged; Peas, in bbl. 196 lbs., $6.25 to $6.50; Barley, in bbl., $6.75 to $7.00.

FEEDSTUFFS—Bran, $27 to $28 ton; Shorts, $28.50 to $29.50 ton; Middlings, $29 to $30 ton; Oil-cake, $2.35 to $2.40, bag 100 lbs.; Cotton Seed Meal, $1.75 to $1.80, bag 100 lbs.; Gluten Meal, $34 to $35 ton; Corn Meal, $1.75 to $1.80, bag 98 lbs.

GRASS SEEDS—Timothy, 19c. to 20c. lb.; Com. Red Clover, 23c. to 25c. lb.; Mam. Red Clover, 23c. to 25c. lb.; Alsike, 20c. to 21c. lb.

DRESSED MEATS—Beef, (carcass), 8½c. to 12c. lb.; Beef, (retail), 16c. to 20c. lb.; Pork, 10c. to 15c.

HORSES—Drafters, $150 to $250; Roadsters, $200 to $300.

DAIRY PRODUCTS—Creamery Butter, 31c. to 33c. lb.; Dairy Butter, 28c. to 30c. lb.; Cheese, 16c. to 16½c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 30c. to 33c. doz.; Fowl, 12c. to 16c. lb.; Chickens, 14c. to 17c. lb.; Ducks, 15c. to 16c. lb.; Geese, 15c. to 16c. lb.; Turkeys, 22c. to 23c. lb.

FRUIT—Apples, $2.50 to $4.00 bbl.

MISCELLANEOUS—Hay, $13 to $15 ton; Straw, $8.50 to $9.50 ton; Beef Hides, 11c. to 11½c.; Calf Skins, 15c. to 16c.; Sheep Skins, 80c. to 90c.; Lamb Skins, 80c. to 90c.

VEGETABLES—Carrots, 70c. to 80c. bus.; Potatoes, 75c. to 80c. bus.; Turnips, 45c. to 50c. bus.

Charlottetown.

GRAIN—Oats, white, 48c.; Black, 50c.

FEEDSTUFFS—Bran, $1.40 to $1.50; Shorts, $1.50 to $1.60; Middlings, $1.55 to $1.60; Oil-cake, $2.45 to $2.50; Corn Meal, $1.85 to $1.95.

GRASS SEEDS—Timothy, 16c. to 18c.; Com. Red Clover, 26c. to 28c.; Mam. Red Clover, 26c. to 28c.; Alsike, 25c. to 29c.

LIVE STOCK—Butcher's Cattle—5½c. to 6c., live; Stockers, $18 to $40; Milch Cows, $25 to $45; Sheep, 3½c. to 3¾c.

DRESSED MEATS—Beef, (carcass), 6½c. to 9c.; Beef, (retail), 8c. to 15c.; Mutton, (carcass), 7½c. to 8½c.; Pork, light, 7c. to 8c.; select, 8c. to 8½c.; heavy, 6¾c. to 7c.

HORSES—Drafters, $150 to $225; Roadsters, $150 to $225.

DAIRY PRODUCTS—Creamery Butter, prints, 33c. to 34c.; solids, 32c. to 33c.; Dairy Butter, prints, 25c. to 30c.; tubs, 25c. to 26c.; Cheese, 15c. to 15½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 25½c., wholesale; retail, 30c.; Fowl, 8c. to 11c.; Chickens, 10c. to 13c.

FRUIT—Apples, $2.00 to $3.50.

MISCELLANEOUS—Hay, $12.50 to $14.00; Straw, $6.00; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 65c. to 80c.; Lamb Skins, 60c. to 70c.

VEGETABLES—Carrots, 50c. bus.; Potatoes, 40c. bus.; Turnips, 16c. to 20c. bus.; Beets, 50c. bus.

Since last report trade has been quiet and prices remain about the same with slight advance in some lines. Pork has come out in very limited supply and in consequence the price has held firm at slightly higher price but the advance is not warranted by market conditions elsewhere and is being paid only because the supply is not sufficient to fill the demand for local orders. Packers are not willing to take select hogs at over 8c. and not particularly anxious for them at that price. In quoting Charlottetown prices on Dressed hogs it must be remembered that this is for hogs dressed for inspection with heart, liver and lungs attached and the price is for gross weight which means ¼ to ⅜c. per lb. more for net weights. Butter is also scarce and prices are higher. Dressed beef is quiet with quality below the average. Eggs are in very limited supply and prices vary in retail way but shippers are paying 25½c. Vegetables are not offering at this season except in a retail way by stores and market gardeners, but it looks like higher prices for all kinds of vegetables for spring. Pressed hay is in demand for local use and prices being paid are not warranted by demand from alround but there will be very little hay for export from this section.

Toronto.

LIVE STOCK—Best heavy steers, $6.75; prime butchers', $6.25 to $6.40; good, $6 to $6.25; medium, $5.50 to $5.75; common, $5 to $5.25; inferior, $4.50 to $5; cows, $3 to $5.25; bulls, $4 to $5.35; calves, $4 to $8. Sheep, $4 to $5; lambs, $7.50 to $7.75. Hogs, $6.70 fed and watered, and $6.35 f. o. b. cars. Milkers and springers, $40 to $70.

Exporters.—Ninety-one steers, 1,190 lbs. each, average weight, at $6.50; 4 heifers, 1,150 lbs. each, at $6.50.

Butchers'.—The Swift Canadian Co. bought 18 steers, 1,328 lbs. each, the best load on the market, for local killing, at $6.90; and another load, bought for Montreal, at $6.80. Prime cattle, butchers' weights, sold at $6.25 to $6.40; loads of good, $6 to $6.25; medium $5.50 to $5.75; common to medium, $5 to $5.40; inferior, $4.50 to $5; cows, $3 to $5.25; bulls, $4.50 to $5.60; canners', $2.25 to $3.

Feeders.—Two loads of feeders, 800 to 850 lbs. each, were sold at $5 to $5.25 during the week.

Milkers and Springers.—The trade in milkers and springers during the week was not any too brisk, but good quality cows are worth good money at any time. Prices ranged all the way from $45 to $75 each, but very few got the latter figure.

Veal Calves.—Prices for veal calves of good quality have been firm for many months. Prices ranged for the past week, at $4 to $8 per cwt., with a precious few new-milk-fed quality at $9 per cwt.

Sheep and Lambs.—As a rule, good sheep and lambs have sold at higher prices. Ewes, $4.25 to $5; rams, $3 to $3.50; lambs, Canadian, $6 to $7.50; lambs, American, $7.40 to $7.75 per cwt.

Hogs.—The hog market was fairly firm all week, at following prices: Selects, fed and watered, sold at $6.75, and $6.40 to drovers at country points, for hogs f. o. b. cars, and $7 per cwt. was paid for several loads weighed off cars.

HAY.—Baled, in car lots, track, Toronto, No. 1, $16 to $16.50 per ton; No. 2, $14 to $15 per ton.

STRAW.—Baled, in car lots, track, Toronto, $8 to $9.

BRAN.—Manitoba, $23 per ton; shorts, $25; Ontario bran, $24 in bags; shorts, $26, car lots, track, Toronto.

BUTTER.—The butter market keeps gathering strength, and the day is not far distant when the common grades will sell at 40c. per lb. Creamery pounds, 37c. to 38c.; creamery solids, 37c.; separator dairy, 34c. to 35c.; store lots, 28c. to 30c.

EGGS.—Case lots of American eggs, for there are no others to be had, 40c.; new-laid, 45c.

CHEESE.—Market firm, at 16½c. for large, and 17c. for twins.

POTATOES.—Market firm; Ontarios, $1.70, and New Brunswick Delawares, $1.80 per bag, car lots, track, Toronto.

POULTRY.—Receipts continue to be liberal, at steady prices. Dressed—Turkeys, 18c. to 20c.; geese, 14c. to 15c.; ducks, 16c. to 18c.; chickens, 14c. to 15c.; hens, 11c. to 13c.

HIDES AND SKINS.—No. 1 inspected steers and cows, 11½c.; No. 2 inspected steers and cows, 10½c.; No. 3 inspected steers, cows and bulls, 9½c.; country hides, cured, 11c. to 11½c.; green, 10c. to 10½c.; calf skins, 12c. to 15c.; sheep skins, 85c. to $1.15 each; horse hides, No. 1, $3 to $3.25; horse hair, per lb., 33c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

FRUITS AND VEGETABLES.—Apples—Spies, per barrel, $2.50 to $4; Greenings, $2 to $3.50; Baldwins, $2 to $3.50; Russets, $2.50 to $3.50. Onions, Canadian, $2 to $2.25 per bag; parsnips, per bag, $1.35 to $1.50; turnips, per bag, 40c. to 50c.; carrots, per bag, $1.15 to $1.25; cabbage, per barrel, $2.50 to $2.75; beets, per bag, 75c. to $1.

Montreal.

LIVE STOCK.—In the local market prices showed an advance of ½c. per lb. in cattle, owing to the lighter offerings and the improved quality of the stock. There was also a better demand, butchers' stocks being rather light. There was some demand from Quebec for bulls, and some heavy stock was sold at 5½c. to 6c. per lb. Full loads of choice bulls sold at 6¾c. to 7c. per lb. Choicest steers sold at 7c. per lb., and prices ranged from 6¾c. to 7c., fine being 6¾c. to 6¾c. per lb., good sold at 6c. to 6¼c., medium at 5c. to 5¾c. per lb., and common dowr to 4c. per lb. Canners' sold as low as 2¾c. per lb., and up to 3¼c. and 3¾c. Milkers sold at $50 to $80 each, according to quality, and springers at $30 to $45. Small meats sold at about the same. Ewes were 4¼c. to 4¾c. per lb., while bucks and culls were 3¾c. to 4¼c. Lambs sold at 6¾c. to 7c. per lb. The market for hogs was about steady. Selects sold at 7¼c. to 7 1-3c. per lb., weighed off cars. Calves ranged from $3 to $12 each.

POULTRY.—Market held steady recently, owing to good demand and cold weather. Prices, 17c. to 19c. per lb. for choicest turkeys; 13c. to 16c. for best chickens, 8c. to 11c. per lb. for fowl, 13c. to 15c. for geese, and 14c. to 16c. for ducks.

POTATOES.—Receipts very light, and the market strong. Green mountains sold, in car lots, at $1.70 per 90 lbs., on track, and inferior grades at about $1.50. Bagged and delivered into store, the price was about 2.c. and 30c. more than the above, in small lots.

EGGS.—Prices have seemed to become firmer as time passes. The weather continued very cold until just lately, and stocks in store were very light, few being produced. Selected eggs, 37½c. to 40c. per dozen; No. 1 candled, 32½c. to 35c., which is about as high as has ever been known.

BUTTER.—Market continues very firm. Supplies light for the time of year, and the make is of small volume. Prices ranged around recent figures, being 33c. to 34c. per lb. for choicest creamery, and about a cent less for current receipts. Western dairy sold at 27c. to 28c. per lb., and rolls at 29c. to 30c. per lb.

GRAIN.—The market for oats has been very strong, and prices have advanced. No. 2 Canadian Western sold at 53½c. to 54c. per bushel; No. 1 feed oats, 52½c. to 53c.; No. 3 Canadian Western, 51½c. to 52c.; No. 2 local oats, 51c. to 51½c.; No. 3 local, 50c. to 50½c.; and No. 4, 49c. to 49½c. per bushel.

MILLFEED.—Bran sold at $24 per ton in bags, and shorts at $26; middlings, $28 per ton; pure grain mouille, $32 to $34, and mixed mouille, $28 to $30.

HAY.—The market for hay is steady, being $16 to $16.50 per ton for No. 1; $15 to $15.50 for No. 2 extra; $14 to $14.50 for No. 2 ordinary; $13 to $13.50 for No. 3 hay, and $10.50 to $11 for clover mixture.

Whilst there is a very strong feeling in all local hay markets of the country no particular change is noticeable in the situation. Supplies whilst light seem sufficient to meet the requirements of a local character. Export business is quiet owing to difficulty in obtaining ocean freight space, and there is still a lot of hay at both American and Canadian seaports awaiting shipment. Cables from Liverpool report the market from at 100 shillings c. 1. f. London cables report situation somewhat easier.

American hay markets show greatly increased receipts. Trade has been light, and large bales are accumulating. High grade stock is short, and for this the prices are holding steady. Hay shippers should take notice that all bills of lading for shipments to New York should have "Inspection allowed" marked on bill ol lading. Railroads terminating in greater New York reluse inspection of hay at all points other than 33rd street, New York; Long Dock, Jersey City, N. J.; and Brooklyn, N. Y.; Eastern District Terminal. Canadian shippers will be at a disadvantage with their shipments, if shipping to points in New York State other than mentioned as the railroads refuse to allow car doors to be opened unless the bill of lading is surrendered to them.

Millfeeds are down about a dollar on the prices quoted one week ago. Ontario bran at $24, and Montreal at $23, at Toronto. Ontario shorts are up $1, now being sold at $26 by the car lot. Montreal quotes no change in the condition of millfeed in general, prices being firmly maintained under a good demand and small offerings. A firm feeling prevails in the market for rolled oats and corn-meal, and active business is being done.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

FOR SALE.—Shorthorn Cow, Freshens March 12th. Apply to C. R. DELONG, New Germany, Lun. Co., N. S.

WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

FOR SALE—Fine bred Shorthorn bull, milk strain, 2 (two) years old. WILBERT SMITH, East Mines Station, Col. Co., N. S.

WANTED—Position as Foreman or Manager of Stock or Dairy Farm, by experienced Farmer. Address Box 28, Great Village, N. S.

FOR SALE—Pure Bred Clydesdale Stallion, rising 3 years, great grandson of "Baron's Pride." Apply to F. E. SHARP, Midland, Kings Co., N. B.

FOR SALE.—Incubator, 80 eggs, C. a. Cypher, $10. Choice seed potatoes, "White Bovee," guarantee pure, $2.00 per bus. HARRY MCDONALD, French River, N. S.

25 FANCY EASTER POST CARDS, Birthday, Lovers, Views, St. Patrick, etc., in gold and colors, 25 cents. Also 100 extra free. All postpaid. FARMER EMPORIUM, BEEBE, QUE.

FOR SALE.—A pure bred Shorthorn bull, of excellent milking strain, light roan in color, good average size, two years old in March, 1912. Females always for sale. L. M. ANDERSON, Sackville, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

MEN WANTED to learn barber trade, few weeks to complete course. Sure employment for a barber. Write for particulars as to our system of teaching. H. I. GREEN, Barber College, 734 Main Street, St. John, N. B.

MAPLE GREEN FARM HOLSTEINS.—Does 54 lbs. milk per day at 26 months old appeal to you as dam of your herd bull? If so, write for particulars to R. L. HICKS, Dalhousie Junction, Restigouche Co., N. B.

HORSE WANTED—I want to buy a young mare or gelding (mare prefered), weighing from 1000 to 1100 pounds, sound in wind and limb, fairly good driver, not fussy and a quiet worker. Write, giving full particulars and price to D. W. MORRISON, Blacksmith and Horseshoer, St. Peters, N. S.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

CRAIG BROS., Amherst, N. S.

GIVEN FREE.

Use of lands consisting of deserted farms in the Counties of King's and Albert, N. B., also the free use of fence poles for fences for raising of sheep. There would be sufficient area to keep many thousand. Will enter partnership with any man of experience who has proved a successful sheep rancher, and will finance the enterprise.

CHAS. T. WHITE & SON,
East Apple River,
Cumb. Co.. N. S.

Poultry Review	.50c
Poultry Advocate	.50c
Both one year	.85c
System in Poultry Practice	1.00
Same with either Review or Advocate	1.00
With both	1.60
Experience in Poultry Keeping	.15c
With either Review or Advocate	.50c
With either Review or Advocate and System in Poultry Practice	1.30
Or both papers one year and both books	1.70

Maritime Poultry Supply Co.,
Moncton, N. B.

KINNEAR POULTRY CO. LTD.,

Sussex N. B.

We are now prepared to supply eggs for hatching from our Utility Pens of B. P. Rocks & R. I. Reds (bred for egg production and market qualities) at $4.00 per 100 in lots of 50 eggs or more. Order ahead of time to ensure delivery when wanted.

Cattle and Sheep Labels.

Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

PROVINCIAL Dairy School

SUSSEX, N. B.

SESSIONS FOR 1912

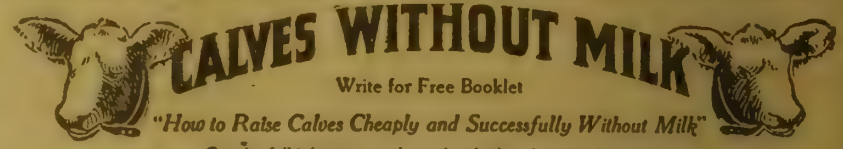
CREAMERY AND FARM DAIRY SESSION

March 19th to 29th---Soft Cheese making will be taught Farm Dairy Class during Creamery Session.

Cheese-making Course.
April 2nd to 12th

For circulars descriptive of courses apply to

C. W. McDOUGALL,
Sussex, N. B. *Superintendent.*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Write for Free Booklet
"How to Raise Calves Cheaply and Successfully Without Milk"
Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

alves can be raised on it at the cost of one where milk is fed.
No e only calf meal manufactured in an exclusive Calf Meal Factory.
Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

SUNNY SIDE STOCK FARM.

The Ayrshire herd now headed by "Greenslack Great Fortune" (imported), his dam had a record of 12840 lbs. of milk 3.9 fat in 45 weeks. At present I am offering for sale in Ayrshires, one bull 18 months, one 12 months, two 5 months and two young calves. Females any age. In Guernseys, one bull 12 months, one young heifer calf. In Chester White Swine, young sows 3 months old and am booking orders for March litters from two aged brood sows. Inspection invited. Intending purchasers met at I. C. R. Station.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

"WILLOW FARM" FOR SALE.

"Willow Farm" is situated two miles from the centre of the town of Amherst, which is a growing manufacturing town of over nine thousand population, and one of the best markets in Canada. There is a good public school within forty rods of the house.

The farm consists of one hundred and twenty three acres, forty three acres of marsh and eighty of upland, sixty five of which are under circulation.

The upland is in a high state of cultivation as a large stock of cattle have always been kept on the place and for several years a short rotation has been followed. The soil varies some but is mostly a good loam quite free from stone and easily worked. The pastures are well watered by springs and brooks.

The house is 28x38 feet, two stories with ell 16x20 with good cellar, heated by furnace. Barn 50x80 feet with basement stable which will accomodate forty cattle and six horses, also root cellar holding two thousand bushels. Carriage and impliment shed 26x36 feet and other out buildings all in first-class repair.

The fencing is nearly all of woven wire and in good order,

A wood lot of 70 acres, three miles from the farm will be included in the sale.

A retail milk trade of about one hnndred and twenty quarts a day will be sold with the farm if desired.

This is one of the finest live stock and dairy farms in Cumberland County; a beautiful home and a splendid opportunity for the right man. Apply to

C. HOWARD BLACK, Owner,
Amherst, Nova Scotia.

BARGAINS

We have several second hand Chatham Incubators that somebody can have a bargain on. Eggs for hatching of many varieties. See our winnings at the big shows.

Hartland Poultry Yards.
Hartland, N. B.

Rocks! Rocks! Rocks!

Eggs for hatching from splendid purebred utility stock. Barred, Buff and White Rocks. I am not in the show business, but in the business for utility, that's what you need. $2.00 for 15 eggs.

J. B. DAGGETT,
Centerville, N. B.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWIN—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM

Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls, colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best herds in the country. Inspection and enquiry dairy solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

Orpingtons,

In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

PLANTS THAT GROW.

Strawberries in leading varieties, at 75 cts. per 100. $5.00 per 1000. Raspberry and Blackberries 50 cts. per dozen, $1.50 per 100. Apple, Pear, Plum, and Cherry trees, and all small fruit plants at LOWEST PRICES. For Large Crops and Quick Returns plant our NORTHERN GROWN STOCK.

Bees and Bee-Keeper's Supplies.

Write for Price List and Free Delivery Offer. Discount for early orders.

E. L. COLPITTS - PETITCODIAC.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 25 to 40 tons of hay; lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2, Amherst. P. O., N. S.

HILLSIDE STOCK FARM.

During the past season our Ayrshires won male championship at Halifax and Chatham, Female championship at Fredericton and first for herd at both Chatham and Fredericton. Only two young bulls left; inquire at once of

PRESCOTT BLANCHARD,
Truro, N. S.

S. C. White Leghorns.

We offer for sale 1st Amherst Cockerel, 3rd Amherst Pullet, 12 pullets of same breeding and 7 Hens, S. C. White Leghorns, also 6 S. C. Rhode Island Red pullets.

ORCHARD HILL FARM,
Brown's Flats, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

White Orpington Cockerels

I have six White Orpington Cockerels left for sale. These birds are nice type and shape and are eight months old. Price f. o. b., Bear River, $3.00 each.

B. C. CLARKE,
Bear River, N. S.

Rosebank Farm Jerseys

Young Bulls for sale by the imported bulls, Pogis 40th of Hood Farm and Foxhall's St. John O'Dreamwold Champion bull at Halifax and Chatham also headed 1st prize herd on the circuit. JOSSELYN & YOUNG
St. John, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

FOR SALE AT ONCE

75 Barred Plymouth Rock, Cockerels and Pullets; two yearling pens, cockerel and pullet matings, also a few Light Brahmas.

Cockerels, $2.00 to $3.00 each; Pullets, $3.00 per pair.

E. T. JORDAN
Kentville, N. S.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 1 Cockerel and 2 Pullets. $4.00 per Trio.

S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 K. C. R. I. Red Cockerels. $2.00 each.

These must be sold to make room for Breeding Pens.

W. H. HENRY,
Shubenacadie, N. S.

FARM WANTED.

We are now preparing copy for Farm catalogue No 3. If you wish to sell this is your opportunity. Listing will cost you nothing. Correspondence invited.

ALFRED BURLEY & CO.,
46 Princess St., St. John, N. B.
Farm Selling Specialists.

Municipal Bonds Safer Than ANY BANK

can be bought to yield 4 1-2 per cent as against 3 per cent for Savings Bank interest. Write us for full information about how to make your money earn more than savings Bank interest.

Atlantic Bond Company, Limited,

HOWARD P. ROBINSON, President.

Herald Building, HALIFAX, N. S.
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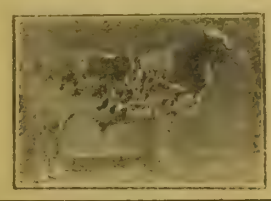
MAPLE FOREST YORKSHIRES

Litters Dating from February 15th and After.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

GLEN VIEW POULTRY YARDS.

Only ten birds left for sale.—Three cocks and three cockerels, Barred Plymouth Rocks; two S. C. Rhode Island Red cockerels; one cock and one cockerel, S. C. Brown Leghorns. Nearly all these birds were prize winners at Amherst and Moncton, 1911-12.

HUGH McMONAGLE, - SUSSEX, N. B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

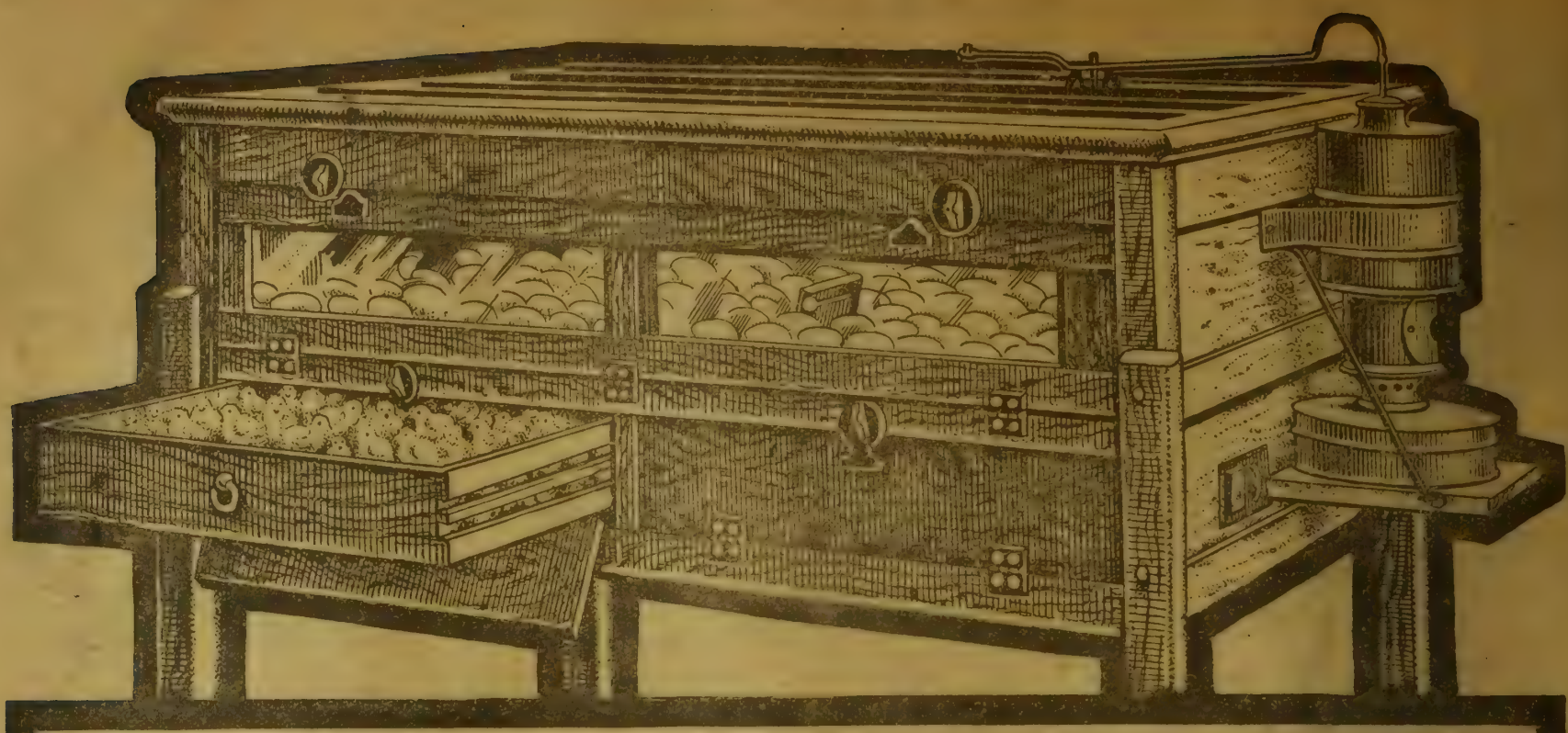
Logan Bros. Amherst, N.S.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

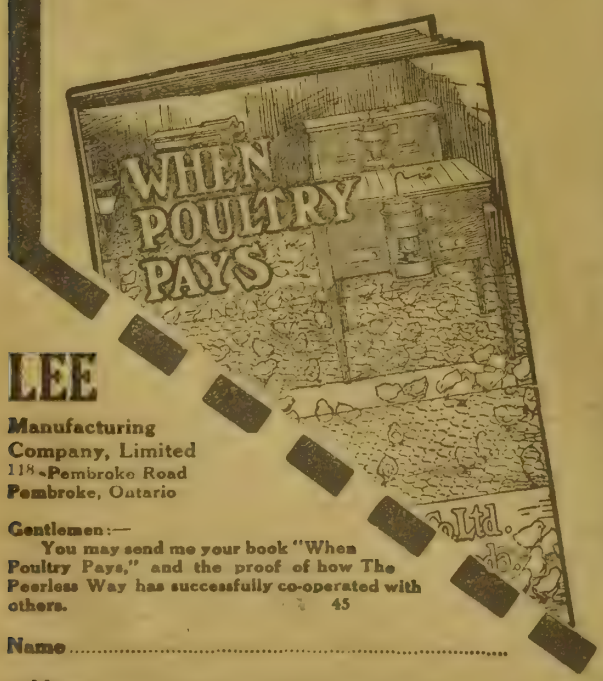


THE PEERLESS INCUBATOR AND THE PEERLESS WAY HAVE DOUBLED THE PROFITS OF 20,846 POULTRYMEN

ANY farmer can raise "poultry-for-profit" on the same plan and under the same conditions as we do it at the Poultry Yards of Canada, Limited, and make just as big a success as we have made of this, the largest and most profitable poultry farm in the Dominion. You can do it. You can put to work for you The Peerless Way and the Peerless Incubator and double or treble your profits right from your first month. Over 20,846 Canadian poultrymen have proven this. By following our system, they are making their poultry pay them greater profits than they ever dreamed were in the business.

THE book, "When Poultry Pays," tells what hundreds of followers of The Peerless Way have accomplished. It tells why the price of eggs doubled in seven years; it tells about a market that exceeds the supply by 200%—a market you can help supply at constantly rising prices; it tells about a plan that is more than merely a system of poultry raising—a plan that raises poultry **at a profit;** it tells about co-operative marketing—how the highest prices are secured in either large or small quantities; and, by no means least, it tells you exactly how to get started in this field of profits that lies right at your door.

Send For This Book—FREE For The Coupon



Remember, we will not send you this book unless you ask for it. "When Poultry Pays," illustrated throughout, has cost a good deal of money to produce and you will have to signify by asking that you are interested. Do not send for it with the idea that it offers any "get-rich-quick" plan, however; but if you have just a little money, a fair amount of horse-sense and a willingness to follow the advice of experts and look after your business, you can double your profits from the start. Indeed, if you will work just a little harder, you can treble them. If you want the book

Use the Coupon

LEE
Manufacturing Company, Limited
118 Pembroke Road
Pembroke, Ontario

Gentlemen:—
You may send me your book "When Poultry Pays," and the proof of how The Peerless Way has successfully co-operated with others. 45

Name .....

Address .....

Town ..... **Province** .....

We Will Show You How To Raise At A Profit.

THE Peerless Way, more than merely a system for raising poultry, will show you how to raise at a profit. Our Poultry Advisory Board sees to it that no followers of our methods ever fail. They give advice, counsel and detailed instructions in every step—from starting to marketing. Our 20,846 successful followers can testify to this—and many of them do so in our book.

We Will Show You How To Get Better Prices.

THIS alone is a valuable part of the service included in The Peerless Way. We guarantee to find, for all your poultry products, buyers who will pay you the highest spot-cash prices and who will charge you no commission for the service either. You do not need to be dependent upon the middleman and cold-storage buyer when you understand co-operative marketing. You do not need to give away part of your profits; the last few cents on every deal is your own "velvet"—and goes into your own bank-account.

We Will Show You The Best Way to Start

YOUR start is important; without experience or guidance, you can badly handicap yourself in the beginning. It may take years to overcome a bad start. The Peerless Way will put your first step on the right road to success, will show you the incubator and brooder that meets the climatic conditions of Canada's cold winters, and will furnish you with plans, blue-prints and complete specifications of poultry houses, etc., that are actually being successfully used today in Pembroke at the Poultry Yards of Canada, Limited.

You Can Learn At Home Or Come To Pembroke—As You Prefer.

THE Peerless Way, combined with the free, personal advice of our Poultry Advisory Board, will make poultry raising profitable for you. If you will take the Peerless Incubator and Brooder and just follow the plain, explicit directions of The Peerless Way, step by step, you cannot go astray. Or if you prefer it, you can come to Pembroke and, on payment of a small tuition fee, take a course of personal instruction at the Poultry Yards of Canada, Limited. But don't think you have to do that to make a success—for you don't.

Consult Our Poultry Advisory Board.

GET a Peerless Incubator and follow the instructions of our Poultry Advisory Board as outlined in The Peerless Way. Or, in special cases, consult them by mail free. You can't fail to increase your profits. If you are interested in greater profits from poultry, send for our book—NOW.

LEE Manufacturing Co. Ltd. 118 Pembroke Rd. **PEMBROKE** ONTARIO CANADA

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The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the Farmers of the Provinces of Canada.

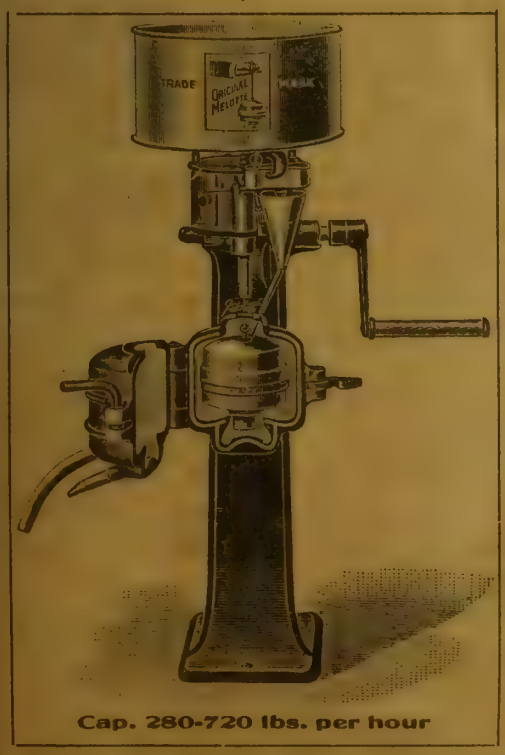
Vol. 17. ST. JOHN, N. B., MARCH 12, 1912 No. 11

25 YEARS' USE

In the Dairies of Half a Million Customers
Demonstrates that

THE MELOTTE

is the MOST EFFICIENT, SERVICEABLE and PROFITABLE
CREAM SEPARATOR ever constructed



Cap. 280-720 lbs. per hour

The "Melotte" pays its original cost within 12 months from date of purchase in EXTRA CREAM alone and there is NO COST for repairs.

The "Melotte" skims more milk with LESS POWER in LESS TIME, and, under all conditions MORE EFFECTIVELY than other Cream Separators.

"MELOTTES" are ALWAYS READY to separate. Ask your neighbor to prove this statement.

If you want a Cream Separator, TRY A MELOTTE, then you'll buy it and be a SATISFIED USER.

It's a Time-Saver, Money-Earner, Satisfaction-Giver, all the year round

MELOTTES are all GUARANTEED to give entire satisfaction, and every machine can be operated before being purchased when in doubt.

Write for New Recommendation Booklet which is All Truth

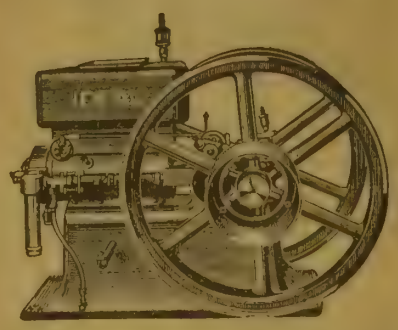
Address "Sales Manager"

Cap.400-1300 lbs.per hour

R. A. LISTER & COMPANY, LIMITED,
82 Water St., ST. JOHN, N. B., or 62 Stewart St., TORONTO

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

WEAR TAYLOR'S

Anti-Rheumatic

Shoe For Men and Women

And get Rid of Your Rheumatism.

MADE BY

The Robert Taylor Co. Limited

HALIFAX, Nova Scotia

YOU WANT TO

Make Money

Dividend of 10% assured the first year

Five going concerns have decided to amalgamate for the purpose of not only making more money but so that they may expand and thus be in a better position to handle their increasing business in all Canada.

Each of these concerns are making good on the capital invested and it is estimated that under the proposed amalgamation that money will be saved both through the buying and selling ends and also that expenses will be cut in two, that it will be possible to earn dividends of 20 per cent in a short time.

During the next few years there will be millions of dollars spent in Canada and it is the object of these concerns to put themselves in a position to get a large share of this money. This could not be so easily accomplished if each were to operate separately.

Each of the five concerns are engaged in separate pursuits consequently no market condition can effect more than one at a time. Each are handling lines that are in daily use. The object is to have the stock of the company as widely distributed as possible. It can only be purchased in not less than $100.00 shares and not more than $1000 to one person.

We are not selling stock as a favor to the buyer, but because with additional capital the company can make money very fast.

The control of the company will be in the hands of incoming investors and the new capital is to provide for expansion.

Every Investor has an opportunity to assist in developing business and when 400 new families become customers there will be a further earning of 20 per cent. to investors.

We have no time to waste and our object of advertising in this way is to secure the names of parties that are desirious of a safe investment.

The company will be under the management of a man and a directorate that will bear the closest scrutiny. Everything will be made clear when we answer your communication.

If you have money that is not earning what it should please fill in the enclosed coupon and mail it today.

I have Money that I want to invest in a safe way and would be pleased to have you send further information.

This Does Not Bind Me in Anyway.

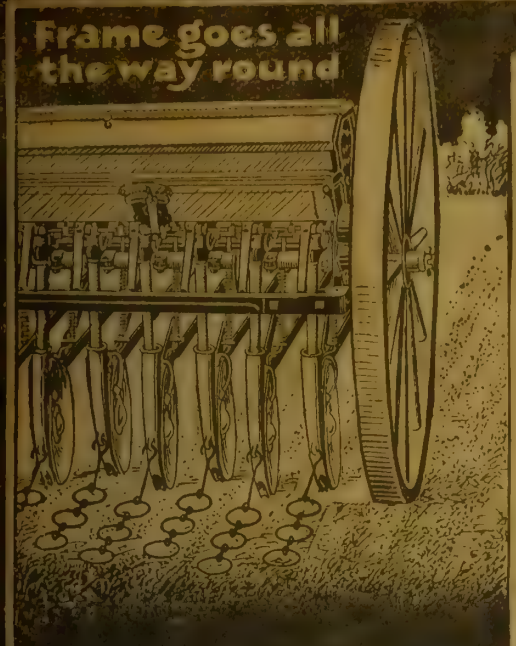
Name .....

Address.....

MARITIME INVESTORS COMPANY

CANADA LIFE BUILDING

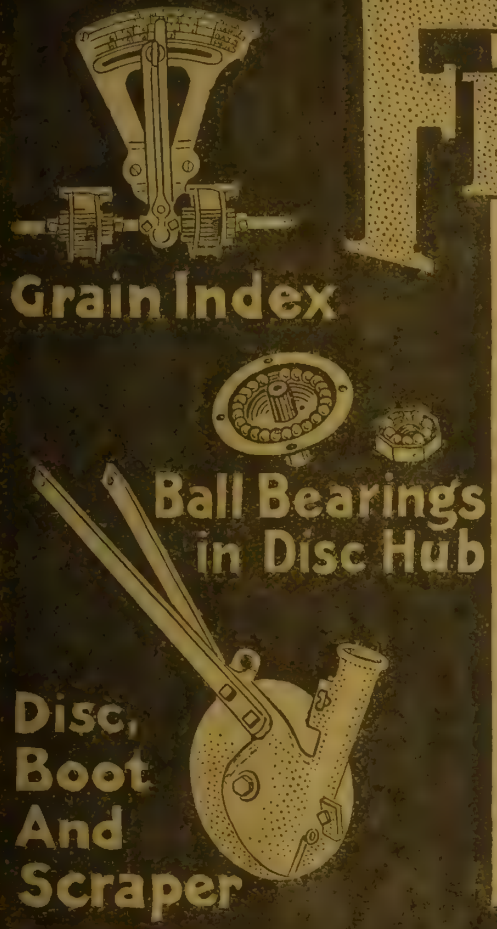
St. John, N. B.



Sow Your Grain in Drills Get LARGER Crops More Profits

Sowing grain in the old style way is wasteful. While some spots get too little seed, most of the ground is generally too thickly seeded.

But sow your seed with the Champion Disc Drill and waste is eliminated. It sows with precision, just the right amount of seed in every inch of every furrow. The same amount of seed goes farther, produces larger crops and yields you more profits. The Champion way is the profitable way to sow your grain.



Frost & Wood

Champion Disc Drill

The Champion Disc Drill has made a great name for itself in "dirty" fields. Corn roots, tangled grasses and straw manure do not bother the Champion. It cuts right through the "meanest" field, sows the seed and covers it up.

The Champion is a wonderfully light draft machine. Instead of the usual iron to iron bearings at the hubs of the discs, the Champion has sets of dust-proof ball bearings. It's the only disc drill so equipped. This smooth-running, friction-reducing feature, together with no neck weight, make the Champion Disc Drill easier on horses than any other disc drill we know of.

The Champion Disc Drill is a strong substantial machine. It has a stationary axle to which the frame and grain boxes are solidly attached. It is built to give you many years of satisfactory service.

It is so built, too, that it is a pleasure to sow seed with it. There are no notches into which a shifting lever must be shoved. You can sow to a fraction of a pint by simply adjusting the Index. The Champion is thoroughly tested before it leaves the factory, and you are thus assured of getting perfect satisfaction when your Disc Drill bears the name "Champion."

We have a special Drill Catalog that we are waiting to send you directly we receive your name and address. Send us a card by next mail.

Frost & Wood Co. Limited, St. John, N. B.
SMITH'S FALLS. MONTREAL.
Sold in Western Ontario and Western Canada by
COCKSHUTT PLOW CO., Limited, Brantford and Winnipeg.

CANADIAN AIRMOTORS

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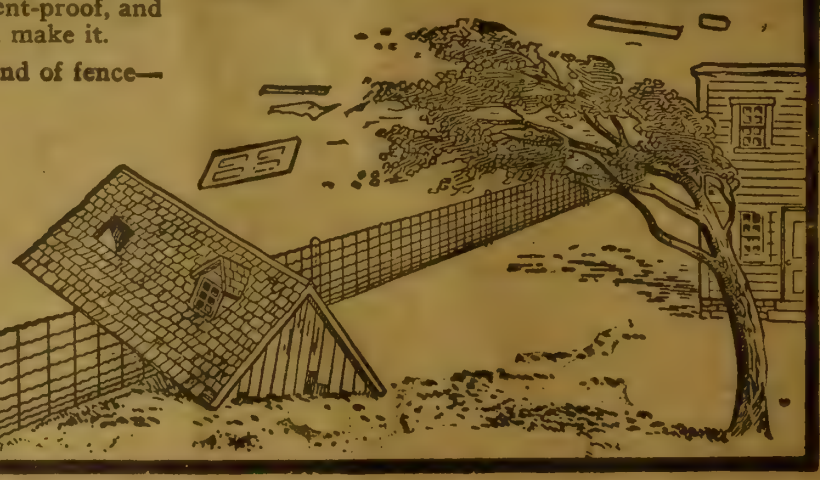

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

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Decorating Manes For Show or Sale.

Some Ideas Worth Practising for the Maritime Horse Show, April 3rd to 5th.

As the Maritime horse show draws near the following instructive article on the art of decorating the manes of draft horses for show or sale by Wayne Dinsmore, Secretary of the Percheron Society of America will be of interest to our horsemen.

The attractiveness of draft horses is greatly increased by the judicious use of decorations in form of roll plaits and small flowers. Draft horses are seldom sent into the showrings without such decorations, and at all the larger shows stallion grooms may be found at work long before daylight, preparing their charges for entrance to the lists.

For the Aberdeen plait colored yarn (Saxony at about 8 cents per skein preferred) is used. Two skeins should be secured, colors that will harmonize being chosen. Red and white, or cardinal and gold, or light blue and cream yellow, are very suitable combinations for dark manes. Each skein should be straightened out, cut once, and separated into two portions. Two skeins furnish sufficient yarn for two horses. Half of each skein is then taken with the ends matched together, side by side, and a bit of yarn is given three or four wraps around the two colors, then tied. This puts the ends in attractive shape. The yarn will be 4 or 4½ feet long.

The mane should be clean and well brushed out and combed to one side or the other. Small benches, 30 inches high and 6 feet long, are provided to stand on. Two men are needed—one to hold the horse, the other puts in the plait. The horse is held with head up, as he would show.

Stand on the bench up beside the horse's neck. Suppose the mane to be combed to the right. Stand on that side facing the same way the horse does. Begin about 2 inches back of the ears. From the top of the mane select a strand about as large as the forefinger. Separate it from the rest of the mane and hold it up. Place this strand of hair between the two strands of yarn and draw the yarn down until the knot rests firmly against the strand of hair. Draw the left (yellow) strand of yarn straight along the top of the mane. Toss the right hand strand (red) cross it, and let it hang down on the left side of the neck. Hold all in position with the left hand.

The Aberdeen Plait.

Next separate another strand of mane, about the size of the little finger, from the top of the mane, just opposite where the yarn strands cross. Draw this directly toward yourself over the yellow strand. Grip with the thumb and forefinger of the left hand. Next draw the original strand of mane back, crossing the other mane strand at right angles and lying over and parallel to the yellow strand of yarn. Draw all snugly so as to keep the plait close to the top of the mane. When all has been drawn tightly, the yellow strand is drawn toward the body of the operator, then crossed over the strand of mane which was parallel to and above the yellow yarn and allowed to drop over on the left side of the neck. The strands are held firmly with the left, and the right hand is passed over to secure the strand of red yarn which is drawn directly toward the operator, crossing the yellow. Draw it snugly and keep the left hand holding the plait close in toward the top of the mane. Now draw the strand of mane which lies to the left of the strands of yarn, to the right, causing it to cross the red strand which should lie parallel to the top of the neck. Hold it to the red strand firmly with left hand, reach over with right and gather up a small strand of mane and draw this in with the other, at the same time crowding the plait close in to the top of the neck. Hold firmly with the forefinger of the left hand below the red yarn, the thumb on top of the strand of mane which crosses it. Next draw the strand of mane which has been lying on the right, back toward the withers crossing the other strand of mane, and thereby coming parallel to and above the red. Place the thumb on top of this, next draw the red yarn slightly to the right, then throw over to the left over the strand of mane which lay parallel to it, and throw clear over the neck; then draw the yellow toward the operator, crossing the red yarn, and continue as before.

Special care must be exercised to keep the strands of mane of the same size, approximately, as the strands of yarn. Fresh mane should be taken in each time the mane strand is drawn in from the left, and the plait must be kept close in beside the top of the mane until well down toward the withers, when it should be gradually sloped down from the top, giving a graceful curve. Hairs must be kept out of the yarn as the beauty of the Aberdeen plait depends largely upon the skill with which it is put in. Artificial roses may be used on this plait, but this is seldom done.

Of all the devices resorted to by the skillful groom to increase the beauty of his charges, none gives greater attractiveness to the mane than the diamond roll. Great skill is needed in braiding this, and patience without limit is required in working with horses that are restless, if good results are looked for. Golf's braid, a kind of tape approximately ¾ of an inch wide and of firm weave, is used. It comes on small spools in 3-yard lengths. The colors found in dry goods stores are usually too dull to be used, but the desired colors can be secured by ordering the braid from large Chicago firms. Four colors are usually used and care should be taken to secure colors that harmonize, such as red (a dark cardinal shade), cream yellow, white and a dark shade of green. Four spools, one of each color, furnish sufficient tape for two manes, on horses of ordinary size—cost, 5 cents per spool.

The Diamond Roll.

After cutting the tape to the right lengths, 4½ or 5 feet, place the four colors side by side. For the purpose of giving directions we will assume the white to be on the left, followed by red and green, with yellow on the extreme right. The ends are drawn even and a single plain knot is turned in the tape, leaving the short ends about an inch long.

In addition to the tape, a filler is needed. Strips of cotton cloth or a small rope may be used, but the latter is unsatisfactory because it is hard and inelastic. The best material is raffia. This is the shredded inner bark of a species of palm tree, and is very tough and strong. It is much used in green-houses and can be secured from any firm that deals in horticultural supplies—cost 30 or 40 cents per pound. A pound will furnish enough for thirty or forty horses and it can be used over and over again. A sufficient number of the strings should be selected to make, when doubled, a strand about as large as one's little finger. The strings are usually 5 or 6 feet long. By slipping part of the strings one way and part the other, the little bundle of raffia can be made about 4 feet long (when doubled), tapering gradually to the end.

The mane cleaned and tape and raffia ready, the operator is ready. An assistant holds the horse, the bench is placed beside the animal and the operator stands on it, facing the front. The band of raffia is grasped at the center, when doubled and placed in the mane from 3 to 4 inches back of the ears. One strand of mane is selected and the raffia placed over it. Small strands of mane are drawn in with the two raffia strands and the operator braids a common three plait for about 2 inches. This is done merely to give a solid fastening for the roll on the forward part of

the neck. Having braided raffia and mane together for a couple of inches, the operator ties a knot, temporarily (to be untied whenever the roll reaches it), and is ready for the tape. Briefly stated, the diamond roll is a four plait braided around the center or filler of raffia and mane. Exact directions follow:

Place the tape astride of the three braid, with the short ends pointed up, white and red on the left, green and yellow on the right. Stand close to the horse, and keep the left hand which holds the braid, close to the top of the mane. Place the knot forward of the raffia. Draw the green tape, which is nearest the raffia on the right, toward the withers, holding it on top or slightly to the right side of the raffia center. Reach the forefinger of the right hand under the raffia, catch the red tape, which is nearest the raffia on the left, draw it under and then throw it over to the left side of the neck. This causes it to pass between the green and yellow, and over the raffia center and green tape. Draw this snugly to place and hold it firmly with the thumb and forefinger of the left hand.

Next push the yellow tape under the raffia between the white and red and then back toward the operator, over the raffia and red tape. Draw the red, green and yellow taut; the last two should now lie on the right side, with the yellow, nearer the withers than the green. Hold all firmly with the left hand, forefinger below, thumb above, and keep the hand close to the top of the mane.

Next pass the forefinger of the right hand between the yellow and green tapes; under the raffia, and grasp the white tape. Draw it under the raffia between the yellow and green and then pass it over the raffia, back to the left side of the mane, thus causing it to cross over the yellow tape at the same time. Next pass the green tape under the raffia and bring up between the red and white; then draw it over the raffia and white tape to the right side. The four colors have all been used when this last move is completed and each color appears in a little diamond-shaped piece, hence the name diamond roll.

Progress from this point is made in the same way that the first four moves were taken. Each color in its turn is drawn under the raffia center, between the two on the opposite side, thence back over the raffia to the side whence taken and crosses each time the same color as at first.

To keep the roll up on the mane, it is necessary to draw in enough hair to bind the roll to its place. This must be taken up in such a way that it does not become visible. This is best accomplished by selecting a small strand from the top of the mane and drawing it in underneath and parallel to the raffia, just before one of the colors (it matters not which) is drawn from the left-hand side. This strand of mane is held firmly against the raffia and the tape is then drawn beneath it and over in the usual way, binding the roll down to the top of the mane. By taking in a small amount of hair about every inch, which will be the case if it is taken in every time the one chosen color is drawn in from the left, the roll will be kept to size and will be so firmly attached to the mane that movements of the neck will not shake it free. It is unnecessary to wrap the mane strands around the raffia, for if each tape is drawn as tightly as it should be the roll will stay to place. The roll should be kept up on top of the mane till well down towards the withers. It should then be slanted off gradually, as in the Aberdeen plait, the exact slant depending upon the fulness and length of the mane.

...The foregoing directions should render it possible for anyone to do good work, but the horse must be held still, with the head up in show position, and the operator must do rapid, careful work, with particular care to avoid wrinkling the tapes, if a good roll is looked for. Not a hair should show on the outside of the roll, nor should any raffia be visible. Silk ribbon is sometimes used for this work, but it is expensive, and wrinkles too easily to be chosen if the regular tape can be secured. Skirt binding is too wide and too flimsy to be used.

Small artificial roses, which can be purchased at millinery stores at 40 to 50 cents per half-dozen, add greatly to the general attractiveness of the roll. These have cloth-covered wire stems about 6 inches long. About five medium sized roses are used and fastened down fairly close to the roll; the wire stems are twisted around the roll, and as they are covered with colored cloth, they are inconspicuous. This method of attaching is to be preferred to that of braiding them in with the roll, as it is easier accomplished, and if desired the roses can be removed when the horse is left in the stall over night. A roll or plait, well put in, should stay for several days, the plait much longer than the roll.—Wayne Dinsmore in Breeders' Gazette.

New Brunswick Immigration Congress.

The most important step taken in the Province of New Brunswick in the way of promoting the settlement of her wide expanses of vacant lands by her own sons and by an influx of settlers from beyond the seas was the Conference held in Fredericton on Friday, March 8th, 1912. The congress consisted of representative delegates from all parts of the province who deliberated in a purely nonpolitical gathering, actuated by common thoughts,—the best interests af the province and the best means of mapping out a campaign that will be successful in bringing about the desired results.

About a year ago representatives of the New Brunswick Press held a Conference for the purpose of discussing and forwarding an immigration policy. The St. John and Fredericton Boards of Trade, assisted by Boards of Trade from nearly every town in the Province were the instigators of the present Congress so that when the fiery cross was passed along for a meeting at Fredericton, the seed sown by the members of the press had germinated and the citizens of the whole province were ready to forward the delegates on their way.

John T. Jennings, President of the Fredericton Board of Trade, presided at the sessions. He called for enthusiasm in the work and asked the various delegates to do all in their power to keep the movement prominently before their people and not let the fiery cross drop after the meetings were over but keep passing it along with united efforts until the desired results were accomplished.

Mayor A. D. Thomas of Fredericton, referred to New Brunswick's neglected privileges. The world should know the greatness of our inheritance the prodigal should be invited to return and the dutiful should be encouraged to remain at home.

A gratifying feature of the deliberations at the congress was the stirring notes of optimism that prevaded the various addresses. Each and every delegate was ready to extol the advantages and natural resources of their respective portions of the province to such an extent that the people of the North Shore learned more of the opportunities offered on the South Shore and vice versa than they ever knew before.

"The need of Greater publicity for the Province of New Brunswick" was introduced and discussed by J. D. McKenna, Editor of the Kings Co. Record, Sussex. The first great essential to an advertising campaign was to have implicit confidence in the goods advertised. He enumerated some of the prominent industries and other advantages offered by New Brunswick that have caused a population of knockers to become boosters, who have every faith in their province and who are now ready to let the world know what they have to offer. The best way to accomplish the advertising of New Brunswick was to form a New Brunswick league, with branches in different parts of the province and small membership fee charged. The sum thus realized could be devoted to advertising. TheC. P. R. would help advertise the province. The Federal Government would assist, the Local Government would do its part but the greatest source of all advertising would be the people themselves.

T. W. Butler, Newcastle; T. H. Estabrooks, St. John; Mr. Armstrong, St. Andrews; James McQueen, Shediac; Matthew Lodge, Moncton; A. D. Holyoke, Woodstock; Wm. Currie, M.P.P., Restigouche; C. N. Vroom, St. Stephen and Medley G. Siddall, Port Elgin followed in the discussion. Some of the ideas brought out by these speakers were: Bring to the attention of the agricultural classes abroad the agricultural possibilities of New Brunswick. The mistake of taking every Tom, Dick and Harry from the slums of large cities and placing them on our farms. The advisability of helping to retain our native born population. Get the right class of men on the advertising committee. Have the outline of the British Isles placed on the map of New Brunswick to give intending settlers an idea of the vastness of our domains.

Mr. Holyoke of Woodstock intimated that members of the Woodstock Board of Trade had personally contributed a set amount for a publicity campaign.

Charlotte County Board of Trade was making a move in the line of advertising Charlotte County and already much good had resulted.

"The desirability of having excursions from Western Canadian points to the Maritime Provinces" was introduced by C. Fred Chestnut, Fredericton and seconded by T. C. L. Ketchum, Woodstock.

Mr. Chestnut pointed out that New Brunswick had great advantages to offer and the business men of the West should be put in touch with this province. He suggested as the best means of doing this the running of business men's excursions from western points to the East. There was no doubt if the people were only once started from the West to the East, the movement would be continued.

William Stitt of the C. P. R. endorsed the idea that if the population of New Brunswick is to be brought up the people must come from the New England States. The C. P. R. had been running excursions from the West to the East for 20 years and had fixed low rates. They had not met with all the success they had expected. In fifteen years 4,000 New Brunswickers had gone west whereas 15,000 had gone to the New England States. This then was the place from which to get the people back. The C. P. R. was prepared to co-operate with the people of New Brunswick for it was good business to do so. Every man placed on the land helped the C. P. R.

George Ham, of the C. P. R., was then called upon. He said the proper way to get immigrants was to go out and hustle for them. One did not catch fish around the town pump, or shoot moose in the back yard. It was the same with attracting immigration. Immigrants could not be attracted to New Brunswick by talking about it to the people who are already here. Mr. Ham said the C. P. R. was prepared to do anything it could for the provinre of New Brunswick. He advised that any campaign undertaken must be properly planned. The officials must be well paid and they would furnish value for the money. With a proper and well managed campaign and no scarcity of funds the prosperity must come.

J. M. Lyons, of the I. C. R., advised that in any publicity planning a reason should be given for the farms being vacant. It struck him that the class of immigrants should also be carefully selected.

J. A. Edwards, of the Grand Trunk Pacific, said his company was largely interested in this question of immigration. The Grand Trunk had played an important part in the upbuilding of Canada, and if fortune had smiled on it now it was only its due. There could be no great west in Canada without also a great east, and the great east was already here. In the Maritime Provinces there were approximately one million people, happy and contented, but he did not altogether approve of the name of Maritime Provinces. Rather he preferred to have it known as Eastern Canada. He felt sure that the East would prosper, and assured the convention that the Grand Trunk Pacific would assist in the development.

"What New Brunswick has to offer as a home for the Immigrant" was the subject of an excellent paper prepared and read by S. L. Peters, Queenstown, N. B. We will publish the paper in full in a future issue. Following the reading of the paper, Mr. Peters moved the resolution: "Resolved that it is in the interests of New Brunswick to give greater publicity as to what we have to offer intending immigrants."

Dr. T. Ives Byrne, mayor of Chatham, suggested that free homesteads would prove an effective means of attracting immigration and that the government should be memorialized for this as well as financial assistance for the settlers. He advocated throwing open the crown lands of New Brunswick to immigrants.

Donald Innes, of Tobique River, said he was one of the men who immigrated to this country 37 years ago. He had made a success of his farm and thought others could do the same. He thought great care should be shown in selecting agents. There was too much said about the abandoned farms and there should be some other name for them. The immigrant would naturally ask why the farm was abandoned and would of course figure it out that if the natives of New Brunswick could not make a success of farming here, how could a stranger be expected to do it? Also there should be care in selecting immigrants. London was no place to go to for farmers and every Tom, Dick and Harry should not be invited to come in.

H. H. Stuart of Newcastle said that while it was important to keep

our own people in the province it is also necessary to get immigrants. The diverse resources of the provinces should be widely advertised and the immigrants will come then. He believed they should be settled in groups to develop community spirit and thus lead a more happy and prosperous life. In order to attract immigrants, Mr. Stuart said, New Brunswick must have a nationalized telephone company, a parcel post system to meet the exorbitant charges of the express companies, more railways, and better and more roads.

James A. Telfer, an extensive breeder and exhibitor of pure-bred sheep, who has shown his sheep at nearly all the important fairs in Canada and the United States, and who has taken up sheep ranching at Markhamville, N. B., after investigating the possibilities on both sides of the boundary line both in the East and the West, had found that New Brunswick was better adapted for the carrying on of his industry than any other part of Canada or the United States. Sheep raising offered a profitable field of work to intending immigrants. By giving sheep the necessary care a profit of 100 per cent. could be made on the investment. He advised that the province strive to get farmers from England and Scotland who would know how to engage in sheep raising. Vacant farms with houses and barns in more or less dilapidated condition can very well be used for sheep and may be bought at reasonably low figures. He also believed that if an advertising campaign along this line were carried on in Ontario, his native province, many young men who are looking for something better than they now possess would be induced to come to New Brunswick.

O. W. Wetmore, of Clifton, gave some interesting information as to the growing of strawberries, in which he has achieved much success. There is an excellent market for New Brunswick berries in Montreal, and he thought that any one who located at a point, where good shipping facilities are afforded could make a success of strawberry farming in this province.

"The Need of a Central Bureau established by the Government where immigrants could apply for reliable information and assistance and providing officials whose duty it would be to visit new settlers offering them assistance and suggestions." In discussing his subject, H. B. Scott, President of the Meductic Board of Trade, who introduced this subject, said the year 1912 promised to be the greatest in history for immigration to Canada, Australia and South America. New Brunswick should prepare for this. The establishment of a central bureau where reliable information would be disseminated was a most important matter. This central bureau, he thought, should be at St. John.

C. N. Vroom seconded the resolution, which he thought was the most important introduced during the afternoon, because it gave effect to the things which had been talked about previously. Mr. Vroom said that two years ago, during one of the fruit shows in St. John, an Englishman had told him he intended locating in New Brunswick, but he had been discouraged because merchants in St. John had told him the West was the proper place to settle. The speaker had advised the visitor not to buy a farm at the present time but to go to work for some one for a year and in that time look around and see where he should buy. Similar information should be given to new settlers through the central bureau. He approveh of the idea of a central bureau in St. John, but thought it should be extended through the province. He described what work was being done in Charlotte County on lines similar to those to be handled by the central bureau.

"That there is need of recognizing the importance of a greater community of interest and encouraging a closer co-operation between the man on the farm and the man in the city" was ably discussed by His Lordship Bishop Richardson who has lived for a long time both in the East and in the West. Conditions in New Brunswick were superior to those of the West where we hear a lot about success but very little about failures. The Western man was a confirmed optimist—abroad he swore by the climate of the West but at home he swore at the same climate. The people of the East must settle down to do their boosting systematically and persistently. The co-operation of interests was essential as the success of one stimulated the other. New Brunswick was by nature intended for small farms intensively cultivated.

Contrasting wheat growing in the West with potato growing in the East he said one man in Western Canada could handle about 70 acres of wheat yielding an average of 20 bushels per acre which sold at a price that left a net profit of about $700. In New Brunswick one man could handle 20 acres of potatoes, yielding about 2000 barrels which when sold left a net profit of upwards of $1000. A wheat grower handling 50 acres in the West would almost starve while on a similar area in New Brunswick the farmer would do well.

There was an opening in New Brunswick for beef raising. Flour mills might be established here as well as in Montreal and Kenora and the by-products could be profitably used. Conservation, reforestation and individual responsibility re forest fires were necessary for the maintenance of our forest resources. The asset of a good name should be carefully guarded by commercial interests so that the term "Made in New Brunswick" would be a guarantee of quality that would stand the most careful scrutiny. Improve one part of the province and you build up the other. It will not do to build up in one section with a disregard to the rest of the province or sooner or later the attempt will have the mark of failure stamped upon it. In this respect the farmer and merchant must work together. Talking alone will not boost. We must not be misled by a hollering but seek for inspiration, aspiration, co-operation and emphasize your interest in these by perspiration. Extend the lure of New Brunswick but give no false illusions. Stick to the facts. Welcome the immigrant. One disgruntled immigrant could do more harm than all the good an immigration bureau could overcome. Overlook the mistakes of the immigrant and stand behind the policy that will make your province grow to be one of the greatest industrial and agricultural centres in Canada.

A Land Settlement Policy for New Brunswick was the subject of a carefully prepared paper by Dr. C. H. McIntyre, Boston, a former New Brunswicker. Mr. McIntyre's address will appear in a future issue of the Farmer. He outlined the need of an agricultural Loan Commission to assist agricultural development and showed how this matter is successfully operated in other countries.

At the conclusion of Mr. McIntyre's address J. D. Palmer moved the following resolution:

"That the condition of our agricultural pursuits in this province required the urgent attention of our provincial and federal governments and as a necessary means of regenerating our rural life and settling the people upon the land we heartily endorse a courageous policy of state advances or agricultural loans to farmers and other persons engaged in such pursuits. We further request the provincial government to take immediate steps to raise the necessary funds upon the credit of the province, either by arrangement with the Dominion government for the use of savings bank deposits or in such other manner as may be expedient.

"As a preliminary method of carrying out this project we recommend the creation of a land settlement commission to manage the business side of the operations, to acquire, improve and sell vacant farms to natives or immigrants and otherwise assist the better settlement of people upon the land until such time as a charter for an agricultural bank is obtained."

John B. Burchill thought it was unwise to pass such a resolution without more mature consideration.

James Porter of Andover, contended that the banks would not lend money on farm property. The Canadian banking system he said, was nothing more or less than a huge trust to control the circulating medium on which the whole future of the country rests. He thought the government should provide money for the purchase of farms and should also nationalize the telephone. He was in favor of the tesolution.

R. E. Armstrong of St. Andrews moved an amendment that the matter be referred to the Boards of Trade throughout the province and to the Union of Municipal Councils.

Mr. Armstrong's motion was voted down and the original motion carried by a vote of 56 to 16.

The chairman announced the following committee to present the memorial to the provincial government, M. E. Agar, T. H. Estabrooks, H. C. Schofield, St. John; E. W. Ward, St. Stephen; T. C. L. Ketchum, Woodstock; R. E. Armstrong, St. Andrews; J. D. Harquail, Campbellton; J. B. O'Connor, Fredericton; M. G. Siddall, Port Elgin.

Arthur Hawkes, Canadian Immigration Commission, said that the convention was as far as he knew the first of the kind ever held in Canada. The resolution which had been adopted marked a great step in advance of anything the provinces had yet done. He pointed out that the first thing to be considered was what to do with your immigrant after you had got him and in this connection urged that he should be used right and honestly.

He had heard Dr. Geo. H. Parkin, a distinguished New Brunswicker, say that the New Brunswick farmer was the most proficient man on earth in the gentle art of skinning an immigrant. If New Brunswick could capture in the next five years 5,000 clean living English immigrants, they could form a partnership with them that would make New Brunswick even greater than prophesied.

Premier Flemming congratulated the province on the [illegible] convention of the kind ever held. During the last few months he had received a new vision of immigration. The Old Land can throw off 400,000 people a year and formerly four-fifths of these went to make new homes in countries where they lived under a foreign flag. More recently, however, this has changed, and now four-fifths of them go to other parts of the Empire. This being so, it was very important that those who come from England should come to Canada. New Brunswick parents should talk to their boys about their future profession. He advised that the young people should be kept on the land and their thoughts turned more toward the beauty of the country.

He was pleased that there had been a great revival of interest in this matter and that the boards of trade were prepared to put up their own funds with the government funds to aid in the work of development. He had been told that 40 business men in Fredericton had agreed to put up $25 each as a publicity fund. This was a good example.

Mr. Porter—I hope the government will follow it.

Mr. Flemming—I can't say a word politically on this occasion, but I can tell my friend, Mr. Porter, that the government is prepared to do its full duty in the way of bringing immigrants to the province and caring for them when we get them here.

We want to induce useful Sons of England, Scotland and Ireland as well as our native born boys to settle on New Brunswick soil. He hoped for the development of the province along the lines that it could absorb the increase as it came.

C. Lionel Hanington, of Dorchester moved, seconded by A. F. Barnstead, of Halifax, a vote of thanks to those who had assisted in making the convention a success after which the delegates dispersed to spread the optimism and good work to the remote parts of the province.

Island Jerseys for Canada.

About 120 head of pure bred Jersey Cattle are leaving Jersey this week for the Stock Farm of B. H. Bull & Son, Brampton, Ont. This is the largest individual shipment of high class stock ever made from the Channel Isles to Canada and the herd contains many animals with honors won in butter and dairy competitions and in the show ring.

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And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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The date after your name on the little green label on front page is, in every case, the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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MARCH 12, 1912.

DATES OF ISSUE.

March 26
April .....16—30

EDITORIAL NOTES.

Man's best possession is a sympathetic wife.

* * *

Diversified farming and intensive thinking go hand in hand.

* * *

It takes a very little bit of old cream to spoil a whole batch of butter.

* * *

Avoid tapping your horse continally with the whip unless you want to drive a common old plug.

* * *

How much is it worth to you, brother farmer to be your own boss? Did you ever set it down among your assets? Think about it whenever you become a little discouraged over your prospects.

* * *

Long neglect of the business side of farming is the great fault which is responsible for the fact that the consumer has to pay in the proportion of $13.00 for agricultural products for which the farmer only gets $9.00.

* * *

When the man who is progressive enough to test his cows is surprised at the result what do you imagin would be the result if the indifferent dairyman were to begin testing?

WORTH OF THE FANNING MILL.

The fanning mill should be one of the indispensable requirements on every farm. One cannot imagine anyone being so reckless as to sow his seed without first cleaning it. Good clean seeed is one of the prime requisites to good crops.

How often do you see weeds grow in profusion where invariably wheat, oats or corn should be growing. Every weed seed sown likely will grow and crowd out good seed, tending to lessen the yield of a good crop. It may be considered a small matter, or the croaking about nothing, but remembering how weeds tend to propagate, coming up year after year of themselves where the farmer's grain crops must be sown annually, it may necessarily have to be considered as a hugely important matter, or at least turn out to be in the end.

The putting of the seed through the fanning mill will not only clean out the weed seeds but also the undesirable unprolific small grain seeds, leaving the remaining seed, the seed you intend to sow, clean, uniform in size and the best in quality. This done year after year with painstaking care must certainly reward the farmer for time and labor spent with better and better, if not the best of crops. The importance of clean, uniform seed as an influence to better crops cannot be gainsaid.

For many years the oat crop has been the most neglected, the most carelessly handled of any crop sown or planted. The seed was promiscuously scattered baoadcast over land that had been in no way half prepared to receive it; taken right from the bin where it had been deposited directly from the thresher the previous fall, dirt, weed seeds, small, half formed grain and all sown under such circumstances in such negligent conditions, can a perfect crop, or even a half crop be expected from your fields?

We have seen seed oats put through the fanning mill prior to sowing and have cleaned from them, say from 20 bushels of oats cleaned, a bushel and over of dirt, containing millions of the most noxious weed seeds. Does it pay?

Ask the successful farmer with the big yield "what forms the foundation of a good crop," and he will answer you, second to none in importance is good clean seed." Soil conditions may be perfect, but if you have not the prime seed to deposit in the soil your labors may be counted vain.

There is no grain seed sown or planted on the farm but what it would benefit the farmer to put through the fanning mill for clean, uniform, best in quality seed.

If this important work has not already been attended to, it is more than probable that you have fed out some excellent seed grain. It is not too late to thoroughly fan the remainder and get the best of it for seed.

WHAT ABOUT OUR DUTIFUL SONS AND DAUGHTERS.

We hear a great deal now-a-days about movement whose object is to induce immigrants from foreign shores to settle on the abandoned farms of the Matitime Provinces. Another movements is fostered by the St. John Board of Trade to have what is called a "Back to New Brunswick" week during the summer of 1912. The aim of the "Back to New Brunswick" week is to get as many of the boys and girls, men and women who were born in New Brunswick, to come back and visit the old home land, when the wonderful natural resources of their native province will be forcibly brought to their notice, and perchance some of the wanderers may decide to remain and help to develop these resources. Our farmers and all concerned are heart and hand in accordance with these movements. The boy or girl who has remained at home and performed their dutiful obligations to home and country are worth more to New Brunswick than a ship load of immigrants or a score of the young men and women who are making their home in foreign lands. Many of the young men and women who have left us in the past are successful in the lands of their adoption; they are an honor to themselves and to the country that gave them birth. We are proud of them; but we are prouder still of the industrious young men and women who are making a success at home. Are we doing our best by our dutiful sons and daughters? We would like for each and every father who reads the Maritime Farmer to read the article "Which shall it be Stranger, Prodigal or Dutiful Son" that appears on the pages of this issue. Having read it, ponder over it and put the implied questions fairly and squarely to yourself: the happiness and future prosperity of your home may depend on your reply.

INDIVIDUALITY IN FARMING.

There is too much imitation in agricultural practices. Thousands of men are unthinking followers where there is one steadfast, unswerving leader. A farmer's vocation does not compel this sort of blind trailing after the crowd. He is not in an army under a general. He is himself a general, with the opportunity and the incentive to plan and work out his own campaigns. If he is wise he will take much counsel, observe closely and rely finally on his own judgment. Even if that prove costly, as occasionly it surely will, it is better for him; he will know his lesson, and grow in the self developed power to deal with his own problems.

If action in a given case followed the careful, deliberate thought of a community of farmers, then the individual who dissented and went a contrary way would be unwise and almost inevitably unsuccessful. But the vast majority of people do not think; they act, and think afterwards. Since folk of this type are easily swayed by economic and political conditions they do not understand, they invariably rush this way or that in unreasoning, inarticulate masses, sacrificing property and losing their way toward any clear course of effective action.

Agriculture as a business needs more men who have the brains, the will and the courage to act with unshakable personal independence, calm and resolute when the multitude is stampeding, and pursuing the course which they have reached by thought. Such men do not imitate or copy; they do not follow in blind faith. They think and act as free individuals, basing their acts and attitudes upon a careful study of the facts, so far ot they can ascertain them.

ARE YOUR SEEDS ALL RIGHT?

Now is an excellent time for buying seeds for spring sowing. Have you sent to the various seed houses that advertise in the Maritime Farmer for their catalogues and price lists? It is important that all seeds should be tested on arrival, and this refers not only to grain, but also to grasses and clovers. The success or failure of your efforts for better crops in 1912, no matter how much attention you may give to cultivation and fertilization, will hinge on whether you sow or plant seeds that have an abundance of vitality. In purchasing seeds be sure to get the best. Cheap seeds of low vitality are expensive and disappointing at any price.

Recommendations by the Canadian Sheep Commission.

In now concluding our report, we will not dwell upon the advantages which would accrue to Canadian farmers through the creation and establishment of a great sheep industry in the Dominion. These we hope will be apparent. We are under obligation however, to set forth, if only in a general way, the outlines of a policy which we would recommend for adoption in the interests of this important work. It will have been observed that all through the report much emphasis has been placed upon the necessity of an educational campaign being undertaken, in districts where there is little intuitive knowledge of sheep keeping, and upon the need of a more thorough organization in connection with the production and marketing of wool. In order, therefore, to give effect to the proposals which may receive the endorsation of the Department and in order to gibe permanence to the policy which may ultimately be adopted, we would recommend the appointment to the Live Stock Commissioner's staff of two specially qualified officers to represent, respectively, the sheep and wool industries, as a part of the executive organization of the Live Stock Branch. The sheep industry, with all its attendant features, is in need of definite organization and systematic direction, and, in order to effectively serve the interests involved, we think the Minister might wisely consider this means of initiating the work.

Following the adoption of this proposal, an extensive campaign of education should be commenced. This campaign should cover every phase of the production and marketing of mutton and wool. The more important features which our investigation leads us to emphasize as deserving of special consideration, we may now proceed to give in detail.

1. The general adoption of improved methods in breeding sheep is of primary importance. The haphazard system now in vogue has done incalculable harm in retarding progress from the standpoint of both the wool and mutton markets. The undertaking of a business-like policy, pre-supposing close attention to the requirements of the trade will alone save the situation. Scientific breeding must be understood and its principles practised. The maintaining of a single breed in any one locality is worth encouraging.

2. Farm management, in relation to sheep husbandry, is almost a science in itself and the subject should receive full duscussion. The management of land, from the standpoint of sheep keeping, is practised by only a very few breeders. Definite systems should be advocated. The advantages of special pasture crops should be pointed out and the danger arising from infested pastures made clear.

3. Sheep are, as a rule, poorly housed and poorly fed. Severe losses are sustained through lack of proper care during the winter season. Information regarding the successful feeding and management of a flock is badly needed. Dipping, docking and castration must be intelligently undertaken by the breeders.

4. The demands of the meat market are insistent but are disregarded. Age, size and quality are factors of importance. Farmers should be urged to form the habit of regularly informing themselves as to the trend of the trade in the purchase and sale of mutton and lamb. The present irregularities and anomalies, both of supply and demand, are due largely to lack of foresight on the part of the breeder and feeder.

5. Definite information is needed as to the requirements of the best markets for wool. This, when provided, should include a full explanation regarding the care of the fleece on the sheep's back, on the shearing floor and up to the time it leaves the farm.

6. Wool exhibits should, we think, be provided at a number of the more important exhibitions of the country. Such exhibits elsewhere have proved to be an excellent means of enlightening farmers on all matters connected with wool production and market requirements. So far as possible, the exhibits should be in charge of demonstrators fully qualified to give to wool growers needed information upon these and related subjects.

7. The educational facilities offered by the Agrirultural Colleges in the Dominion are such as to make it desirable that advantage be taken of them to create amongst the students a special interest in the trade in wool. We would suggest that the Department provide these colleges with carefully arranged wool displays. We would urge also that their co-operation be secured and that they be earnestly requested to include in their courses on sheep husbandry a set of lectures on the structure of the wool fibre and an the scientific production of wool.

8. Demonstration farms should be established in various parts of the Dominion. Each farm should furnish a practical example of the advantages to be derived from the keeping of sheep under the conditions obtaining in the particular district in which it is located. The purchase of land would in few cases be necessary, rented farms being quite as suitable for the proposed undertaking. The sheep industry is in need of practical object lessons and nothing less will serve. The Live Stock Commissioner's expectation that these farms would be self-supporting is a strong argument in their favor and should further commend their practical value to the sheepmen of every province. The farms should be so situated as to effectively illustrate the advantages of sheep keeping, as for example,—in profitably utilizing rough land, in fostering a more intensive practice on mixed farms, in assisting to clear Western lands of weeds and in bringing into more productive use the rich valleys of British Columbia, where an early lamb trade is awaiting development.

9. The further distribution, in isolated districts, of pure bred sheep, especially rams, should be undertaken in a comprehensive way. Canadian breeders have neglected the home trade and suitable breeding stock needs to be wisely directed into channels where it will more effectively serve the interests of our own farmers.

10. Co-operative summer grazing should be encouraged, especially, in the Eastern provinces, as previously suggested in our report.

11. Co-operative marketing of sheep and lambs should be organized in specially selected districts in order to ascertain the feasibility of the more general adoption of such a system. Our investigation leads us to strongly favor this method of marketing.

12. The settlement of abandoned farms where sheep raising could be made a specialty should be encouraged. In order to render this practicable, it would be necessary that the land be cleared of stones, underbrush and much useless timber. Temporary loans to the farmers, to be paid back in annual installments extending over a period of years, would enable them to effect the necessary improvements. We commend to the provinces the consideration of the whole question. Lacking their initiative in opening up these abandoned areas for settlement, much useful land will, in all probability, continue to lie idle.

13. Realizing that the enactment of dog legislation may be undertaken solely by the Provincial Governments, we would suggest that the Minister represent to these Governments the necessity for the rigorous enforcement of the existing dog laws or for their amendment, if such be required. Suppression of the evils attendant upon the attacks by dogs would remove the greatest obstacle to successful sheep raising and restore a sense of security and confidence to this important industry. After careful study, we have come to the conclusion that a regular tax should be imposed upon the owners of dogs, the annual payment of which would place needed restriction upon the maintenance of useless animals and at the same time provide sufficient funds to fully compensate farmers for such losses as they might incur through the worrying of their sheep. As proof that the tax has been paid and as a convenient means of identification, all dogs should be required to wear a collar, with a small metal disc attached, which should bear on the one side the owner's name and address and on the other the license number.

In those provinces where sheep suffer through the attacks of coyotes and other harmful wild animals, we would recommend that the enactments providing for the suppression of these pests be systematically enforced.

14. Special assistance should be afforded to Sheep Breeders' Associations to enable them to forward experimental consignments of wool to British markets in order to test the advantages to be gained through such shipments. Careful arrangements should be made to ensure having the wool in the best possible condition, not only in the case of such as may be selected for experimental shipments, but in regard to all consignments intended for sale in Great Britain.

15. After carefully studying the various methods of handling wool in successful sheep farming countries elsewhere, we have come to the conclusion that Canadian wool should be handled on co-operative lines, so as to combine the advantages possessed by the marketing system of Great Britain with those secured through the organization of Australasia, together with such as would likely be obtained through the adoption of approved methods recently undertaken in other countries. As a means to this end, central wool depots or receiving stations should be established in suitable localities for collecting, warehousing, grading and classing, Canadian grown wool for shipment to the home or to the export trade.

Which Shall it be Prodigal, Stranger or the Dutiful Son,

Editor Maritime Farmer:—

"Back to the farm," that expression of recent birth and rapid growth has provided me with a subject of thought for some time.

Before commending or condemning it I would like to know the meaning the writers under this heading mean to convey. If they mean a general rush of everybody, regardless of their adaptation and qualifications for the land, then I condemn it; but if the intention is, to induce only those who have a love for agriculture and who possess the necessary natural ability, education and other means essential to success, then, I commend it.

As no qualification has appeared under this heading, I am almost inclined to think that its birth and growth came about much the same as the expressions:—"Sure"! and "That's right"! which have spread as rapidly as the Divil's Paint Brush in an old run-out sod field.

I first saw this "Back to the farm" heading in the Farm Journal. A man in New York gave a detailed account of his success on five acres of land in Vermont. This man was born in that State, lived his early days on the farm, acquired a love for the soil, but, growing tired of the monotonous life, as the farmers lived it, went to New York and acquired a good knowledge of strictly business principles, and devoted his spare time to studying scientific agriculture. He never lost his first love. Failing health caused him to return to the farm, and with all the necessary qualifications referred to above, he and his wife, to whom he was careful to give her just share of the credit, made a satisfactory success and he regaining his health.

Shortly after I saw another letter in another American paper under the same heading, not so interesting. As I saw it was by a mere copyist. I like originality of thought. Soon after, it got over into Canada. I suppose it was on the free list.

I do not mean to discourage any one who may desire to take up farm life, for that is the natural and ideal home of man, and there, as no where else does man meet and become acquainted with God in the study of His laws in plant and animal life. This cry "Back to the farm" is to the prodigal, no doubt, but, what about the elder brother? Which of these two men, think you, would be most likely to succeed on the farm? I have heard a great many sermons and pretty stories told about the prodigal; but, I have yet to hear the first defence for the elder brother. This text is always dealt with from a spiritual standpoint; but, I think it has its human side and a very strong one as well, and this is the side to which I wish to draw your attention. It is no wonder the old brother got his back up when he came home from his hard day's work and found his fatted calf gone, etc., etc. You all know the story.

The point I want to make is in defence of the boy, who sticks to the farm under hard circumstances and is to-day sliding down hill because of an exhausted farm, that is perchance in the hands of all kinds of money fiends and mortgages, paying all the way from 50 per cent. to 150 per cent. No man can exist under such circumstances—and to add to his sorrows, he hears a great noise and frolic over the prodigal and the importation of Europeans—and he has to bear his share of the expense.

Now, I say, take care of the boys we have already on the land, stranded for both education and capital. Give them a chance to share the possibilities of our province, and then we will have no difficulty in getting immigrants at their own expense. I do not believe we can import any better men aod women than have grown on our own soil.

The Seed Growers' Association, tell us that all the noxious weeds, with one exception, comes from Europe. Let us be careful in the selection of our immigrants. Let us profit by the experiment of the United States.

I think I understand the needs of this part of our province as not many do, for I have made a special house to house study of it for twenty years, and in this way have found out many things, which were not obtainable in any other way. It is in the back districts generally where I find the greatest need of help. The promised revival train will no doubt do a great deal of good to a certain class and number; but, I am afraid, with the masses the influence will subside with the last sound of the whistle (as is generally the case with humanly devised revivals when the preacher has gone), unless it is accompanied or preceeded by local demonstration. MIXED farms conducted according to local needs.

I sincerely hope that some system of borrowing money at a low rate of interest by the farmers will soon be introduced; education alone will not do. Unless this is accomplished soon, many of the farms will fall into the

(Continued on page 397).

HORTICULTURE.

Mushroom Culture.

To a great many people the art of growing mushrooms is quite a mystery, and even amongst gardeners of considerable experience and skill their cultivation is attended with a good deal of guess work, because they lack the knowledge of two or three essential points, which, if attended to at the outset, the after crop of this delicious esculent can be looked forward to with absolute certainty. Everyone likes mushrooms, and there is no reason why anyone who can procure the manure and has a place, either in a shed or out-building or a cellar, may not have a bed producing plenty of mushrooms the year around, excepting June or July—and even in these hot months they can be grown if kept covered up from the flies.

Mushrooms will grow anywhere when given the proper materials, and dark, dry cellars not being used for anything else are ideal places, spaces under verandahs, or the prepared manure may be packed in boxes any size, so long as they are deep enough to hold eight or nine inches of manure. Old bureau drawers serve capitally for this purpose—in fact, there is no limit to their cultivation in places that may be convenient or that ingenuity can suggest.

To have certain success, procure if possible the daily manure and sweepings from a stable, whatever quantities possible, forking out the long straw, if any, and add a third of good garden soil to the manure, mixing it thoroughly, turning daily to prevent it heating too much, adding to the pile fresh manure and soil as you procure them till you have sufficient to make a bed four or five feet in width as long as you have space for, and when packed down to be not less than eight inches in depth.

After the first rank heat has escaped, make the bed by placing the manure in layers, pounding it firmly. Pound it as you would pound the soil in setting posts; the more compact your bed is, the longer it retains the heat, and the spawn travels quicker through it.

In locating your bed, do not put it on a cold floor or where any water would be apt to raise and be absorbed by the bed; in such a possibility, raise your bed up four or five inches, and if made against a damp, cold wall, run some boards between.

When your bed is made put a thermometer in it and observe the temperature, which will rise up to a greater or lesser degree; but when you notice it going down and about ninety degrees, place your spawn in it by making holes four inches deep, fifteen inches apart, and place the broken spawn in small pieces in the holes, covering the same.

A particular point in after-success is to wait after spawning for a week or ten days before you put the top covering of soil. Many growers are so impatient that they put the soil on too soon. The heating or fermentation going on in the new bed causes moisture or hot steam, and this must be allowed to escape, so that if the soil was put on before this occurred it would be retained in the bed and kill the spawn. This is the actual cause for the failure in nine out of ten cases of attempts to grow mushrooms, and too much stress cannot be laid on these two points in growing them: The first, being careful not to spawn the bed till the heat is receding and is about ninety degrees or eighty-five degrees, and the second, not to cover with the top two inches of soil till eight or nine days have passed after spawning. When putting on the top two inches of soil, pat it down firmly and smoothly and then place a layer of straw over your bed; though not actually necessary, it aids to keep the soil surface moist and prevents the air drying up the bed too quickly, and keeps a still temperature. The temperature to grow mushrooms should be fifty-eight and one-half degrees, and should not vary, but anywhere between fifty to sixty degrees will answer. I have succeeded in varying temperatures, but that is the proper—fifty-eight and one-half degrees—and that is why underground tunnels, sewers or caves are utilized, because the temperature can be kept so even.

Following out the foregoing instructions, you should have plenty of mushrooms. Be careful not to get the manure wet when preparing it, as this delays and hinders your bed; in fact, it is absolutely necessary to save it and prepare in some dry place. There is sufficient moisture in the manure itself during the process of heating, but if conditions occur in too dry a place and your bed needs water, warm it well before applying, say about 100 degrees, an occasional sprinkling will keep it right. When preparing material for your bed, be careful to see there is no old iron, such as pieces of hoop iron, or nails. It is stated as a curious fact that iron will prevent any mushrooms. It is recorded that among rival mushroom growers in France care is taken of the beds to prevent any enemy from sticking nails into it, as this meant failure.

In about six weeks or two months, if the temperature keeps right, mushrooms should appear, and when gathering give the mushroom a slight twist so as not to disturb the little ones, and be careful to fill up with good soil any holes made in the bed by removing. Never cut them off with a knife, as the stump remaining will decay and infect the surrounding growth.

After a bed has exhausted itself, which it should in about three weeks, a couple of inches of good soil applied on the topwill renew the crop for a short while. I have found it efficacious to occasionally water it with liquid manure, which stimulates and increases the size of the mushrooms. When completely exhausted, remove the old material, which is just right for digging in flower beds or for bulb cultivation.

A good plan to have successive crops of mushrooms is to keep adding to your bed fresh manure treated as directed, removing the old portion as it throws off the crop. Mushrooms can be grown anywhere on shelves built for them in the cellar, making one above another, or you can have a bed in a barrel by filling the barrel, spawning it—having regard to the temperature—and then cutting holes in the sides of the barrel at various places, through which openings the mushrooms will appear. To sum up, the whole art of mushroom cultivation lies in observing these rules:

1. Get your manure fresh and keep from wet.
2. Turn daily and mix a third of good soil with it.
3. Make your bed, when pounded thoroughly firm, to be about eight inches in depth; any deeper would make it heat too much, and any thinner or shallower would not be enough.
4. Spawn it when the heat is receding from ninety degrees to eighty-five degrees, never more, as the heat would kill the spawn.
5. Wait ten days after bed is spawned before you put on top layer of soil, so as to allow excess heat and moisture to escape.
6. Do not water unless you have to and have it at blood heat.
7. Have the temperature near sixty degrees, no more.

As it takes six weeks to two months for the crop to grow, you can make the beds any time, so long as you avoid it cropping when flies

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SO declared the mother of a small family not long ago—

—And proved the statement true by simply relating her tea experience.

"I used a 30c. Tea for years," she said. "One day the Grocer asked me to try a 40c. package of **Red Rose**—he told me it was better Tea. I found it better Tea, and—before I had quite finished the first package I thought it made more Tea. The second pound I used with care—

—**And found out that less Tea in the Pot made a richer, finer-flavored Tea, if you know what I mean.**"

We know exactly what this lady meant—

—40c. **Red Rose Tea** is a richer, stronger Tea, more delicately flavored.

The 30c. variety makes about 150 cups—

—Whereas the 40c. **Red Rose Tea** makes about 200 cups.

So—You might as well have **better tea for the same cost in the long run.**

There are several grades of **Red Rose Tea** selling at different prices, but the 40c. grade seems to please best. It is not only fine Quality but goes farther.

"Red Rose Tea is Good Tea"

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Maritime Farmer Ads. Give Best Results.

abound. I would not advise making any beds in May. It is not necessary to grow mushrooms in dark places, but they will grow there as well as in the light.—J. McPherson Ross, Toronto.

Lime Sulphur is a Superior Spray to Bordeaux.

Prof. Cordely, of Corvallis Station, Oregon, said last year in Hood River Better Fruit:— "I have not only used and recommended the use of Lime-Sulphur for the past 3 years, but will use it and continue to use it until something better is found."

Prof. A. L. Melander, of Pullman Station, Washington, said last year: "I believe you will find Lime-Sulphur a better fungicide than Bordeaux." Writing again this year, says: "Lime-Sulphur has been proven to be a better fungicide than Bordeaux, and an all round spray in the west for keeping orchards clean and healthy."

Mr. Robt. Thomson, of St. Catherine, says he is greatly in favor of Lime and Sulphur, being satisfied that it will replace the Bordeaux as being more satisfactory, more economical and more uniform in quality.

Mr. L. Caesar, B.L.A., of the Department of Biology, Ontario Agricultural College, gave as his opinion "that there was no doubt that dilute lime-sulphur, either commercial or home-boiled, or Bordeaux, will give equally good results as a summer wash. The weakness of Bordeaux is that for some unknown reason, especially in some seasons, it will rust the fruit. Lime-Sulphur is cheaper than Bordeaux."

Upon the Coddling Moth spray, Mr. L. Caesar, of the Gueluh Agricultural College, of Ontario, in Bulletin 187, says:— "In some way not yet fully understood, the spray immediately after the blossoms drop, and before the calyx closes, will, if thoroughly done, kill not only the seventy-five per cent. that enters by the calyx, but also nearly all the remaining twenty-five per cent. which ordinarily enters by the side or stem end. Therefore this one application is all that is necessary for the control of the Coddling Moth in any district except where there is a large proportion of second brood."

General Remarks Upon Using Lime-Sulphur.

NIAGARA LIME-SULPHUR of 32 to 33 Baume test is very simple to use. Fill the spray barrel or tank with water, leaving room for the 4 to 1 gal. of Lime-Sulphur as the case may be, pour the Lime-Sulphur, which is as thin as water, into the barrel. It mixes as readily as water itself. Stir up the given quantity of Swift's Arsenate of Lead in about 3 to 4 quarts of water, add this the last thing and the mixture is ready to put on. The best way to open a barrel of Lime-Sulphur is to place it on two planks close by from where the water is filled, knock out the bung, tack a piece of leather around the hole, and roll the barrel towards you until it runs out. Do not knock in the head, for there is no need, as it does not require being kept stirred. All the sludge or sediment is taken out of Niagara Lime-Sulphur by forcing it through 10 oz. duck by a powerful pump.

Summer spray for apples, pears, plums, cherries and potatoes use at strength of 1 to 40 weakening it to 1 to 50 for the last spray. For peaches 1 to 100 or 200, for tomatoes 1 to 160.

Roughly speaking it will take for the dormant and summer spraying (5 in all) about 1 barrel of concentrated Niagara Lime-Sulphur to every 100 barrels of apples grown.

Agricultural Society Spraying Campaign.

At a recent meeting of the directors of the Sussex and Studholm Agricultural Society, Col. H. Montgomery-Campbell introduced the suggestion that the Society purchase and operate a Spraying outfit and spray the fruit trees and vegetable crops of the farmer members.

The idea was heartily endorsed by the directors and a strong committee was appointed to purchase the apparatus and map out a course of procedure.

The members of the Society will pay a nominal fee for the use of the machine and the time of the operator.

In view of the fact that spraying is not carried on very extensively by the members of the Society, Col. Montgomery-Campbell thinks this educational Spraying Campaign will prove a source of profit, in the shape of larger and better crops to all those who will take advantage of it.

How to Spray.

Extracts from Spray Calendar, 1911, by Prof. A. L. Melander, Entomologist, Pullman Station, Washington.

"Spray thoroughly. Direct your attention to the hardest places to reach. Cover every surface. Wet behind the buds. Reach the bottom of every crack. Fill the lower calyx cup. Do not try to economize on spray. For all orchard spraying use a high pressure pump, at least 200 lbs. Have a crook to set the nozzles at an angle of forty-five degrees. Spray from a tower if the trees are beyond your reach."

Russeting of Apples.

Russeting of apples by Lime-Sulphur, is, at least, rare and of minor importance as compared with that caused by Bordeaux. Considerable natural russeting occurred the past season (1910) on unsprayed trees, especially on Baldwins, caused by certain weather conditions. In our experiments there was in both seasons even less russeting on the Lime-Sulphur sprayed than on the unsprayed trees. We have not yet seen a clear case of russeting from Lime-Sulphur, but such have been reported, and we cannot dispute the possibility. Aside from the russeting, apples sprayed with Lime-Sulphur have invariably been more highly colored and had a finer, more waxy finish than those sprayed with Bordeaux.—Cornell Bulletin 284.

Do Not Add Lime to Lime-Sulphur.

Upon this subject Prof. Stewart, of the State College, Pennsylvania, says:— "Lime-Sulphur solutions are decomposed by a number of things. Acids, carbon dioxide, certain arsenicals, and even extra lime put in as a marker, all appear more or less to break down the Lime-Sulphur combination. We believe it to be avoided. When possible most of them can be avoided by elimination. In the case of our arsenicals, however, their addition is necessary if the material is to be used as a summer fungicide. The resulting compound seems to give good results particularly. The use of Paris Green in this solution we believe to be undesirable with nothing to commend it."

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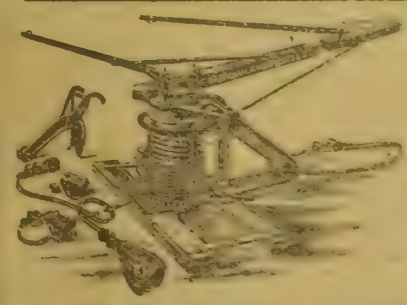

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DAIRYING.

Cost of Market Milk.

Dr. J. B. Lindsay, in the 22d annual report of the Massachusetts Agricultural Experiment station, has an article on the cost of producing market milk, which comes nearer the truth than anything I have yet seen in print; but in some respects his estimate is defective in my opinion. For instance, he estimates the cost of keeping a cow for a year at $69.-82 plus the cost of the food consumed by her, but from this he takes $22 as a credit for manure and calf; the calf consumes more than his value of milk before the bob veal or petty buyer comes around, and the older he is the more the farmer loses on him, so I would eliminate that $2 credit; as to the $20 worth of manure, I would also eliminate that credit, because it is a thoroughly figurative and imaginary value and does not in any way help the farmer to pay his bills. In common with many other agriculturists of practical experience, I consider farm manure worth just about the cost of handling it, and if a farmer has several hundred acres he will find it pays him better to buy chemicals for his outlying fields rather than haul manure to them and spread it. I have refused to buy manure at any price and refused to take it when offered to me for nothing, because I would have to haul it 4½ miles, considering the expense of handling greater than the value of the manure. Dr. Lindsay places the value of manure at $4 a cord; it could not be sold for that price here, or for half of it, and then the buyer would not be a farmer but some of our millionaire summer residents who wish to make grass grow on barren rocks. They buy what manure there is for sale around here for $1 to $1.50 a cord, but the demand is limited. I have frequently been offered manure if I would take it away, and I would do so if I did not have to haul it too far, otherwise I refuse, for the expense of hauling soon exceeds the value of the manure, that is, you can fertilizer your crops more cheaply with chemicals. Dr. Lindsay has forgotten one item of expense in the production of market milk and that is delivering it at the railroad station. Market milk is paid for at the railroad station and the cost of delivering it there is a part of the cost of production. This I estimate for such cows as Dr. Lindsay speaks of at from $8 to $12 per cow, or at 2 to 3 cents per 8½-quart can, which is probably too low, as it costs the average farmer more than that. This brings the cost of keeping a cow up to $170, and the cost of producing a quart of milk at exactly 5 cents per quart for a cow producing 400 cans of milk a year, or 7,310 pounds of milk, and 6 1-10 cents per quart for a cow producing 6,000 pounds of milk, or 328 cans.

Dr. Lindsay kindly tells us that his figures are for a cow producing 7,000 pounds of milk, and that for a cow producing 6,000 pounds of milk the food cost will be $6 or $8, or less; but neglects to say that for the cow producing 8,000 pounds of milk the cost would be correspondingly increased. His estimate for producing market milk for a cow giving 7,000 pounds is a fair average but is about one cent per quart too low, owing to his erroneous estimate of the value of the manure and to his neglect to include the cost of taking the milk to the railroad station.

The above calculation gives us 42½ cents per can of 8½ quarts of milk of average quality, delivered at the railroad station, as the cost of production to the farmer, and in order to make a urofit of one cent a quart he should get 51 cents a can at the railroad; instead he receives about half that amount in the 10-cent zone, so-called.

Dr. Lindsay also gives us the food cost of the Amherst herd for 1907-8. It amounts to 26.6 cents per can. The contractors in the two years paid an average of 25.9 cents a can in the 10-cent or average zone, or seven mills less than the food cost of producing milk at Amherst Experiment station. If any of the contractors see this, they may recollect my telling them that all they ever offered the farmers was practically the food cost of producing the milk. The above figures certainly bear out my statements. For the last 15 years the farmers have received practically about the food cost for the milk produced, or to take it differently, about half the cost of production, long experience having convinced me that the cost of production has been practically double the food cost. Elaborate and detailed statements will be found on examination to come within a small fraction of this every time, though of course this or that item will vary with the cost of local labor and this or that local condition.

A practical way to get at the cost of milk is to take the food cost and double it. There is no need to go into elaborate calculation of this or that cow's consumption and performance. It was proved years ago that it takes 100 pounds of good hay, or its equivalent, and 33 pounds of mixed grain to produce 100 pounds of milk. At the present prices of hay, this would bring the food cost of a can of milk to 35.2 cents. The con-

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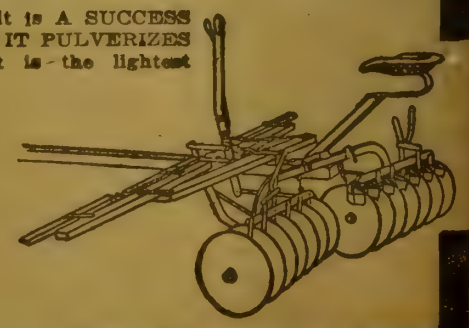

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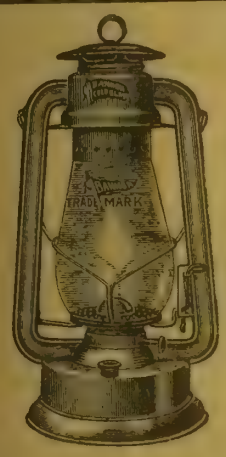

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tractors are now paying 35 cents in the 10-cent zone, about the food cost of the milk, which as I have said before, has been their practice for years. This state of things has driven the milk producers in the metropolitan district out of business as they found themselves getting poorer every year. The few large farmers in this town who are producing milk for the Boston market are gradually giving it up, finding themselves with less money than they had five years ago.

I myself stopped making milk for the Boston market three years ago. Since then I have averaged 13½ per cent. net profit on a fair valuation for my farm instead of losing 30 per cent. as I did when selling milk to the contractors. This shows the fault is not with the land nor with the farmers, but with the conditions besetting the milk business. As long as the farmer is willing to sell the crops he raises, in the shape of milk, at half their market value, so long he will remain a poor man with no chance of attaining ease and independence.

A great deal has been said about ensilage cheapening the production of milk. While rendering due credit to the merits of ensilage, when we remember that it takes 300 to 400 pounds of ensilage to have the feeding value of 100 pounds of good hay, and that the manure and labor cost that will produce 15 or 20 tons of ensilage will give us four tons of good hay to the acre, it is not easy to see where the economy comes in, except as a matter of figures, for the ensilage having no market value is figured at cost price, but take the feeding value, if we take 350 pounds of good ensilage to have the feeding value of 100 pounds of good hay, and take Dr. Lindsay's value of $3.75 a ton for ensilage then it would take $13.12 to raise the feeding value of a ton of good hay in the shape of ensilage, and the ton of good hay can be raised for less money, and every pound of fertilizer to do it purchased at that.

There remains the question of succulence: For this purpose, I would rather have beets, and the acre of ground that will produce 15 or 20 tons of ensilage will produce 40 or 50 tons of mangel beets. I will say in conclusion that I have tried many kinds of feed for cattle and conducted many tests of cattle so that I know exactly what results I was getting, and I have never found a feed that would take the place of good early cut hay, properly cured and therefore containing plenty of digestible nutrients. If you have not some of this quality of hay to feed you will not get the best results possible from your cattle.

In regard to the rule laid down here of 100 pounds of hay, or its equivalent, and 33 pounds of grain, to 100 pounds of milk, it applies only to good dairy cows; it will apply even to phenomenal producers. A large Holstein cow producing 100 pounds of milk a day will consume a bushel of mixed grain weighing a pound to the quart and all sorts of roughage besides, the marvelous thing about the highest class pure-bred cows being, not that they produce milk from little feed, but that they are able to assimilate tremendous quantities of food and turn them into milk. Another item of expense in the raising of market milk is the loss of fertility to the land. Each cow producing 8,000 pounds of milk takes about 700 pounds of milk solids not fat from the land, made from its most fertile constituents and these must be replaced by purchased fertilizers, and on this account I consider Dr. Lindsay's estimate of food cost in addition to the 20 weeks' pasturage lower than it should be, both to maintain the flow of milk and the fertility of the pasture.—John B. Marcou, Princeton, Mass.

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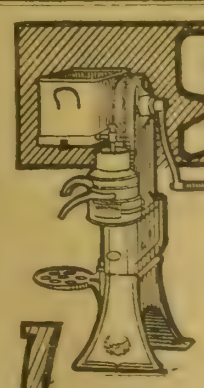

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LIVE STOCK.

Why is Sheep Breeding on the Decline ?

Editor Maritime Farmer:—

Why are sheep decreasing in numbers in the Maritime Provinces? is the question we often hear asked of late years. Is it because they do not pay? Is it because they are too much trouble? Or is it the indifference of our farmers to know a good thing when they see it?

The Dominion Government appointed a commission to investigate the sheep industry; they have made their report. It is well worth perusing and farmers who are at all interested should write the Department of Agriculture, at Ottawa, for a copy. It contains a fund of information. It may seem at a casual thought that a subject so old and one upon which so much has been said and written must of necessity be wholly exhausted; but sheep husbandry has occupied the attention of man from the early days of the patriarchs down through all ages to the present time and will continue to do so as long as the world lasts.

The crucial test by which all business transactions are tried is the one of profit—"Does it or will it pay?" Sheep raising should be no exception to the rule, and yet we are of the opinion that too many who are keeping sheep in these Provinces have but a vague idea how the balance sheet stands with their flock at the end of the year. Perhaps having read the Spanish proverb that "Wherever the foot of the sheep touches the land is turned to gold," they take it for granted that they are making money. That a profit and a good one will ensue from the keeping of a flock of good sheep and caring well for them there is no question, and that even the poorest flock and worst kept possibly may not run their owner in debt, which if proven speaks well for the sheep, but is no particular credit to the man who owns them.

Care and selection in breeding should be more closely followed, one needs only a glance at the flocks on the hillsides to notice this. The difficulties under which many farmers seem to labor is that they have no fixed purpose in their breeding. A mongrel ram should not be allowed in any flock. He will either have a very small preponderance of coarse wool or the same of fine wool, in one case you will soon be out of wool, in the other he will find himself pretty near out of muttom. This state of things is usually the outgrowth of the indifference to the wants and requirements of the flock or the insatiable desire for low priced rams. There is no excuse for this state of affairs for any farmer. We have to-day through the provinces some fine flocks of pure-bred sheep from which good breeding stock can be obtained at very reasonable prices. In the upper provinces are to be found flocks of all the best breeds from which any of our farmers can purchase foundation stock for their flocks. With prices double what they were a few years ago, and the demand greater than the supply, it looks as though the farmers, more especially those in the eastern part of Nova Scotia were losing an opportunity to make a good profit, and at the same time enrich their fields and rid them of weeds.

There are thousands of acres of land lying idle to-day, almost under the shadow of, at least, in sight of, the smoke of the great industrial centres of Eastern Nova Scotia, that can be profitably utilized in the sheep industry.—A. Hector Cutten, Colchester Co., N. S.

Dentition in Pigs.

When full grown the pig has twelve incisors and four canines, an equal number in each jaw. The central pair of incisors are known as nippers; the teeth right and left of these are the intermediaries, and the other pair the corners. At three months all the milk teeth, which include the nippers, the intermediaries, and the corner incisors will have appeared. At six months they have reached full size, and are supplemented more prominently by the tusks. To quote next from the "Book of the Pig." "As soon as the four middle front teeth of the lower jaw have reached their full length they will present an evenly rounded front, but soon afterwards the edges of their crowns begin to wear off, first on the nippers, and afterwards on the intermediary incisors. At the sixth month of the pig's age the so-called wolf teeth (which lie between the tusks and the molars in the lower jaw) break through the gum." The corner incisors and the tusks are shed shortly before or during the ninth month, while the nippers are shed with the beginning of the twelfth month. Those who have examined the teeth of the pig cannot mistake the milk teeth for the permanent teeth, and this applies more especially to the nippers and intermediate incisors. It appears, therefore, to me that up to the age of a year there is no better way of determining in a simple way, as when judging, the age of a pig than by an examination of the front teeth. I am well aware that conditions differ, and in consequence the dates of alteration in the appearance of the teeth, but while I have not referred to the action of veterinarians when a case is referred to them, I adhere to my statement that the front teeth are an indication of age in the young pig, and one which is quite sufficient for the judge.

—James Long.

Managing Vicious Bulls.

Recently a neighbor of mine was severely injured by his herd bull. The animal has proved to be an extra good sire and is a valuable animal, and for this reason has been retained in service, although during his years of usefulness he has been a very stubborn beast and difficult to handle. The owner has never attempted to employ any means by which the bull might be kept under control, but has always allowed him to have a "head of his own," and anyone's life is at stake when approaching him.

Probably the safest and simplest means of handling an animal of this sort is to blindfold him. He may be managed by means of ropes and pulleys, giving him room to move out of his stall when required and bringing him back to his place, but it is a cumbersome method. Blindfolding quietly takes all the conceit out of a blusterer. A broad bandage of double sacking securely fastened over his eyes may serve the purpose ordinarily in the stable. This device may be used to good advantage in handling a nervous or excitable beast while being led to market, or drawn in a wagon to be shipped on a train. I remember a case of a heifer received on the train being so wildly excited that she would jump at a person approaching her to untie her halter, but by throwing a blanket over her head and afterward tying a sack over her eyes she was quietly unloaded and tied behind a wagon which she followed as meekly as one could desire.

Mismanagement or lack of thought makes a great deal of trouble in the handling of stock. Often we see men chasing pigs all over the place in the vain effort to get them into a pen, the animals always going in the direction contrary to the one they

THE TELL-TALE TEST

To test the quality of Molassine Meal, we bought a pair of cattle from Nova Scotia, on October 7th, 1911. The animals were in fairly good condition, weighing respectively, 1465 and 1585 pounds. On arrival at St. John, they were stabled, and, for thirty-four days, fed on One Pint of Corn Meal mixed with a quart of Molassine Meal three times a day. They were weighed again on November 11th., when they tipped the scale at 1745 and 1855 pounds each, showing a total gain of 550 pounds. They were sold to Mr. M. J. Collins, of Fairville, N. B., a copy of whose letter, given below, tells its own story.

WHAT MR. COLLINS HAS TO SAY

Fairville, N. B., Nov. 15th, 1911.

Messrs L. C. Prime Co., Ltd.,
South Wharf, St. John, N. B.

Dear Sirs:—"The pair of Cattle purchased from you were knocked down the first of the week and I am now writing to inform you that we have never handled better beef. This beef was equal to anything coming from the West and weighed when dressed 2185 pounds.

"I can honestly say that I know of nothing that is equal to Molassine Meal for bringing Live Stock into good condition quickly."

Yours truly,
(Signed) M. J. COLLINS.

As this letter is Proof Positive of the Superior Nutritive Qualities of

MOLASSINE MEAL

The Feed That is a Feed

We need only add that It Is Not a Medicine, but An Ideal Vegetable Stock Food, combining the very Best Properties Mother Nature Has to Offer for producing Strong, Healthy, Heavy Animals. Its use prevents disease in cattle, sheep and swine, increasing their weight and creating a vastly superior quality of beef, mutton and pork.

Fed to Horses, Molassine Meal makes greater strength and staying powers, also, keeps their coats smooth, silky and glossy.

Molassine Meal is the only stock food containing molasses that can be fed freely to animals without fear of injuring them.

LET US HEAR FROM YOU

We can furnish the names of many satisfied users of Molassine Meal, and will be glad to answer any questions you care to ask about it.

If your dealer cannot supply you with Molassine Meal, write us and we will see that you get it.

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The Iron Age Planter is the one machine with which an absolutely perfect stand can be obtained. At the Maine Experiment Station the yield where the

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8was used was 75 bushels per acre more than where one of the best of the "Picker" machines planted. It makes no misses, no doubles, injures no seed

In Idaho, Herbert Lambing, a former Iowa Agricultural College student, has gained attention by his big crops, due to scientific methods. He writes in part; "The *Iron Age* means just one half my crop this year." Let it secure for you a perfect stand, a bigger yield and more profit. Ask your dealer to show you the Iron Age Planter, with or without fertilizer attachment. Write us for special booklet and Mr. Lambing's complete letter. Both will interest you. This planter is but one tool in our complete line of Iron Age farm and garden implements. You should know them all.

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In appearance and utility this silverware is exceptionally attractive. They are buffer polished as carefully as any piece of Sterling Silver ever produced. A handsomer line in gracefulness of pattern and richness of finish is not found in the market. This beautiful 8 piece set of SIX TEA SPOONS, BUTTER KNIFE AND SUGAR SHELL in PUFF LINED RACK BOX is given FREE for selling only $3.00 worth of lovely Gold Embossed Picture Post Cards at 6 for 10c. The very latest designs in Views, Floral, Birthday, Comics, etc. The fastest sellers. Just show them and take in the money. Write to-day and get a package. Hurry now, for we give an extra present for promptness. COBALT GOLD PEN CO., Dept 413 Toronto, Ont.

Many sufferers from rheumatism have been surprised and delighted with the prompt relief afforded by applying Chamberlain's Liniment. Not one case of rheumatism in ten requires any internal treatment whatever. This liniment is for sale by all Dealers.

are desired to go, while by having a pair of low light hurdles hinged together forming a v-shaped guide the animals can be handled quickly and with the use of no unseemly words. Vicious bulls are generally made so by unwise treatment when young, giving them too much liberty, or using them cruelly. It is well to use them kindly, but they should be trusted no more than is necessary, for it sometimes happens that a bull that has been quiet suddenly and unexpectedly becomes vicious and maims a man for life or gores him to death. It is the part of wisdom to handle a bull with a strong staff and a safe connection with his nose-ring no matter how quiet he may be. —O. F. Taylor in Breeders' Gazette.

Valuable Cow Ruined.

There is no period in the life of a cow when she requires and should receive more attention than at the time of freshening, owing to the fact that she is so susceptible to complication of diseases such as milk fever, retention of the afterbirth, stoppage or paralysis of the bowels, mammitis or inflammation of the udder and many other diseases.

Among these mentioned perhaps the retention of the afterbirth is the most common and while it does not necessarily terminate fatally, it is exceedingly successful in ruining a cow as a profit producer. The afterbirth is oftentimes retained owing to the fact that the cow has been given cold water at the time of freshening, or permitted to freshen in a cold, damp stable, or out in the rain when the weather is unfavorable.

When the afterbirth is retained it should not be removed by main force owing to the fact that parts will remain. These parts are converted into matter which set up an intense inflammation, causing a catarrhal condition of the genital organs. The animal absorbs the pus which forms from the retained parts and the absorbing of such decomposed tissue upsets the entire system of the animal. This pus is excreted from the system to some extent from the kidneys, bowels, and udder, thus rendering the milk from a cow that has retained her afterbirth unfit for human food.

Cows thus afflicted should be given a dry, clean, well-ventilated, box-stall. A blanket should be placed upon them in cold weather. They should be given ground oats, bran, good clover or alfalfa hay, plenty of water with the chill taken from it, and such medicine as will have a tendency to ripen and expel the afterbirth. The genital organs should be washed out with an antiseptic solution and in this way a cow which has retained her afterbirth will soon be put in a strong, healthy, profitable condition, whereas if she was neglected she would be ruined as a profit producer.—Dr. David Roberts, Waukesha, Wis.

Feed Rack and Manger.

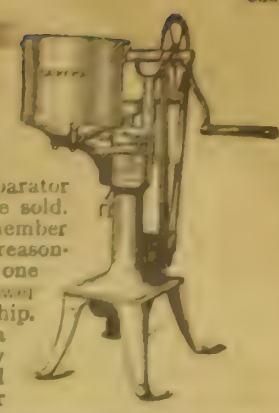
Two parts oats and one of bran make a well-balanced grain ration for pregnant ewes.

Now and then put a little brine on the straw. It acts as an appetizer, and the sheep clean up the straw better.

Expect any young lambs? They will bring you some money, providing you can get them through. To do that you must give them a good warm place to stay and plenty of juicy food for the ewes. Winter lambs are nice and all right, but you must get a hustle on you to save them, all the same.

More animals, more feed crops, more diversification, more rotation, more cultivation, more manure, more system, more planning—mean more prosperity.

The Best Cream Separator is the Cheapest in the End



THE cost of manufacturing a cream separator determines the price at which it may be sold. Therefore, when selecting a separator, remember that the machines which are offered at an unreasonably low price can be offered at that price for one reason only—they are built to sell at prices lower than the cost of good material or workmanship.

Such separators are costly at any price. Only a good separator is cheap; not because of a low first cost, but because it will last for years and save enough butterfat from the milk of four or five cows every year to pay for itself. The best workmanship and material that money can buy are used in making

I H C Cream Harvesters Dairymaid and Bluebell

You will find an I H C the cheapest separator you can buy, because it will do better work and last longer than any other separator.

Go to the nearest I H C dealer who handles these separators and see how carefully they are made. You will find that they have phosphor bronze bushings—that the gears are spiral cut—are entirely protected from grit and milk, and at the same time are easily accessible.

The neck bearing is trouble-proof. The patented dirt-arrester chamber removes impurities before separation begins. These separators are made in four sizes. Ask the I H C local agent to show you one, and give you a catalogue, or, write the nearest branch house for catalogue and any other information desired

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

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It keeps Sheep free from Ticks and Assures better Wool and Heavier Clip.

Flavor of Milk and Butter are improved when Herbageum is given regularly.

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None Better—Costs only 1½c. per lb.

HERE IT IS—100 lbs. Oil Cake Meal; 300 lbs. Shorts; 4 lbs. Herbageum; about 1 lb. Salt. Mix well. Stir about two cupfuls in a gallon of scalding water and feed warm.

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AND REMEMBER—NOTHING ELSE IS QUITE SO GOOD

The BEAVER MFG., CO., Ltd.,

Galt, Ont. - - Sole Manufacturers.

THE HORSE.

Some Facts About Shying.

The theory generally held that shying is commonly the result of defective vision on the part of a horse has probably bery little, if any, justification in fact. It may be doubted whether horses ever shy because of distorted vision. That horses may suffer from defective eyesight without showing a trace of actual disease of the eye is doubtless undisputable. But it does not necessarily give rise to shying. Take the case of a horse which shies at certain objects, such as a heap of stones or mud-scrapings lying at the roadside, and assume, for argument's sake, that owing to impaired vision it gets a distorted view of these objects. How is the animal to know that the object appears distorted to it? The heap of stones, perhaps, does look to it something different from what it really is; let us say, like a sack of potatoes or a collection of rubbish, yet it must be all the same to the horse whether it sees a heap of stones or a sack of potatoes or rubbish or what not, it being no worse off in that than a horse with perfect vision. If this matter is logically thought out one must inevitably come to the conclusion that defective vision can hardly be a potent cause of shying in horses.

THE CAUSE OF SHYING.

The principal cause of shying in horses is nervousness, and it is well known that by far the largest proportion of shyers are met with among horses of either a highly nervous or else a very timid temperament—the latter especially. There would undoubtedly be a great many more cases of shying among well-bred horses, which possess a decidedly sensitive nervous organisation, if it were not for the fact that the high courage characteristic of them neutralises their constitutionally nervous character. Therein we also have an explanation of the fact why entires are so much less liable to shy than mares.

IN YOUNG HORSES.

No particular importance need be attached to the habit of shying at unfamiliar objects commonly met with in raw young horses when first brought to work. There are many sights on the road which they have never seen before, and which, therefore, have a somewhat terrifying effect upon them at first, until they have familiarised themselves with those various objects; but it cannot be too strongly insisted upon that a young horse needs to be treated with the greatest forbearance and gentleness when it shies or makes a feint as if about to do so on meeting anything which excites its apprehension. It should be cajoled and spoken to soothingly, so as to allay its fears and give it confidence. Given such patient management all tendency to shy will, in average cases, sooner or later be overcome. If harsh methods and punishment are resorted to, the animal being forced past the object of which it is afraid at the point of the whip, the consequences may be disastrous. Such irrational procedure is a prolific cause of turning young horses into confirmed shyers. The animal comes to connect the sight of an object which excites its fears with punishment, and it shies from sheer apprehension of being punished whenever an unfamiliar sight is encountered. Once the habit of shying has become firmly ingrained, whatever the original cause, it is practically impossible to cure, even with the most patient treatment, and the less one has to do with a bad shyer, especially for saddle work, the better. The most suitable place for such a horse is in double harness, where it cannot do much, if any, harm, for though it may attempt to shy its mate usually will prevent it from actually swerving or stopping dead. It is an established fact that horses are less liable to shy when driven in harness than when ridden. This is partly, perhaps, owing to their wearing blinkers, which prevents them from seeing some things which might otherwise startle them, but it is also largely due to the fact that, being harnessed to a vehicle, they cannot swerve or break out so easily as when carrying a rider.—Argus.

About Parasites on Colts.

Weanlings are frequently troubled to a considerable extent with intestinal worms of various kinds, especially if grazed on low-lying pastures in late summer or early fall. Some of these parasites are more to be dreaded than others, but none of them are desirable guests or in any way beneficial to their involuntary hosts, and it is therefore advisable to take measures for their removal.

The old farmer's remedy of wood ashes and salt is not to be laughed at in this connection, and if persevered with in small doses for some time will often have the desired effect, but where a more speedy and certain riddance is desired it is well to give a course of anthelmintic powders, as iron sulphate one drachm or powdered arecanut two or three drachms twice a day in a little soft food for a week, to be followed by a drench composed of turpentine one ounce, and raw linseed oil from 10 ounces to a pint, according to the size and condition of the patient. This mixture should be given on an empty stomach and all dry food withheld until the bowels have responded to its action.

INJECTIONS FOR WORMS.

In all cases of intestinal worms, benefit is found from occasional injections of tepid water strongly impregnated with soap, and for this purpose Gamgee's enema funnel, a cheap and convenient instrument easily turned out by any tin-smith, will be found suitable. Some varieties of worms demand for their successful removal a repetition of the medicinal treatment, but those most commonly met are generally satisfactorily disposed of at the first attempt.

External parasites should also be guarded against. Many a good colt has gone to skin and bone from the constant irritation and uneasiness produced by lice, and whenever a young animal shows unaccountable loss of condition and want of thrift it is advisable to examine him closely for signs of the presence of these undesirable companions.

A CURE FOR LICE.

Should they be detected, the sufferer may in reasonably mild weather be washed well with carbolic soap and soft warm water, and after thoroughly drying the skin, carefully and closely dressed more particularly about the roots of the mane, with a good insecticide. For this purpose an ointment composed of equal parts

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

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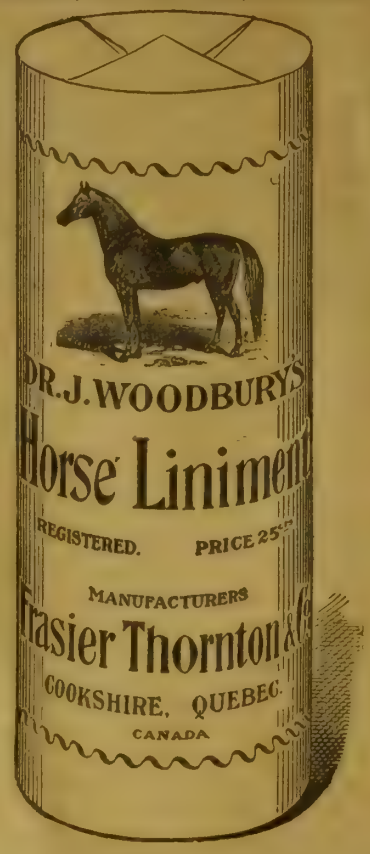

Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump and Tools. **$22.50**

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nearly 100 diseases of farm stock is told in FLEMING'S VEST POCKET VETERINARY ADVISER. Write for this indexed, illustrated 96 page book—it's free.

Tells how to cure the dreaded

LUMP JAW

in a safe, quick, easy way. The first successful cure — the one that cures the highest percentage of cases, and the worst one's, is

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If it or any other of Fleming's Remedies fails to cure, we will refund your money.

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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered. Horse Book 9 E free.

ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Will tell you more if you write. $1 and $2 a bottle at dealers or delivered. Manufactured only by

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Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

by weight of sulphur and lard will be found effectual, as also safe, cheap and easily procured. In cold weather the washing must of course be dispensed with, but the ointment may be applied without risk in a moderately warm stable at any season of the year.—Dr. J. G. Rutherford, Live Stock Commissioner, Ottawa.

Shoulder Injuries on Horses.

If the shoulders of the work horses are neglected during the idle months of winter, the animal is in no condition for spring work.

The causes of shoulder galls and abscesses are ill-fitting and dirty collars, also horses unaccustomed to work are put at hard, continuous pulling before the shoulders become toughened. The first symptom of a sore shoulder is that the hair stands erect in the location of the injury. Later, if the animal is continued at work with the same kind of collar, the skin and hair slough, leaving a raw, bleeding surface. The size of the sore may be from that of a silver dollar up to three inches in diameter.

The sore shoulder causes the horse considerable pain, and if not relieved the animal soon loses flesh, and may cause a sound animal to become balky.

Many times a soft swelling appears just above the point of the shoulder. If opened at the outset, a straw-colored liquid escapes. On the other hand, if not molested it becomes infected and an abscess forms.

These abscesses are often superficial, but may be deeply seated and require expert attention. The deep abscesses may be located six inches or more below the surface of the skin, between the shoulder joint and the chest wall. These abscesses often prove serious and should only be treated by a qualified veterinarian.

By way of prevention of shoulder abscesses and galls, give particular attention to the collar. See that it fits snugly at the top and only room enough between the neck and collar to admit the arm. Also remember that the collar should be kept clean. Wash the dried sweat off the collar at night, and bathe the shoulders with cold water after the horse is unharnessed.—C. L. Barnes, Colorado Agricultural College.

You can say goodbye to constipation with a clear conscience if you use Chamberlain's Tablets. Many have been permanently cured by their use. For sale by all Dealers.

Care of Horses in Spring Time.

Editor Maritime Farmer:—

There is no feed or care too good for the farm work horse, more especially at this time of year, as it is near the time when the very busy work on the farm will begin.

As a rule, many farmers are overanxious to get all the work done they can, so as to get their crops planted as soon as possible, and sometimes work their horses harder than they should. It must be remembered that the horse is less able to stand hard work early in the spring than at any other time, on account of his long rest from labor. Then, too, the change from cold to warmer weather, and his shedding or changing his old coat for a new one all have a tendency to weaken his vitality.

It is well to govern him for a time with tight lines and stop him quite frequently for a few days until he becomes accustomed to steady work again.

As a heavy grain ration is not usually necessary nor desirable for horses that are not constantly employed during the winter, they need a little more grain as spring approaches.

I feed my horses good clover hay because I believe it is the best kind of hay to give farm horses. Timothy may be best to feed horses that work in the city, but in my estimation the best rough feed that can be procured for farm work horses is good clover hay, cut before it is too ripe and put up without rain. It also saves grain.

Regularity in feeding is a matter of considerable importance. It is never best to feed the horse one morning at four o'clock and the next morning at seven, or miss one feed and give him twice the amount the next time.

I always water my horses before feeding for two reasons—to wash out the mouth, throat and stomach, and to keep from washing the feed out of the stomach before it is digested. During the busy season the horses should be given fresh water at least once between morning and the noon hour, and once between noon and quitting time. It takes a little time, of course, but the horses can do more work and they will keep in better condition.

It pays after the cold days are over and the warmdays of spring time are here, to clip the horses; that is, if the proper care is to be taken of them. They will stand more work and do it with more comfort.

The currycomb and brush should be freely used at least once a day when the horses are at work and brought in warm. They should not be compelled to endure the night with their legs covered with mud and the hair baked on them, but should be given a good rubbing.

Their feet need careful attention, and they should be shod when they need it without delay. It is never best, under any circumstances, to drive a horse on the road when his feet are worn and tender. If the hoofs get hard and are inclined to contract, they can be softened with tar or axle grease.

It is essential to keep the harness in good condition, especially collars, sweat-pads and traces. It is well to have three or four pads for each horse. And they should not be changed from one horse to another; they will not fit. If the pads are washed occasionally they will keep soft and pliable. It is the continued sweating and wearing rough collars and pads that so often cause sore shoulder.—F. A., Pictou Co., N. S.

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Because it promotes digestion and assimilation, and enables you to cut down the grain ration 15% to 25% and still get better results. This saving of grain represents a saving of good hard cash to you.

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It will not cost you a cent if you are not satisfied. See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16x22, of our three champion stallions.

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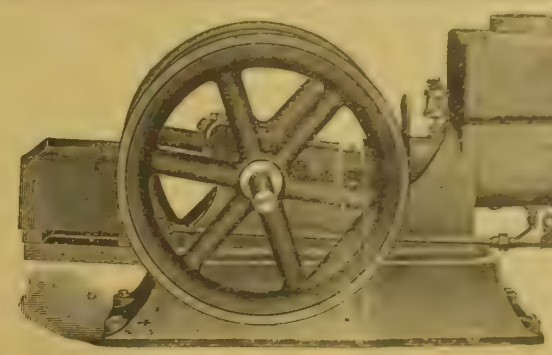

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Bickmore's Farm Account Book will be sent free to any farmer who will tell us what and where he is. This book is arranged to keep all accounts in simple and [illegible] more practical than trying to remember them; shows what to [illegible] a laborers' time record, and section for personal accounts. 64 pages, for ink or pencil.

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Harness and Saddle Galls; Rope Burn, Cuts, Scratches, Grease Heel, etc. [illegible] the horse. Bickmore's cures while the horse works. The workers [illegible] do not [illegible]

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POULTRY.

Poultry Notes.

Lame chickens and bumblefoot are very often the result of too high roosts, especially for the heavy breeds.

Milk is valuable in many ways for poultry. Nothing equals it for mixing up all kinds of soft or ground food.

Keep a daily account of the receipts and expenses with the poultry. This is the only way to know whether they pay or not.

As soon as the young roosters are old enough to sell they should be sold. As soon as their combs grow they are then classed as "old roosters" and do not command a very large price.

Feeding Early Chickens.

There are two distinct methods of feeding young chickens in vogue at the present time, each of which possesses advantages and disadvantages. Some breeders prefer one method, some another, while some prefer a combination of the two. As I try to show below, I think the combination is the best paln. Until a few years ago there was but one plan in common use, the moist, and breeders had no option but to feed their chickens upon a soft diet. The dry system, so-called in contradistinction to the moist, was introduced about ten years ago, at once becoming very popular indeed. I think I am right in claiming that I was one of the first in this country to adopt the new method and I am bound to admit that it has rendered winter rearing a much simpler task than it had been hitherto. At the same time the moist method possesses some advantages. In order to make comparisons I purpose dealing briefly with the two systems of feeding young chickens. The moist method is first discussed.

EARLY DAYS.

The recognised, and by far the best moist diet for the first few days consists of hard-boiled eggs, chopped up finely, mixed with breadcrumbs or biscuit meal, and moistened with warm water or sweet milk. Biscuit meal is preferable to breadcrumbs since the latter has rather a constipating effect. Milk, too, is preferable to water, as it has so excellent a feeding value. No food whatever is given during the twenty-four hours immediately succeeding the chicken's exit from the shell; this applies to which ever method is adopted. The portion which remains of the yolk sac is absorbed into the body of the chicken just before it emerges from the shell, and this contains sufficient nutriment for the period named. The first meal is given about twenty-four to thirty hours after the exit of the chicken. The mixture referred to above is, in my opinion, the best, but there are some who prefer giving a custard pudding during the first few days. This, however, I do not recommend.

THE LATER DIET.

If the chickens are thriving well the egg may be discontinued at the end of four or five days, and during the following week or so biscuit meal or some such specially prepared cooked chicken food should form the staple diet. If the chickens are rather backward it pays to continue the egg longer. Although apparently rather an expensive food, it is not so really since it is unnecessary to use new-laid eggs for the purpose. What are termed "cooking" eggs answer capitally, and are very cheap. Infertile eggs, too, which have been tested and rejected on the seventh day do quite nicely, and the value of these is practically nothing. After the chickens are ten days old a variety of foods may be employed, retaining biscuit meal or some such specially prepared food as the basis. Ground oats, barley meal, and middlings are all useful meals, either mixed together or used alone. Whatever meal or meals are employed, however, it is very important indeed to give them fairly dry and not sloppy. A crumbly moist condition is the best. If chickens are

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Will Surprise and Delight You With Their Lightness, Neatness and Comfort —Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to **feel** and **see** and **know** how much **lighter, neater, stronger,** more **comfortable** they are than any other work shoes in existence. Hence we are making this special **Free Examination Offer,** merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you **immediately** you can notify us to send for them at our expense and we will refund your money.

Must Sell Themselves

We ask no favors for Steel Shoes. Compare them with the best all-leather work shoes you can find.

Give them the most rigid inspection **inside and out.**

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The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and astonishing durability. The introduction of Steel Shoes in a neighborhood always arouses such interest that an avalanche of orders follows.

Here is the way Steel Shoes are made: The uppers are made of a superior quality of leather, as **water-proof as leather can be tanned.** Wonderfully soft and pliable—**never gets stiff!** The soles and sides are made out of one piece of special, light, thin, springy, rust-resisting Steel. Soles and heels are studded with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets easily replaced when partly worn. 50 extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years! No other repairs ever needed! The uppers are tightly joined to the steel by small rivets of rust resisting metal, so that no water can get between.

The soles are lined with soft, springy, comfortable Hair Cushions, which absorb perspiration and odors and add to ease of walking.

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6, 9, 12 and 16 Inches High

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, $3.50 per pair.

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Boys' Steel Shoes, 6 inches high, $2.50 per pair.

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Good for the Feet! Good for the Health! Good for the Bank Account!

These shoes are better for the feet, better for the health, better for the pocketbook than heavy work shoes or rubber boots.

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by wearing Steel Shoes. Figure it out for yourself. One pair will outlast 3 to 6 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

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And Your Money Back Promptly If It Looks Better Than the Shoes!

You owe it to yourself to Investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which will be returned if you and **your own feet** are not convinced of their merits.

WHY WAIT? SEND NOW!

No risk! No bother! No obligation! Don't hesitate! Act while this offer is open! Simply state size of shoe you wear, enclose the price and get the shoes for Free Examination.

For **general field work** we strongly recommend our 6-inch high Steel Shoes at $3.50 per pair or the 9-inch at $5.00 per pair. For all classes of use requiring high cut shoes our 12 or 16 inch high Steel Shoes are absolutely indispensable.

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supplied with sloppy foods they are almost sure to suffer from bowel complaints, one of the most common ailments affecting young stock. Boiled rice is a suitable food, but careful preparation is necessary. To one part of "paddy" or chicken rice three parts of water should be added, and the two allowed to simmer on a fire till all the water is absorbed.

SOME IMPORTANT DETAILS.

It is extremely important when this method of feeding is adopted to give the chickens so many meals a day, allowing them to eat as much as they will at each meal, but removing the food when their appetites are satisfied. It is as bad for chickens as it is for children to be continually eating between meals. They should have as much as they want at a time, but nothing between. Small troughs or wooden blocks should be used for feeding, and never on any account should the soft food be thrown down upon the ground, for the chickens trample upon it, making it unfit to eat. Besides injuring their health, a large quantity of food is wasted. It is a debateable point whether it is advisable to give drinking water or not. Personally, I think the chickens, when being fed on moist foods, are all the better without until they are a month or five weeks old; many poultry-keepers, however, disagree with this, and supply water from the first. I do not think it is a very important matter—the important thing is that if water is supplied it shall be quite fresh. It should be renewed two or three times daily, for stale or tainted water is an almost certain forerunner of disease. During the first week of their lives feeding should take place every three hours from about 6.30 or 7 a.m. till 9.30 or 10 p.m. The last meal or two must be given by lamp light. During tne second, third, and fourth weeks five meals a day are sufficient, after which age four meals daily suffice. When the chickens are from six to eight weeks old a little grain may be given to them. Cracked wheat, cracked maize, or some of the smaller grains are suitable. Care must be taken in giving the wheat and maize to see that it is cracked, and not crushed, for in the latter condition it is bad for the birds. If a good sample of tail wheat can be obtained this answers the purpose admirably.

ADVANTAGES AND DISADVANTAGES.

There are two chief drawbacks to the moist method of feeding, and there are two advantages. Perhaps the chief drawback is the fact that under this system bowel complaints are of rather frequent occurrence. Particularly early in the season is this the case, for when the days are fine and more or less warm the exercise the youngsters are able to procure counteracts the tendency to bowel troubles. It is difficult under any circumstances to persuade chickens to take sufficient exercise; when feeding on moist foods it is doubly difficult. The other drawback is the large amount of labour necessary to prepare the food and to feed the chickens so many times a day. The preparation of the food involves much time and labour, since it has to be prepared for each meal, besides which feeding has to take place early in the morning and late at night. The advantages of feeding chickens on moist foods are that growth is very rapid and that the flesh is made soft and tender. This latter point is of importance with chickens intended for the market. Fatteners do not care very much for dry-fed chickens, since they assert that their flesh is hard and their crops small, thus rendering the fattening process more difficult. For rearing chickens for table purposes, therefore, the moist system is the better, seeing that development is more rapid and the fattening possibilities greater.—E. T. Brown.

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And many other prizes according to the Simple Conditions of the Contest (which will be sent).

This is a chance for clever persons to win Cash and other Prizes with a little effort. Count the Xs and Ts in the Square, and write the number of each that you count neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. Try at once.

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Mother.

There is a shrine whose golden gate
  Was opened by the hand of God;
It stands serene, inviolate,
  Though millions have its pavement trod;
As fresh as when the first sunrise
Awoke the lark in Paradise.

'Tis compassed with the dust and toil
  Of common days, yet should their fall
A single speck, a single soil,
  Upon the whiteness of its wall,
The angels' tears in tender rain
Would make the temple theirs again.

Without, the world is tired and old,
  But once within the enchanted door
The mists of time are backward rolled,
  And creeds and ages are no more;
But all the human-hearted meet
In one communion, vast and sweet.

I enter; all is simply fair;
  Nor incense clouds, nor carven throne;
But in the fragrant morning air
  A gentle lady sits alone.
My mother—ah! whom shall I see
Within, save ever only thee!

—Digby Mackworth-Dolben.

Love's Barrier.

(Continued from last issue).

CHAPTER XIX.

THE ORDEAL.

The heavy rustle of Mrs. Hayes' silk skirts broke the tense silence. She rose from her chair with a conscious pride to receive her guests, and make the important introduction. She had time, however, to notice the distinction of Mrs. Secretan's dress, the consummate grace with which it was worn. She also noticed, however, that she was extremely pale.

"So glad you were able to come. Permit me to introduce Major Hunt—our dear friends Mr. and Mrs. Secretan, Gerald, of whom we have talked so much."

Helen met Hunt's eyes clearly, and gave a slight bow. He fully understood that she desired to ignore their past acquaintance, and while it secretly piqued him, he could do no other than fall into line with her mute suggestion.

He murmured something about the pleasure it was to meet her. Secretan, less cold, offered a frank hand, and when Helen saw it she drew a step back. Audrey went to her side, and drew her down on the couch, ready to speak from an overflowing heart.

"Gerald and I were so sorry to find you out when we called yesterday. I have been simply dying to see you, darling, and thought tonight would never come. Don't you think I am a lucky girl?"

Helen did not at once reply. She felt the room reeling round her, and wondered how she would get through the ordeal of the meal in front of her. The last straw would be if she had to go down on Hunt's arm, but she comforted herself with the assurance that it would not be possible, she being the only lady guest. The men had already grouped themselves about the log fire, which burned so cheerfully in the wide low grate; fortunately Hunt's back was turned to her.

"What do you think of him? Isn't he handsome, Mrs. Secretan?" asked Audrey, with all a girl's pride in her first real lover.

"Yes," admitted Helen, but her voice sounded far away and unreal even in her own ears. "He is certainly very handsome."

"And isn't it wonderful that such a brave, clever soldier should stoop to a girl like me, a little country girl, who knows so little, and has never seen anything?"

"That is your particular charm, dear; you are so natural and so fresh—an unblown bud on the tree," said Helen mechanically, though she tried her utmost to speak naturally. Audrey looked a little perplexed, missing the usual warm sympathy, the quick comment, the look of live and loving interest in the eyes of the woman she had learned to look up to and to love, with all that girlish enthusiasm which finds its outlet in the making of heroes and heroines, until some of the grey realities of life somewhat dim the happy quest.

"Dear, I don't think you are bery well. You are so frightfully pale, and your hands are cold," she said anxiously. "But I have never seen you look so sweet. There is something about you which allures people. Can't you see the Rector's eyes always turning this way, and if Gerald were not very stupid, he would turn round, too."

"He would have eyes for no one but you, Audrey," said Helen, forced to say the obvious, but putting no life into her words. "Yes, Mr. Hayes."

She was glad when their host, who was a warm friend of the Secretans, and of whom Helen was specially fond, came to her side to offer his arm.

"Dinner is served, I think. We are all very glad to be back again on the moors. Foreign places have their charms, I don't doubt, but, after all, England is always home."

Helen rose and laid her hand on his arm. Her fingers touched it a little convulsively as she passed close by Hunt and felt his eyes upon her. The expression on his face, however, was inscrutable; it was only his eyes which were filled with a sombre fire. He followed with Audrey, laughing and chattering by his side, and so came to the dining-room, where they assembled at a round table, which afforded Helen no screen. She was seated so that Gerald Hunt could obtain a full view of her face, and note its every expression. Helen was a clever woman, who on more than one occasion in the past had been compelled to play a part, but never one like this. She had decided on a moment's impulse, which came from she knew not whither, that she would meet Hunt as a stranger. She could not have given any reason for such a course, except that she required some time in which to gather and regulate her thoughts and face the full significance of what had happened and what was going to happen.

Hunt had accepted her cue, and after the first moment of awkwardness passed off, he settled down to enjoy himself. The finding of Helen here in this unexpected house gave an odd piquancy to the situation. He was sufficiently man of the world to be able to extract its full flavour. And he admired Helen exceedingly. She had acquired dignity, repose and a new and altogether indescribable charm for which he could not account. He had always admired her; had, indeed, cared as much for her as it was possible for a heart so wholly selfish to care for another, and now that she was altogether out of his reach, the old spell seemed to spring upon him again. He had difficulty in keeping his eyes from her face. A delicate flush began to creep through the whiteness of her skin, after she had yielded to her host's entreaty, and tasted the champagne which foamed in her glass.

"We must drink to the young couple, you know," he said with an air of fatherly pride, as he raised his glass. "It is a very special night."

Helen raised her glass also, and just touched it with her lips. Secretan's hearty response made up for her coldness, and the incident passed without any outward sign.

The dinner was not very long. Mrs. Hayes had profited by her few entries into good society to observe its customs, and had grasped the fact that the acme of the caterer's art is to produce the perfect in little. Hunt was indeed amazed at the super-excellence of everything, at the quiet richness of the table appointments, and the solid British comfort of his future father-in-law's abode. As the dinner proceeded he became a little more daring, and decided that he would punish Helen for her cut direct.

"Audrey tells me you lived at Colchester before your marriage, Mrs. Secretan," he said, with a studied politeness. "You and I must have mutual acquaintances, I feel sure, even if we did not meet during my all too brief sojourn there. Did you know the Langton Gores at Gore Farm?"

"My father knew them well; we did not exchange visits after his death," replied Helen, forcing herself to speak with a cold naturalness which amazed herself.

"And the Willoughbys at Dedham? I think you must have known them. Constance Willoughby, you remember, who married Jimmy Graves."

The Willoughbys had been Helen's most intimate friends, and it was at their house they had first met.

"Yes, I knew them, too."

"Isn't it delightful to find you have so many mutual acquaintances," said Audrey artlessly, as she leaned her round, perfectly moulded elbows on the table and nodded delightedly across at Helen. Dessert was on the table, but nobody seemed in a hurry to rise. Helen, feeling herself desperate, looked with a gesture of quite genuine appeal at Mrs. Hayes. That good lady saw that Mrs. Secretan looked not quite like herself, and considerately rose.

"Are you feeling the room a little hot, dear Mrs. Secretan?" she said anxiously, always very affectionate to the Rector's wife, since she had discovered her intimacy with the Duchess. Helen would have been surprised had she known how often her name and that of the Duchess of Eastwater had been coupled on Mrs. Hayes' lips at Marienbad during the past six weeks.

"I do feel it a little hot. Yes I shall be glad to go upstairs."

She swept from her chair, and carrying herself with a regal grace, followed her hostess from the room, Audrey bringing up the rear with her arm thrown affectionately about her waist the moment the door closed.

"I'm so glad you made mamma get up," she whispered. "I'm simply dying to hear what you think of Gerald. Isn't he clever? When I heard him and Mr. Secretan discussing the frontier question in India I felt how little I knew. I hope you liked him, Mrs. Secretan."

Helen did not immediately reply. Something was tightening about her heart. They got to the drawing-room, and Audrey placed Mrs. Secretan in a very comfortable corner of a big Chesterfield couch, and went to get a stool for her feet. When she came back something about Helen caused her to give a shrill cry.

"Mummy, there's something the matter with Mrs. Secretan; come quick!"

Helen had fainted.

Mrs. Hayes did not lose her head in an emergency, and she was genuinely concerned at the apparent indisposition of her guest. Her motherly heart warmed to her, and she bent over her with a quite real tenderness while she despatched Audrey for Tremlitt and restoratives. A little brandy quickly revived her, and Helen sat up looking much ashamed of herself.

"Dear Mrs. Hayes, I can never forgive myself. I have not been feeling very well all day; in fact, I have been lying down the best part of it. I ought to have sent an apology, and allowed Claude to come himself. I hope you will forgive me."

"Forgive you, my dear—what is there to forgive? There, Tremlitt, take that cushion from Mrs. Secretan's feet. You can go now and make a good cup of tea, and we will come to the boudoir for it. It will be better for Mrs. Secretan now than the coffee."

The footman entered with the coffee-tray at the moment, and Audrey busied herself with the cups. When the man had retired again, Mrs. Hayes on nodding her head at the same went on nodding her head at the same time as if she fully grasped the situation and knew how to deal with it. Bending over Mrs. Secretan she patted her shoulder kindly.

"It often came over me like that

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Women everywhere should remember that there is no other remedy known to medicine that will cure female weakness and so successfully carry women through the Change of Life as Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs.

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Yours truly,
J. B. Livesque.

St. Joseph, P. O., 13th Aug., 1900.

STAMMERERS

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to 11

THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

before Audrey was born," she whispered. "It need not alarm you in the least, I am sure."

Helen's colour came back with a rush, and she tried to get to her feet.

"I am really quite all right, and there is no need to trouble about getting tea. I assure you I am quite all right." Audrey, a little puzzled, and much concerned, hovered about anxiously. Helen gave a little hysterical laugh. "It was ridiculous to go off like that, but don't look so troubled, I assure you it won't happen again."

She refused to move from her corner, or to accept Mrs. Hayes' suggestion that she should go and lie down in her boudoir; and when Audrey went out to tell Tremlitt to bring the tea to the drawing-room, Helen looked at Mrs. Hayes.

"Please don't say anything about this to my husband, Mrs. Hayes. He would exaggerate it. He will not notice anything, and I assure you it has not done me the least harm."

Mrs. Hayes shook her head.

"You have to be very—very careful," she began; and Helen laughed a little hardy.

"It is not as you think. There is nothing. It is only the heat, and because I felt stupidly tired before I came."

"You didn't look tired, I assure you. I never saw you so brilliant, and how you talked at the table! I haven't got any of that sort of talk. My gifts have always lain in other directions."

Mrs. Hayes uttered these words in a tone of slightly virtuous complaint, as if to imply that the more solid characteristics did not always meet with their full appreciation.

"Did I talk too much? I suppose I did not notice it."

"Oh, nobody thought so; I'm sure the gentlemen didn't. Did you not see how interested Major Hunt was? How do you like him, Mrs. Secretan? Tell me as long as we are alone. Don't you think he is a very distinguished looking man?"

"Very," replied Helen, thankful that she could answer the latter query with perfect truth.

"And his aunt, Lady Angela, has quite the air of the grande dame. But her and me" (sometimes, even yet, when she was a little carried away, Mrs. Hayes made sad grammatical lapses)—"her and me got very intimate. How fond she is of that boy! She could not love him any better if he were her own son. Of course, they are not very rich, but as I said to Mr. Hayes, riches aren't everything. And we shall be able to give Audrey a very handsome income, even while her father is alive. I wonder how Audrey will like the roving life. It's the only thing I don't like about the affair. If only he could have got a nice place. The family place is in Worcestershire, near Hagley, I am told; and I'm sure Mr. Hayes wouldn't quarrel about the price if it could be brought back, and they could settle on it. But Major Hunt won't leave the army just yet. He's keen on active service, and they're expecting to get some, it seems, sooner or later in India. Of course, Audrey doesn't know that. She would worry herself into her grave about it, poor child. It is not very easy to be a soldier's wife."

"Are they going to be married soon?" Helen forced herself to ask.

"Gerald wants it to be before Christmas," whispered Mrs. Hayes proudly and mysteriously. "But Geoffrey hasn't given his consent yet. I suppose he will have to. Ah, here is Audrey."

The door opened and Audrey came in, followed by Tremlitt with the tea-tray.

Helen drank her tea feverishly and felt stimulated by it. Her eyes had their brightness restored to them; indeed, they seemed to shine unnaturally.

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—use warm water and Baby's Own Soap.

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I will mail, **free** of any charge, **my home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. **Men cannot** understand women's sufferings. What we women know **from experience,** we know better than any doctor. **I know** that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharge, Ulceration Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also **pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weakness peculiar to our sex.**

I want to send you a **complete 10 days treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really cures all women's diseases and makes women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

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You can win any of these splendid premiums by selling $3.00 worth and up wards, and if you will **write today** you can also win one of the **Extra Premiums** we are giving to those who are prompt. **Send us your name and address,** plainly written, and we will forward you a package of cards and our big premium list. We get a great many repeat orders from our customers. That's **BECAUSE OUR PREMIUMS ARE THE BEST. COBALT GOLD PEN CO. Dept. 320 Toronto, Ont.**

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HEADACHE

Seems To Be Habitual With Many People.

Some are seldom, if ever, free from it, suffering continually and wondering why they can get no relief.

Headaches are generally caused by some derangement of the stomach or bowels, or both.

Burdock Blood Bitters removes acidity of the stomach, improves digestion, regulates the constipated bowels, and promotes a perfect circulation of pure blood to all portions of the body, thereby curing the headaches by removing the cause.

Mrs. L. Maguire, Kinmount, Ont., writes:—"I am writing you a few lines to tell you what your Burdock Blood Bitters has done for me. I used to be greatly troubled with headaches, but after using two bottles of Burdock Blood Bitters I was completely cured. This was two years ago and I have had no return of headache since."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

A SPEEDY CURE

Kentville, N. S., January 1st, 1910.

Messrs. C. Gates, Son & Co.,

Gentlemen,—This is to inform you that I have been a sufferer for the last fourteen years from kidney and stomach trouble, brought on by severe colds. Having been laid up every winter during that time. Last year I was laid up for seven months, so that I could not go out of the house. Dropsy set in, and my stomach swelled so that I was six inches larger than my usual size, had two doctors in attendance, but I grew worse and they were going to tap me—my friends despaired of my life. At this time I was recommended to use Gates' Life of Man Bitters and Invigorating Syrup No. 1. and in one week after commencing their use, my size was reduced two inches, and in four weeks was reduced to my usual size, so that I went to work in my mills, and have been able to continue it ever since. By continuing the use of your BITTERS and SYRUP, I hope to get a cure of the kidney and stomach trouble so far as it is possible, as it always helps me when I take it. You may make these truths known for the benefit of sufferers. Yours very gratefully,

John W. Margeson.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

"You won't mind if we go rather soon," said she when the sound of voices was wafted up the wide staircase, indicating that the gentlemen were leaving the dining-room.

Mrs. Hayes nodded.

"Just wait till they have been here a few moments, and I will order the carriage."

The door opened, and Mr. Hayes came in alone.

"Gerald and Mr. Secretan have gone back to smoke another cigar," he said genially. "They got on uncommonly well together; so well, indeed, that I thought I'd just slip up where my company might be a little more appreciated."

He smiled and nodded to Helen, and finally took a seat on the end of the couch beside her. Helen's colour, now quite hectic in her cheek, receded.

Why had they gone back? It was most unusual. Had Gerald Hunt any sinister meaning by it? Would he speak to Claude about the past; drop poison into his honest, unsuspicious mind? The idea was intolerable. She scarcely knew wnat was passing around her; she listened mechanically to her host's remarks, to the interludes made by the other two, but was not really conscious of their actual portent. Her whole heart and being were downstairs at that table where her husband and her old lover were tete-a-tete. Presently Mr. Hayes begged for a little music.

"It will bring them up quicker than anything. Major Hunt sings well, and when he hears your fine touch on the piano, Mrs. Secretan, he won't be able to resist coming up."

Helen rose, thankful to get away from the kindly small talk, the need to listen, and to answer. She could be alone there in the dim corner where the tall palms almost hid the instrument from view, and she knew that its touch would soothe her as nothing else could. She rose and glided across the room, pulling her lace scarf about her shoulders with a gesture of infinite grace. Audrey came forward, and asked whether she should turn up the electric light, arranged so cunningly to send the soft glow down upon the keys.

"No, thank you, dear; I'm only going to play a little from memory. Go and talk to your dear father. This will put me quite all right."

Audrey obeyed instantly, and Helen began to play. In spite of the contemptuous way she had summed up her accomplishments to Secretan, she played really well, with a little appealing individual touch which always compelled people to listen. It soothed tham all. Mrs. Hayes began to nod in the depths of her capacious easy chairf She had eaten a very good dinner, and the slight excitement over Mrs. Secretan had left her a trifle tired. Audrey and her father continued to talk in whispers, she leaning against him, her head on his shoulder.

So the two from the dining-room found the room when they entered it. Helen felt them come rather than saw them, but, hardening her face, she played on, without so much as one false note. She knew that Hunt would come to her side, and she wished it. She had something to say. In a moment of time her mind was made up. The purity, the childlikeness of Audrey Hayes, the knowledge of the sheltered life she had led, of her total unfitness for the life to which a man of Hunt's type would introduce her, filled her for a moment with a vast dismay. She had suffered so much herself, she would save another woman, especially the child she loved, and whose sweet affection had added so much to her happiness in Midcar Rectory, she would save her from a life that could only end in misery for her.

Hunt strolled up the room, and came behind the great palms which eyes quite clearly and unfalteringly shut them off practically from the to his face. She waited as the most end where the others were grouped. casual acquaintance might have done Helen played on, and when Hunt for him to speak.
stopped by her side, she lifted her (Continued in next issue).

CURIOSITY Prompted Many Women To Try PURITY FLOUR

THEY were curious to see exactly what results would be produced by flour *consisting entirely of the high-grade portions* of the best Western hard wheat.

They were curious to know more about a flour that contained none of the low-grade portions, which are found in every wheat berry, but which are separated and excluded from the high-grade in the process of milling PURITY FLOUR.

THEY were curious to know whether an ALL HIGH-GRADE hard wheat flour was really superior to a mixed hard and soft wheat flour.

They were curious to see and taste the kind of bread, buns, biscuits, cakes and pies PURITY FLOUR would make.

Curiosity prompts you to seek the knowledge they discovered. It's urging you to try PURITY FLOUR.

REMINDER: On account of the *extra* strength and *extra* quality of PURITY FLOUR it is necessary, for best pastry-results, to add *more* shortening than you are accustomed to use with an ordinary flour. Add *more* water when making bread.

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PURITY FLOUR

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110

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Adjustable width of track and rows, all-brass Spramotor, brass ball valves, automatic agitator and compensating plunger. High grade throughout. For one horse only.

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Sleeplessness.

It is most important that the digestion should be in perfect working order, food being taken at regular hours, and the bowels opened daily. Light food only should be taken, and above all things, avoid a late meal. The evening meal should be taken no later than 7 p.m. Tea should be taken once a day only. Instead of drinking tea three or four times a day try Sanatogen. This can be mixed withmilk, cocoa, and Benger's Food and taken in many other ways. It is a very soothing, light food, and a good plan is to take it at breakfast, after lunch. and at bed time. It should be given in hot milk or Benger's Food after the person has retired to bed. This should prove a great aid to sleep, as the nerves gradually become quiet and soothed. Sometimes a glass of hot water or lemonade will have the desired effect. On no account take whisky or brandy, as in nine cases out of ten it tends to wake the person up, besides being injurious to good health. It is of great importance to find out the cause of sleeplessness. Often it is want of exercise and fresh air. A good walk every day and sleeping in a room with the window open are most essential. Cold feet may be another cause. Never go to bed with cold feet and legs, trusting to a hot water bottle to warm them. The feet should be bathed in warm (not hot) water, to which has been added a little mustard. Well rub dry with a good rough bath towel; this will aid the circulation of the whole body. Massage of the feet, legs, or head will often induce sleep when other methods fail. Reading by the aid of a candle some book, not too exacting, is very beneficial to some people. A light diet, fresh air, exercise, and daily movement of the bowels should remove all tendency to sleeplessness. One should always remember a person of sixty-seven years will not require the same amount of sleep as another of twenty-one years.

Baby's Ears.

There are various little things associated with the toilet which have an important bearing upon the health and hygiene of baby during the first year. When the ears are not attended to properly, troublesome eczema often occurs. After the ears have been well washed with a little warm soap and water they should be well dried. This is best done with a soft piece of linen handkerchief, or a little cotton wool. The mother should never push the corner of a towel into the delicate ear structure with the idea of thoroughly drying the part. She may by so doing cause chronic deafness, as the ear drum is so easily injured in infancy. Any undue redness or rash round about the ear should be treated with zinc ointment, rubbed in immediately after baby's toilet is completed. Many a mother would be saved a good deal of worry over sore ears, eyes and mouth if proper attention were only given to the bathing and drying of the child. The old saying, "Prevention is better than cure," should always be borne in mind by the young inexperienced mother.

Picture Hanging.

To hang pictures to nails driven into a wall is not the best or most convenient way, for if at any time it is required to rearrange them it may be necessary to draw the nails and drive them in the wall again elsewhere, leaving behind an unsightly hole and break in the wallpaper or distemper. A good and convenient way is to fasten a rail to a wall to within a few inches of the ceiling. Drive into the wall two or three wooden plugs, to which the rail should be screwed. The rail needs a groove along the top to carry the hooks, these can be moved to any part of the rail, and cost a few cents per dozen. Hang the pictures to these by picture wire, which is preferable to the old cord, as it will not rot so quickly. A metal barrel rod may take the place of the wooden rail if need be. The brackets to which it is fixed must not, however, jut out too much away from the wall. A damp wall is often the ruin of many a work of art, but it is also often the ruin of another work of "art"—the wallpaper—through the lower end of a frame lodging against the wall and causing an unsigntly dust mark. Avoid this by screwing a small piece of rubber or cork to each back lower corner of the frame, which keeps it from coming into close contact with the wall and allows free play of air and prevents the collection of dust.—G. A. C.

Washing Utensils.

Baths and all washing utensils need regular and thorough cleansing; it is not sufficient that they get only the one swill round of cold or even warm water after immediate use. but they should be well brushed out with hot, soft, soapy water, then swilled several times with clean water, and kept well on the move all the time, so that no soapy scum or poisonous matter may remain to cause an unsightly dusky stain. This stale scum or other stain may be easily removed from porcelain ware with a little dampened salt rubbed in with a cloth and then rinsed away. Should the trouble occur to an enamelled article it is rather more difficult to be rid of, and may mean a fresh covering of enamel or paint. Any accumulations of stale dirt or grease on zinc or galvanised iron ware will readily yield to a little mixture of paraffin finely powdered bath brick, and elbow grease; the last well applied often restores an article to its original beauty. All articles of wood need an occasional scrubbing with strong hot soapsuds and plenty of swilling with clean water.—G. A. C.

Apple Rice Pudding.

Pare and quarter four medium-sized tart apples, and lay them loosely on a buttered pudding-mould; turn over them a quart of milk in which has been dissolved three-quarters of a cupful of sugar. Sift three tablespoonfuls of rice over the top, pressing it gently under the milk; add a few bits of butter, and bake slowly for four hours. Serve with plain sweetened cream.

Breakfast Croutons.

Cut some remains of ham in dice, and toss them till hot over the fire, with a little pepper, minced onions, parsley, and mushrooms (if at hand); now stir into the mixture the yolks of two eggs, watch them till they are just on the point of setting, then put the whole on to squares of hot buttered toast, dust with a little pepper, and serve very hot.

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Here is an extra special worth $1.50 which we are offering at only 98 cents postpaid.

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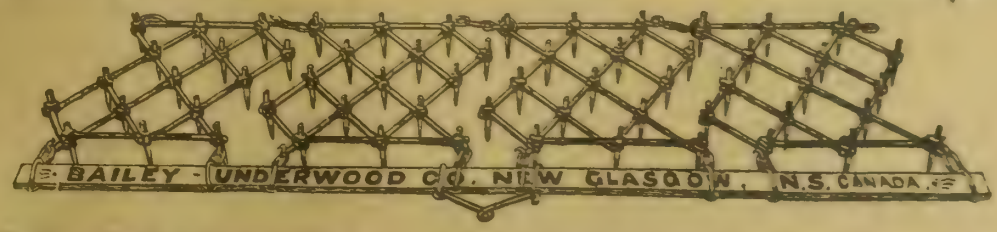

HARROWS We make all kinds, Spring and Spike Tooth. When you are considering during the Spring evenings, what kind of a Harrow you will buy, get it fastened into your mind that we make the best and most effective working Harrows on the market. It will pay you.

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Nagging of Children.

A Physical Trainer, in Orff's Review, has given the following, which should be read and reread by parents:

A child that is nagged at never holds itself well. Its deportment betrays its mental attitude, and to the trained eye of the physical training instructor the round shoulders and apologetic air tell their own story in the case of a child whose physique otherwise reveals no sign of constitutional weakness.

The attitude of the body discloses in a marvelous way that of the mind, and many parents would be astonished to learn that the bearing of their children reflected their home influences in a very unflattering light.

"I want to walk as though I owned the street," said a lady to me one day. "That's the way my sister walks—can't you teach me to do the same?" I tried. But after weeks of fruitless effort, I discovered the reason why no amount of instruction would give this woman the queenly bearing she coveted. She lived in terror of her husband. I had previously expended similar fruitless efforts on her children. Their carriage was the same as their mother's! Doubtless they received the same treatment from their father.

For of what is this hollow chest a sign except that the child treated unsympathetically shrinks into itself? What is this drooping head but an outward expression of fear within? And what does this poking chin suggest but obstinacy and defiance?

The only way to correct the defect is to remove the cause. An atmosphere of appreciation and loving sympathy will induce fearlessness, cultivate self-confidence, and elicit good will, traits which unfailingly express themselves in a child's appearance.

Whilst lunching with a lady the other day, I listened to a tale of distress about her little boy's flat chest. Presently the child came in from school with colored pictures. "Oh, yes, dear, but don't start with it now; go and wash your hands and get tidy." The child's enthusiastic little face fell, his flat little chest seemed flatter still, and he resignedly put away his book and left the room. There will be little chance for that child's chest until his mother learns to express her affection more positively in the form of active and ready sympathy, not merely negatively in the form af anxiety. The glow of enthusiasm which was swelling the child's heart, literally as well as metaphorically, was quenched by the chilly reception. The expanded chest which accompanied the movement of enthusiasm collapsed at once like a pricked bubble.

The most affectionate parents are often the worst sinners in this respect, and their anxiety for their children's welfare often takes the form of continuous reproof, indicating a lack of wisdom rather than of love.

"Oh, my dear child, do put your shoulders back! How often have I told you——" That is the constantly reiterated phrase, and constant reiteration is perhaps the most painful form of "nagging."

What is the use of telling the same thing in the same way so many times? If the nineteenth time of telling has had no lasting effect, why should the twentieth?

The only sound course is to find some other method of bringing about the desired result. The most potent weapon is the power of an idea. Endless nagging will never do more than weary the child and make it obstinate or sulky, and an obstinate or sulky child always becomes round shoulder, just as a shy, self-conscious child will always poke her head forward.

Even though at each reproof the child may make a spasmodic effort to correct the defect, no lasting result will accrue, because the predominant mental attitude will always beget the habitual bearing. No physical instruction can produce the carriage that every one delights to see unless there is a measure of confidence and self-esteem behind it. Self-confidence and self-esteem come hard to a little girl who is always conscious that other people have a poor opinion of her. Self-confidence indeed seldom comes to her at all, except through the expressed confidence. So it is useless to tell a girl to hold herself up, and at once follow the admonition by querulous criticism and unfavorable comparison with others.

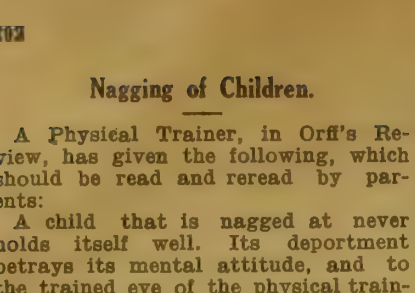
There should be in the carriage something beyond more than an erect spine, flat shoulder-blades and a head held high; something subtle and striking, potent and attractive, and dependent entirely on the attitude of the mind. The self-reliant deportment of the confident woman who knows that she is capable of taking care of herself; the joyous, happy gait of the young girl to whom the world is always in blossom; the quiet, masterful air of power and dignity of the person who holds a position of responsibility—all bespeak a very different mental attitude from that represented by the apologetic, conciliatory, sulky, or semi-defiant bearing of those who live perpetually in an atmosphere of reproachful criticism.

Give your children, therefore, encouragement, rather than criticism, sympathy rather than reproof, and, whilst they are in the awkward age, at least, do not add to their self-consciousness by constantly drawing attention to their faults.

I have seen a little girl in school suddenly transformed by one word of praise from the teacher; a poor little child, it was accustomed only to scolding and punishment, and the unusual praise acted on her like a charm. Each little advance was rewarded with more praise, and so the charm continued and the transformation became a permanency.

Another case I remember of a girl of really exceptional beauty, almost entirely spoilt by a shy self-conscious awkwardness. Her head, Juno-like though it was, poked itself forward. She was strong and healthy, but seemed unable to hold herself correctly. It was only a school play that worked the reform, an amateur play in which she took an important part; a splendid, stately role which she filled with brilliant success. She became absorbed in her "part," lost her self-consciousness, and rose that evening to the superb and stately woman that she has remained ever since. It is the power of an idea.

But nagging is fatal.



"Knack"

"Knack" is not needed to make good coffee every time. Follow the directions in each sealed tin of Red Rose Coffee; and in six minutes the small crushed grains give you the full strength and brisk flavor of this choice coffee. There is no dust, so Red Rose Coffee requires no "settling." No chaff, so no bitter taste. You will surely like

Red Rose Coffee

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This Morning

millions of people enjoyed the flavor found in Quaker Oats---found in this oatmeal alone.

Think how Quaker Oats has become the world's breakfast.

Just because we pick out the rich, plump grains—we get but ten pounds from a bushel.

And because we prepare them in this delicious way.

This best of the oat foods—this cream of the oats—costs but one-half cent per dish.

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Family size, with a piece of china beautifully decorated, 25c
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PETERBOROUGH, ONT.

Look for the Quaker trademark on every package.

Buttered Eggs.

Make three pieces of toast, butter them, and put them on a hot dish before the fire to keep hot. Put about 1 oz. of butter into a small enamelled saucepan, and while it is getting hot beat two eggs to a froth, add a tablespoonful of cream or milk, and a little salt and pepper. Pour this mixture on the hot butter, and stir it over the fire until the eggs show signs of setting, then draw the saucepan to one side, and continue to stir until the mixture is soft and creamy like custard, but do not allow it to become lumpy. Pile it on the buttered toast, and serve it as quickly as possible.

"Will You Keep Your Hands Off?"

There is no action for which young children have to be more frequently corrected than that of fingering things. The active, healthy child shows its curiosity chiefly through the fingers. We all know how extremely difficult it is to restrain them from touching something new and strange which is shown to them. If asked what they would like at table, out goes the hand and touches the desired piece of cake or scone. Put on a new frock or blouse, and it is handled all over, the texture felt critically by little palms, and the buttons, laces, and ribbons fumbled by none too clean fingers. Sit down to a piece of sewing or knitting which is not familiar to the little ones, and soon they are pulling at it, handling the thread, and very likely interfering with your movements till you are compelled to order them peremptorily to keep their hands off. A number of parcels brought from town have an irresistible attraction for them. It seems impossible for those young hands to let them alone.

And yet if those young eyes were incurious, and the small hands never attempted to meddle, the child could never learn anything. We, who have forgotten how we learnt the most important things, can hardly realise that without touch, eyesight would be of no value. Sight alone could not teach us the character of water, wood, fire, green leaves, and the infinite variety of things around us.

FREE $100.00

WIN A PRIZE

8	21	14	4	18	5	4
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WIN A PRIZE

GIVEN AWAY

And many other Prizes according to the simple Conditions of the Contest (which will be sent).

Each one of the above four lines of figures spells a word. This most interesting puzzle can be solved with a little study, as follows: There are twenty-six letters in the alphabet, and we have used figures in spelling the four words instead of letters. Letter A is number 1, B number 2, C number 3, etc., throughout the alphabet.

USE YOUR BRAINS. Try and make out the four words. ACT QUICKLY.

This is a chance for clever persons to win Cash and other Prizes with a little effort. Write the four words, with your name and address, neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. Act Promptly.

DOMINION PREMIUM CO. 210 St. James St. (Dept. 91b MONTREAL

The sense of touch is closely connected not only with every other sense, but with the higher nerve-centres of the brain, and without it the brain could not act at all. So that the children are merely obeying an overmastering instinct of the brain when they handle everything—even forbidden things—which they see.

One of the characteristics of feeble-minded children is that they show little, if any, desire to finger things as if they were examining them, and the hands are always defective. One of the first things a physician tests when he is consulted by a patient suffering from nervous disorder of any kind, is the hand. He examines the wrist, the fingers, the thumb, the palm, stretches the hand, and tests the muscles and sinews; finally, he tries the grip. If there is any weakening there, it is a sign of weakness in the higher nerve-centres. I knew a child who seemed all right in childhood, but who showed serious deficiences in his teens. When I asked his mother if she had noticed anything wrong when he was a child, she said, yes, she had always noticed that his hands were not so active as they should be. We should be thankful for the meddling, mischievous fingers of the little busybodies, and when they must be checked for touching things they would injure, see that they get something to themselves to rough handle, and not be too faultnnding when they finger our parcels and our clothes.

The Preparation of Roes.

In our plain Scotch household there was a sort of contempt for the internal parts of animals as food—such as kidney, liver, sweet-bread; only one member confessed to a taste for tripe, and another to a liking for kidney, and these had to indulge their taste a solitaire. Roes were rejected as offal, and it was not until I was grown-up that I was introduced to the delicacy of a herring roe at another table. A roe, like a sweetbread, has very little pronounced flavour of its own, and must be served with something to give it piquancy. The chief roes which are used are those of the herring, the cod, and the bloater. Plain boiled, these can be cut into slices quickly while hot, and served in a tomato sauce or any other sharp flavoured hot sauce.

A very good way of doing herring roes is to cut them small, fry gently for a few minutes in butter; then add a seasoning of salt and pepper, two tablespoonfuls of cream; thicken with a beaten egg, and serve on toast. Lest some reader should have in mind the old saw, "Bile stanes wi' butter, an' the brew 'ill be gude," I must add that the roes are quite toothsome fried with butter alone and served on hot buttered toast. They must be well seasoned; a pinch of cayenne is an improvement.

Cod's roe is not quite so delicate as that of the herring, although it can be treated in the same way. Here is a recipe for it: Boil until tender as much as is required; let it get cold, then pound it, add a tablespoonful of butter (to ½ lb. of roe), pepper, salt, cayenne to taste; mix well together; melt a small piece of butter in a pan, stir in the roe, sharpen with a squeeze of lemon, and when quite hot, serve on toast.

For a sandwich paste, pound some cooked roe with the yolk of a hard-boiled egg, a slice of butter (weight for weight of roe and butter), pepper, and a little grated cheese. Use as a paste, or rub through a sieve, heap upon buttered brown bread, and serve as a garnished dish.—Gretchen.
as a garnished dish.—Gretchen in Scottish Farmer.

Sick Headache Cures.

Sick headache, while not dangerous, is one of the most disagreeable forms of illness. Some women are subject to it at such frequent intervals that they are incapacitated for several days at a time.

Unless the headache is known to come from some functional disorder it can generally be traced to impaired digestion or a sluggish liver. These must be treated in the interims of the headaches, as at the time nothing but alleviating remedies are possible.

A treatment that is often successful is to abstain from red meats for a time and to be careful about taking foods that ferment easily. One man who had doctored for years for sick headaches was cured by his wife seeing to it that he drank a cup of hot water with a half teaspoonful of salt in it as soon as he arose in the morning.

A half lemon in a glass of cold water taken night and morning is another remedy that has proved helpful to many.

During the attack rest and quiet are imperative. Lie down in a darkened room, drink quantities of hot water and apply either a hot water bottle or an ice bag to the temples and the base of the brain.

Cloths rung out of hot witch hazel often bring quick relief. Headache cologne if rubbed on the temples in time acts as a preventive, while some sufferers are helped by taking a cathartic at the first symptom.

In severe cases five or ten minutes' treatment with an electric battery is invaluable. This is better than massage, as the pressure is sometimes too strong when the headache is bad.

In the first stages of sick headache it can often be averted by taking abdominal and neck exercises and by putting a mustard plaster over the stomach.

FREE
GIRLS
Girls, Here is Your Chance to Obtain FREE a Handsome Bisque DOLL
Do you want to receive Free a beautiful doll? We have them for you. Our large handsome doll will sit down, fold its arms, turn its head, shut its eyes and go to sleep like a real baby, the best kind of a doll, 18 inches tall, with long curly hair, real eye lashes, handsome turning Bisque head, full jointed body, pearly teeth, very stylishly dressed, fancy underwear, with hat, shoes, stockings, etc., dressed completely from head to shoes, free to you for selling only 15 packages of our famous Marvel Bluing at only 10c per package. We send a beautiful finished Turquoise Brooch to give to every customer who buys a package from you. This makes them sell quickly
Return the $1.50 when sold and we will promptly send you this handsome doll. Write to-day. Address Dept 77
MARVEL BLUING CO., TORONTO, ONTARIO, CANADA

Those Wedding Gifts.

Whenever we think about the great number of people we know who are constantly getting married—that is, the marriages are constantly taking place all about us, it makes us sit up and think.

We are great people, we are. In our kitchen there is a bum old coffee pot that we have intended replacing as soon as the Nickleodeon store gets a fresh supply. It will cost us ten cents then, and the robbers now want a quarter.

Over at the McKinney's is a beautiful vase we gave them when they were married, not long ago. It set us back seven dollars, but we gladly did it.

Then we gave a set of china to Mabel and Tom. It was a pretty set, too, and cost $27.35 with the case.. Also Dick and Mary came in for a gift. It was a nice silver coffee pot—wish we had one like it, don't you?

These are just a few. We've given wedding presents to most everybody we know so far this year. We're glad to, you know, but it seems queer to give people a set of knives and forks when we haven't enough in the house to enable us to entertain two people.

Some of these days we'll do like the man back in the east, who looked for sales and bought a large number of wedding presents, all alike, and stored them away. Whenever anybody got married he dug out one of these and sent it. Surely. Why not?

Once a man, though, bought part of a lot of little mirrors with fancy frames—nice ones, too. He began giving these as presents, and presently it became known to him that other people were onto his plan, for they bought mirrors themselves, and at one prominent wedding fourteen of them came—all alike.—Galveston News.

"Eastlake" Steel Shingles

will save you money

Exclusive Features

By

The Philosopher of Metallic Town

"EASTLAKE"
STEEL SHINGLES

The Experimental Farm at Guelph Ontario ranks as one of the best in the World.

There, the farm buildings are roofed with Eastlake Steel Shingles

Some of these buildings were roofed 18 years ago —all are in perfect condition to-day.

A pretty stiff durability test, don't you think?

It's the **"Eastlake"** exclusive features, that no other metal shingles possess, that count.

The single side-lock and gutter—the **"Eastlake"** counter-sunk cleat—and three-inch lap.

The **"Eastlake"** single side-lock makes it the easiest and quickest to lay and permanently weathertight.

No rain or snow, no matter how fine, can sift in under an **"Eastlake" Steel Shingle**. There is a full three-inch lap, and the counter-sunk cleat holds the bottom of the shingle as tight as though welded in place.

The bold **"Eastlake"** Pattern is so deeply embossed that only the very best Steel will stand it.

Let us send you our illustrated booklet, **"Eastlake Metallic Shingles."** *Write to-day---just your name and address on a post card,*

We also manufacture Corrugated Iron, House and Barn Siding, Metallic Ceilings, Eavetrough, Cornices, Conductor Pipe, Ventilators, etc.

294

THE METALLIC ROOFING CO. Limited

King Street West - TORONTO

BRANCH FACTORY: WINNIPEG AGENTS IN PRINCIPAL CITIES

A Hint for Hand-Sewing

I have discovered an easy way to make hand-run tucks in lingerie. Crease the first tuck as usual for machine tucking and gdjust the tucker, but do not thread the machine. Then run the material through the tucker. The needle will leave a distinct line throdgh which to run your hand-sewing. The machine also leaves a ,ine for the next tuck.

It is best to sew each tuck as it comes from the tucker as handling obliterates the marks. By this method tucking may be done more accurately and in less than half the usual time.

To insert lace or insertion, first baste the material to be trimmed, ob stiff paper, then apply the lace to it and sew by hand or machine. To form yokes or cuffs, cut the desired pattern in stiff paper, baste on the insertion and, holding it flat, sew it on the machine. One edge of the lace should be lapped over the other. The machine gives a better finish, is firmer, and is much more quickly accomp,ished.—H. M. J., Massachusetts.

Her First Cake.

She measured out the butter with a
very solemn air;
The milk and sugar also; and she
took the greatest care
To count the eggs correctly and to
add a little bit
Of baking powder, which you know,
beginners oft omit.
Then she stirred it all together and
she baked it full an hour—
But she never quite forgave herself
for leaving out the flour!

—E. L. Sylvester.

Roast Goose.

The flesh of the goose is very sweet and tender, and is very readily digested. To be good the fowls should be young and in prime condition. They are said to be best at from four to six months old. A goose should be killed at least twenty-four hours before cooking. After plucking and dressing, cut the neck close to the back, leaving the skin long enough to turn over the back. The breast bone should be flattened with a rolling-pin, the legs and wings securely skewered. A young goose will require an hour and an half to cook. It should be basted frequently. Watercress is a pretty garnish for a goose, which should be served with brown gravy and apple sauce. Some cooks send it to the table with both onion and apple sauce. To roast a goose, stuff with a dressing made of four large chopped onions, a tablespoonful of minced sage, a pint of stale breadcrumbs, 2 oz. of butter, one beaten egg, with salt and pepper. After filling the body, sprinkle well with salt and pepper. Put in a dripping-pan, dredge with flour, add a cupful of water to the pan, set in the oven, and let bake ten minutes for every pound. Baste every fifteen minutes. Serve with its own gravy and apple sauce.

Glazed Apples With Cream.

For a dozen large apples, use a cupful of sugar and a cupful and a half of water. Put one cupful of the sugar in a saucepan with the water, and boil rapidly for twenty minutes. Pare and core the apples, keeping them whole. Put them in deep earthen plates, and put a teaspoonful of sugar in the centre of each apple. Baste the outside of each apple with about half a teaspoonful of the hot syrup. Place the pans in a moderately hot oven, and bake the fruit until it is tender, basting frequently with the syrup. When the apples are done place them on a flat dish, and pour over them the juice from the pan on which they were baked. Serve cold with a bowl of whipped cream.

Baked Cabbage.

Select a solid, white head of cabbage, cut off a small portion of the top, and take out the middle, leaving enough of the outside leaves to stand like a cup. Put the whole in salt water and let it stand from two to three hours. Then chop fine a part of the cabbage you have taken from the inside, and mix with it cooked rice and cold roast beef, cut into small pieces, or oysters. Season with butter, salt and pepper, and an onion. Put this filling back into the head you cut it from, and tie in the top securely. Bake in a pan with but little water to keep from burning. Cook slowly half an hour.

Mutton Soup.

Take a sheep's neck, wipe with a damp towel, put into a soup-kettle with four quarts of cold water, bring slowly to a boil; skim carefully, cover and let simmer gently for three hours. Take up, strain, return to the kettle with one sliced onion, one large, sliced turnip, a bunch of sweet herbs, and half a cupful of rice. Let simmer an hour longer, season with salt and pepper, and serve.

Haricot Savoury.

Stewed beans (for two).—Four ounces haricot beans, steep them over night in cold water; place in a saucepan with a small-chopped onion; cook two or three hours. Half-an-hour before serving, add salt and pepper and a pinch of sage, marjoram, or parsley, and serve.

INVINCIBLE
INVINCIBLE FENCING
2
Canadian Made - Canadian Quality
Why should Canadians buy fences made from imported Bessemer "close-wiped" galvanized wire with the thinnest possible coating? Wire "skimped" to swell the sellers' dividends. Witness the rusty dilapidated fences everywhere. Canada for years has been a dumping ground, and fence-factories are still turning this "skimped," imported Bessemer wire into fencing which will come very dear to the user.
The interests of The Steel Company of Canada and those of the Canadian farmer are mutual. On the permanent good will and welfare of the Canadian consumer the Steel Company of Canada places the highest value. Invincible Fencing, made of the finest steel heavily galvanized, and woven by men of long experience, merits the Trade of Canadian Farmers.
It is Canadian made and Canadian quality. Of the finest open hearth steel and honest, heavy galvanizing. The Invincible lock has the grip and tenacity of the British Bulldog.
Invincible Hot Galvanized Gates are a wonderful improvement. They are zinc-clad, rust-proof and indestructible, good for a lifetime, yet cost about the same.
Agents should get promptly in line with the biggest Canadian steel producing company and the most desirable and paying line in the Dominion. Write for agency proposition.
THE STEEL COMPANY OF CANADA, LIMITED
THE FENCE DEPARTMENT, BOX 31 MONTREAL, CANADA.

"Don'ts" for Mothers.

Don't say, "Oh, do be quiet," or "Do sit still!" Remember that bones and muscles must develop. Make a place for them to do so. This is your duty.

Don't permit a fear to be implanted in your child.

Don't forget that "What?" and "Why?" are the best manifestations of a normal brain. Take time and pains to make it grow wisely.

Don't take your small child shopping.

Don't fai, to give the reason why every time you give a command. You want the obedience of an intelligent, reasoning being, not that of an automaton.

Don't forget that the mother who can enter into all her children's pleasures has discovered a marvellous "youth restorer."

Don't bring up your children upan a steady diet of "Don'ts," miserable, pricky little word that it is, and sure to rub the wrong way.

Don't correct your child in the presence of others. You yourself would find this very hard to brook, so why regard this little being as less sensitive?

Don't overlook an untruth, yet weigh carefully between untruthfulness and a vivid imagination. It is often a hair-splitting task, but no mistakes should be made.

Don't fail to listen attentively and patiently to all the little trials which come into the lives of these small people. Help adjust them, and remember that at six they are as great in proportion as those which daily come into your own life.

Don't offer bribes as an inducement to good behaviour.

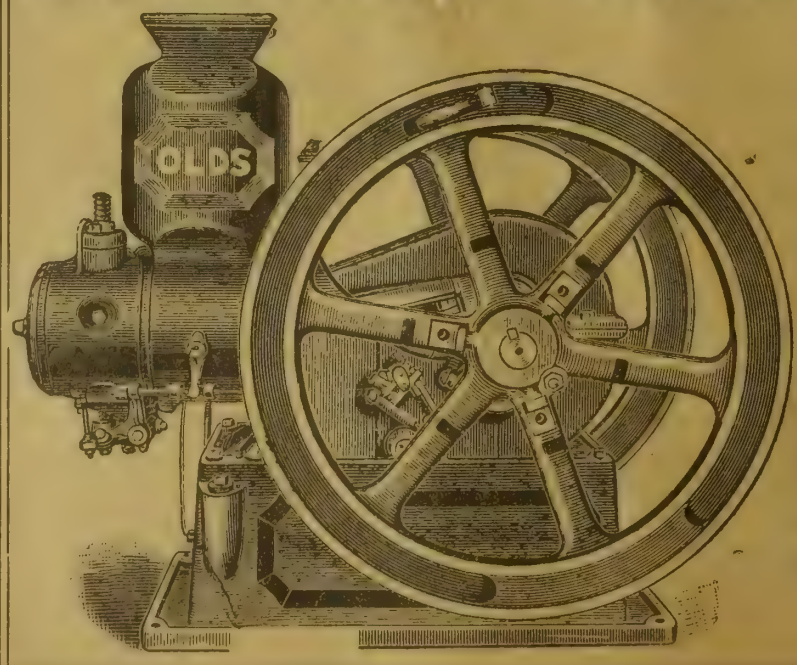
Don't fail to insist, while your children are still schoolboys and schoolgirls, upon orderly habits in the home, and certain hours for certain duties. As a result of this method the good housewife and thoughtful husband may bloom forth later.

Don't fail to make your smile your children's ,ast memory as they depart for school. A ruffled spirit as a send-off puts the time out of joint for the entire day.

Rice Fritters.

Put into a small stewpan one pint of new milk with 6 oz. of rice, 3 oz. of sugar, the peel of a lemon grated, 2 oz. of butter and a very little cinnamon. Boil all slowly until the rice has absorbed the moisture. Mix in the yolks of three eggs well beaten, and, when all is cool, make the rice into balls, placing in the centre of each some orange marmalade. Brush them over with the yolk of an egg, sprinkle with breadcrumbs, put them in a wire basket, and fry them in boiling fat a light brown. Drain, and serve in a napkin with sugar sifted over them.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Eye Facts.

Editor Maritime Farmer:—

One of the most, if not the most, important subject that confronts humanity to-day from a physiological standpoint is that of defective eyes, and how this defect can be remedied by the skilled optometrist with optical appliances.

Possibly there is no branch of any trade or profession more liable to be made a mystery of by unqualified persons than the adaptation of glasses.

It cannot be too strongly impressed upon the public, that to correct the various errors of refraction requires a great deal of skill and intelligence, knowledge of the anatomy of the eye, the effect of different lenses and combinations of lenses thereon, and the ability to correctly diagnose the various defects, both structural and functional, which is only obtained by years of study and experience in dealing with impaired or defective eyes; at the same time there is no mystery whatever about it. There are certainly well defined principles recognized which must never be lost sight of.

The subject of eye strain is one of great importance. I have, after careful observation, become convinced that this greatly prevailing complaint may be the chief cause and not the result of obscure diseases.

I should like to briefly demonstrate the relation eye-strain bears to many nervous diseases and derangements.

Before proceeding, however, it will be necessary to take a cursory glance at the eye and its functions, for the better understanding of those not acquainted with the physiology of the eye—not, however, from an anatomical point, as that would necessitate too much unnecessary detail.

The eye may be likened to an ordinary camera, in which the retina is represented by the screen or sensitibe plate, the choroid by the dark background, the crystaline lens, the aqeous and vitreous humors by the refracting media. The iris is illustrated by the diaphragm, which shuts off the peripheral rays that would otherwise traverse the lens and give rise to what is termed "aberration."

The sliding tube of the camera for focusing objects at various distances, is in the eye the ciliary muscle. The focusing of the images of distant or near objects upon the retina is effected by a change in the convexity of the lens so as to form on the retina a distinct image of an object miles away or only a few inches away.

It will now be seen that an eye that departs from the standard, or is abnormal in anyway, must be more or less at a disadvantage.

If the eyes of an individual do not possess sufficient refractive power it is obvious that he must "accommodate" more or less to increase the convexity of the lens. This necessitates a continuous strain on the ciliary muscle, which, though perhaps scarcely perceptible for a time, sooner or later makes itself felt.

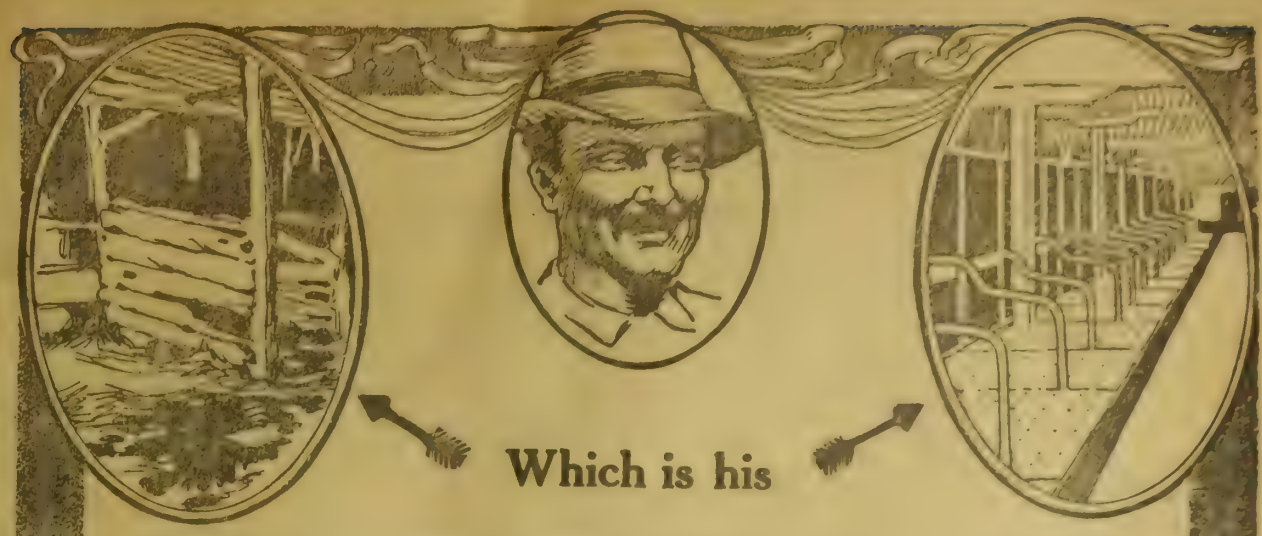
Many suffer from headache and nervousness that do not suspect the cause. The nerves that control the eye have a direct connection with the most vital parts of the human system. Continual strain on these nerves keeps them in such a weakened condition that they have to call on the force of other nerves to keep them supplied. In that way the strain is carried to all the nerves, and will, in time exhaust them all.

The "hypermetrope" then complains of pain in the region of the eye, sometimes in the centre or back part of the eye ball, but more frequently through the temple and over the brow. Occasionally the pain is felt in the back part of the head, and it may be accompanied by nausea and vomitting.

As a rule, the patient will complain that he is unable to use his eyes for long without weariness, drooping of the lids, and an inclination to close them; if he persists in his work for a lengthened time the pain becomes severe, the pages of a book blur, and the letters become indistinct and run together. By resting the eyes and relieving them of the strain, by relaxing the accommodating ciliary muscle, the work may be proceeded with for a time, but it finally has to be dropped altogether to obtain relief.

Suitable lenses placed before the eyes of such a person at once make up the deficiency that exists, and relieve the accommodation and hence the strain.

Another very important function closely associated with accommodation is that of convergence.



Which is his

THERE'S no mistaking the expression of a man whose farm is well "improved." He *looks* as prosperous as he *feels*.

It isn't the size of a place that counts most, nor its actual dollars-and-cents value. It's rather that "well-kept," thrifty appearance; the appearance that makes you think of fat stock, and well-filled barns, and comfortable, contented living.

Neat, permanent improvements go further in giving a farm this appearance than any other feature.

Concrete Is The Ideal Material

for such improvements. It is neat, harmonizing with its surroundings in the country. Everlasting, it cannot be injured by fire, frost, wind or lightning. Age—instead of causing it to decay—actually makes it stronger.

Concrete never needs repair—first cost is last cost. New improvements can be added year after year with less expense than would be required to keep wooden structures in repair.

Concrete walks, feeding floors, dairy-barns, ice-houses, root-cellars, well-curbing, fence posts, silos—which of these does your farm need most? Whatever you want to build, it's best to build it of concrete.

Do you want to know more about this subject of permanent farm improvements? Then write for your copy of

"What The Farmer Can Do With Concrete."

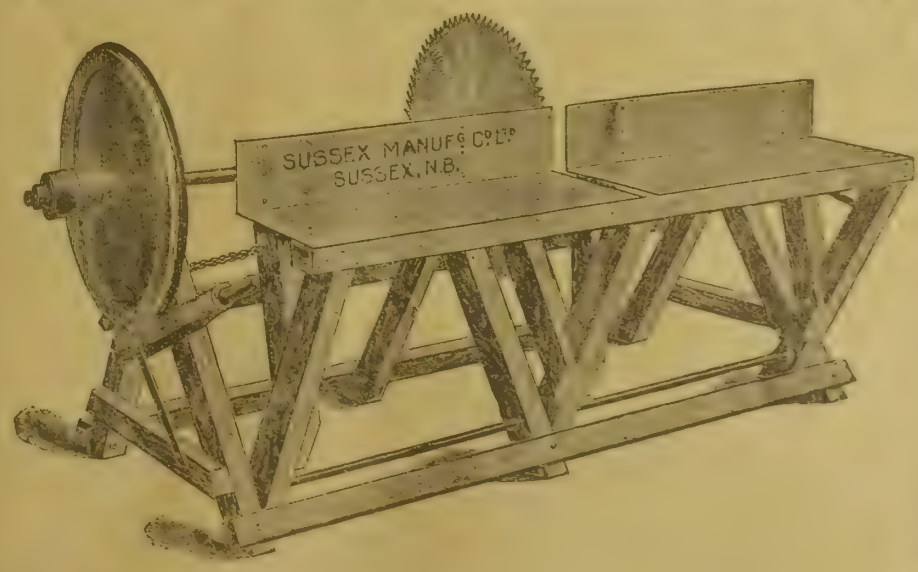
It's a book of 160 pages, telling how other farmers have used the "handy material" to good advantage. Published to sell at 50c. a copy, it is now being offered free to all farmers who write for it. Address

Canada Cement Co., Ltd., 22-32 National Bank Building, Montreal.

PORTLAND CANADA CEMENT — CANADA CEMENT COMPANY LIMITED MONTREAL

SEND ME YOUR BOOK.

Wood Cutters Made in Three Sizes.



We make the best Wood Cutter on the market. The length of table on our Long Swing is 8 feet, 3 inches; distance between balance wheel and saw 4 feet, 3 inches. Heavy substantial frame and well braced. Steel plate table.

Length of table on Flat Rolling Machine is 8 feet, 3 inches; distance between balance wheel and saw 4 feet 3 inches. The table of this machine moves on grooved rollers and vd. track, which holds the table in position, making it move very easily to and from the saw.

Our Short Swing is built on the same principles as the Long Swing, the arbor and frame is shorter; length of frame 4 feet, 3 inches; distance between balance wheel and saw 3 feet, 6 inches.

On all our machines the arbor is the same size, made of the best turned steel and runs in bearings of the best babbitt. The balance wheel is a solid web and weighs 180 pounds.

We have a large number in stock and can ship promptly. All enquiries will have prompt attention.

The Sussex Manufacturing Company, Ltd., Sussex, N.B.

BACK WAS SO LAME

LIFE WAS A BURDEN FOR TWO YEARS.

Mrs. Joseph Throop, Upper Point de Bute, N.B., writes:—"I cannot speak too well of Doan's Kidney Pills. For two years I was so tired life was a burden and I got up more tired than when I went to bed, and my back was so lame I could hardly straighten up. I took different kinds of medicine, but none of them did me any good until a friend advised me to try Doan's Kidney Pills. I did so, and to-day I don't know what it is to be tired, and my lame back is all gone. I can recommend them to any person suffering with lame back, and that terrible tired feeling."

Doan's Kidney Pills are a purely vegetable medicine, realizing quick, permanent relief, without any ill after effects.

Doan's Kidney Pills are 50 cents per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price, by The T. Milburn Co., Limited, Toronto, Ont.

If ordering direct specify "Doan's."

Fertilizer Requirements of the Potato.

Extract from

"The Potato Crop in Canada"

By

B. Leslie Emslie, C.D.A., P.A.S.I., F.C.S.

"The elements of fertility, of which a soil becomes depleted in the ordinary process of cropping, are Nitrogen, Phosphoric Acid and Potash, and every pound of produce sold off the farm removes a certain amount of these substances, so that if the fertility of the soil is to be maintained, these essential elements must be returned in some form. This can be accomplished by applications of artificial fertilizers, either as substitutes for or supplements to barnyard manure.

It has been shown by repeated analyses that a crop of 300 bushels of potato tubers removes from the soil approximately 60 lbs. of nitrogen, 30 lbs. of phosphoric acid and 105 lbs. of potash. A preceding crop of clover ploughed under, would furnish the necessary nitrogen; clover being peculiarly endowed with the power of assimilating atmospheric nitrogen, enriches the soil in that expensive ingredient. 300 lbs. of Acid Phosphate would provide all the phosphoric acid and 210 lbs. of Sulphate of Potash all the potash required. If we allow for a small supply of these substances, available from the soil's supply, smaller quantities might suffice, but then, remember, that for a crop larger than 300 bushels the extra requirements would be in proportion to the increase in yield over that amount." Copies of this and other important bulletins, treating of this important subject may be had by applying to

GERMAN POTASH SYNDICATE,
1102-1106 Temple Bldg., TORONTO, ONT.

Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diphtheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all Dealers.

If an excessive amount of accommodation is required the extrinsic ocular muscles must suffer as well as the ciliary; the external rectus is usually the affected muscle, this becoming weak, permits its ooposing muscle, the internal rectus, to draw the eye in towards the nose. This condition is termed "esophoria" and is usually the result of uncorrected hypermetropia.

Then there is the myopic or near sighted eye. In this case the refraction is too great. The eye being adjusted for near objects only, there is no occasion to use the accommodation and consequently convergence must suffer, the internal rectus giving way to its antagonist which in time, draws the eye outward from the nose. The myopic, therefore, sees near objects clearly, while distant vision is very imperfect. Suitable lenses placed before such an eye sends the focus back on the retina where it belongs, thereby enabling it to see the world in a new light and opening up to the beholder beauties of nature never before enjoyed. The uncorrected myope complains of pain, fatigue and intolerance of light, due generally to the muscular strain.

Speaking of muscular strain it might be remarked that it often exists when the eye is perfect,y normal with regard to its refraction power. This constant strain on the ocular muscles brings on the dreaded sick headache. Life becomes a burden, and despondency, melancholia, etc., may follow.

Another refractional error which claims a great deal of attention is astigmatism, the most common form of which is due to an irregular curvature of the cornea. Rays of light emanating from a point do not focus at a point on the retina of an astigmatic person.

In order to gain a clearer and more distinct impression of an object, such a person will sometimes hold the head to one side, and there is a constant effort to try to see distinctly.

These anomalies may exist unknown to the patient, without the symptoms enumerated.

It is therefore evident that the most careful and searching examination should be made by means of the various improved methods now known to the optical profession for errors in the refraction of the eye and lack of muscular adjustment.

In cases where the error is so small as to be quite unnoticeable by the patient, vision being good and none of the unpleasant symptoms connected with the greater defects, sight can to a very great extent be preserved by proper glasses.

"Old sight" or presbyopia is due to a hardening of the crystaline lens which renders it less susceptible to the action of the accommodative muscle.

This is a physiological or natural change which all eyes undergo and is caused by increased age.

When one feels it necessary to hold reading matter at a greater distance than fourteen inches from the eyes it indicates that the tiny ciliary muscle, which has been hard at work for years, is now unable to perform the task assigned it. At this stage relief should be sought in suitable lenses it being very poor policy to over tax this faithful servant.

In view of the foregoing facts, and the various statistics that come to hand, it is safe to assume that eye strain with its accompanying functional incapacities, must be largely on the increase, and it should therefore be one of the first duties of parents to have the eyes of their children carefully examined by an expert.—H. V. Harris, Optometrist. Margaretville, N. S.

Any Man May Easily Regain LOST VITALITY

Strong vigorous vitality, the crowning glory of mature, healthy manhood.

Do you know, reader, what this means to you?

If by these few simple inspired words (which every man may with profit read)

I should be the means of pointing out to you or other men the straight and sure, if narrow road to new manhood, new powers, new capacities for a better and more glorious physical and vital development, then in doing this I have rendered a great and lasting service to my fellow beings, and one which is infinite in its power for good

This self-same VITALITY, this builder of manhood and manly vigor, may easily be regained, and I will tell you how.

Have you ever stopped to consider that it is this VITAL FORCE which makes rugged men the real men that they are? It is this same MAN FORCE which is behind every great achievement in the world to-day, which gives the flower of our army and navy the courage to meet and face death unflinchingly, which gives the rough and rugged man of the plains that compelling power to rescue at all odds a loved one from some great peril, as our illustration here portrays, and it is this self-same, identical VITAL VIGOR which I must impart to you, reader, if you are not the man you should be.

Therefore, if I give you new vitality, I make you young again, and keep you feeling young the balance of your days. By increasing your vital supply, I soon have you answering "Simply feeling fine" to your friends' morning greetings, while they in their turn will secretly marvel at the wonderous change for the better which has come over you. A thoroughly vital, manly man is the greatest inspiration in the world; his power and fascination are felt by all women and all men alike who are near him. Nothing but death can conquer the giant of strength and manly vigor. On the other hand, how different with the half-man, the neurasthenic degenerate, who is burning up his vitality in dissipation and excesses! Is there any sight more pitiable, more repellent to one's sense of decency, then the weakling who deliberately kills his manhood and self-respect by acts of willful debauchery? Such a man has neither my sympathy nor can he profit by what of wisdom I can impart. But any man who is willing to make a fair, square fight for the return of his lost vitality and lost manhood, who will promise faithfully and honestly to discontinue any debasing practices or excesses he may be indulging, who will help me thus by helping himself to such, no matter how despondent he may be, no matter how weak and debilitated, no matter what years of folly have passed, to such a man I can offer all the encouragement in the world. Just lead a decent man's life, my friend, and then increase your VITALITY. All else will come.

I make and distribute a vitalizing appliance which I call a HEALTH BELT. I do not want you to get one of there HEALTH BELTS now nor to-morrow nor next week, for that matter, but first wish you to write for or call and get one of my little free books. I want you to thus have my whole story of this subject of VITALITY, so that you may judge for yourself. My HEALTH BELT, with suspensory attachment, is a complete treatment in itself; that is you place it comfortably around your waist nights when you go to bed and wear it at the time when you are asleep. The vitality which it produces and sends into your system hour after hour is felt as it flows in. There is no shock, but merely a pleasant, warm, soothing sensation which induces a sound, refreshing sleep. Weak back often disappears at once, and a better feeling is immediately experienced. Two or three months' wear is usually sufficient. The cost is nominal. With special attachments, my HEALTH BELT is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

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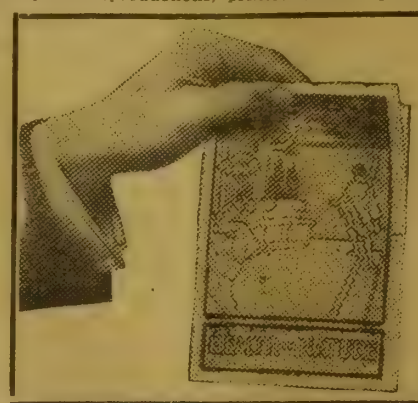
My book, as described above, will be sent in plain, sealed envelope to anyone who fills in the below coupon. It is fully illustrated with photo reproductions, printed on fine coated paper, and should be read by every man, young, middle aged or elderly, whether ailing or strong. Write or call to-day. Hours 9 to 6.



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A Sprain or Cut calls for quick treatment. Don't try experiments. You are safe and sure with the old, reliable

JOHNSON'S ANODYNE Liniment

The 101 Year Old Liniment

Used over 100 years for Rheumatism, Swellings, Stiff Joints, Wounds. Used inwardly for Colds, Sore Throat, Croup, Bowel Troubles.

25c and 50c Bottles. At all Dealers.

I. S. JOHNSON & CO., Boston, Mass.

Parsons' Pills *Best laxative. Tone the System.*

Used in Canada for over half a century —used in every corner of the world where people suffer from Constipation and its resulting troubles—

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stand higher in public estimation than any others, and their ever-increasing sales prove their merit. Physicians prescribe them. 8

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"Why Man of Today Is Only 50% Efficient"

This book, written by a well-known physician, is a most interesting treatise on a subject of great importance: that of keeping up to "concert pitch" and securing that 100% of efficiency so necessary to meet successfully the business or social requirements of the present age.

You will learn something about yourself that you never knew before by reading this book, which will be forwarded without cost if you mention The Maritime Farmer.

CHAS. A. TYRRELL, M.D.
275 College St. Toronto, Ont.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont. will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.
Personal attention given to sales of utter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 906.

I.C.R. Has Had Record Winter in Passenger and Freight Business.

Montreal, Feb. 26th—"We are above the high-water mark in everything," said Mr. E. Tiffin, of the Intercolonial Board of Control, which has been holding sessions here. "The winter has been a record one for both passengers and freight business."

Which Shall it be Prodigal, Stranger or the Dutiful Son.

(Continued from page 377).

hands of the money lenders and machinery men. Some have gone that way already and more will follow.

I want to call the attention of the fathers on the farm to one part of the prodigal's story. The elder boy said to his father: "You have never given me a kid during all these long years so that I could entertain my friends." Oh! son, you are always with me and when I die you will have it all, was the father's reply. That's all very well, but, a boy does not want to be a baby as long as his father lives—and those old fellows lived a long time in those days. You see the boy felt sore about it—we know by his remark. So do our boys feel under similar circumstances. It is not much wonder that boys treated in the same way leave the farm. Give your son something that is his own as soon as possible and you will have a chance to watch how he handles it and you will also have an opportunity to direct him. Take proper care of the boys while you have them and you will not have the trouble and expense of dragging them back out of the slums.

I was talking to a boy, eighteen years old, last week. He has one little sister but no brothers. He told me that he had to work in the woods all day and in the barn till nine o'clock at night. His father seldom speaks to him and he never sees any friends or boy or girl chums.

Is that not enough to drive a boy out? His eyes filled to overflowing, as he related his story. I told him to stick to the farm and I would talk to his father and try and better his condition.—D. Macdougall, Westmorland Co., N. B.

Characteristics of the Guernsey.

Editor Maritime Farmer:—

In a previous article a short account of the early history, development, and distribution of the Guernseys was given and this shall deal chiefly with the general characteristics of the breed.

In size they are much larger than the other Channel Island breed, the Jersey, also a more rugged looking animal with more bone, a stronger constitution and lacking a little of the smoothness of that breed. The average weight of a mature cow is around 1100 pounds while a bull should not be under 1500 pounds, and many are much heavier. In general conformation the cows strongly illustrate the dairy type, having a strong constitution and large storage capacity for both food and milk. The head is somewhat long but not unduly so, neat, well chiseled, with a face slightly dished but refined in every point, and topped, in cows, with neat white or amber colored incurving and upcurving horns; while in bulls the horn is somewhat shorter and stouter with less curve. The eye is large and bright, muzzle strong, of a buff or flesh color and encircled with a white or yellowish circle of hair and a similar circle usually surrounds the eye. The head is neatly joined to a trim neck which blends into a strong sharp shoulder and this into a deep, chest and large roomy barrel. The back is large and straight with the vertebrae well apart. In the hind quarters we have a lack of fleshiness, strong hips, good length between hock and pin bones and thin and incurving thighs. The milk secreting apparatus is characteristic, the udder large with good fore-udder and attached high up in the rear. The teats are of excellent size, but not excessively large, and pendulous and cut up udders are not common. The prevailing color is usually a shade of fawn with attractive

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Resist wear and tear

For over 40 years Sherwin-Williams Paint has been made with the definite purpose of giving the user the greatest wearing value of any paint, either hand-mixed, or machine-made. Don't be tempted into buying a cheap prepared paint because of its low cost per gallon—buy paint for what it will do. Use the paint that covers most surface and lasts longest —use SWP. 64

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

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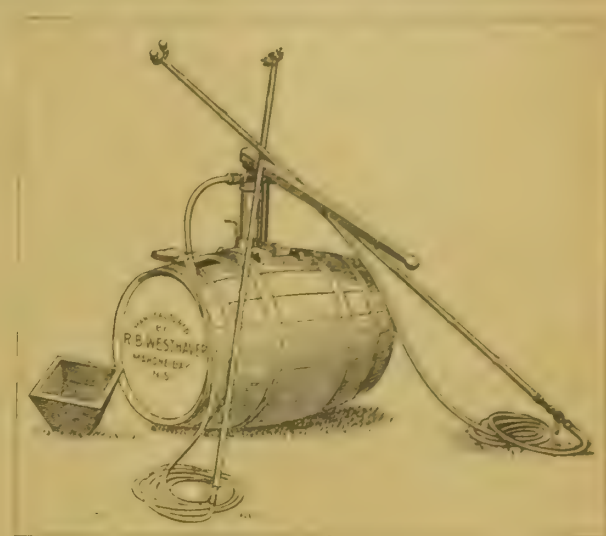


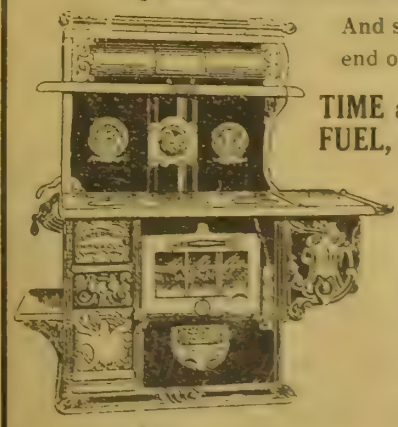
Spray OR Suffer Loss?

"Perfect" Spray Pumps are made by

R. B. WESTHAVER, Mahone Bay, N. S.

SELL YOUR OLD STOVE—BUY AN

Enterprise Monarch



And see how far ahead you will be at the end of the year, in

TIME and therefore TEMPER | SAVED
FUEL, which means MONEY

The MONARCH STEEL RANGE is simplicity itself to operate, for it has no complex dampers or troublesome drafts. Every contrivance [illegible] effective so that the MONARCH as sold today is the most compact steel range on the market handsome in design, a "tip-top" baker, and so economical in fuel that the [illegible] pays for itself.

If your dealer does not handle this range, fill out a post card with your name and address and request for copy of our illustrated circular. One cent so invested may bring big returns.

The Enterprise Foundry Co.,

MANUFACTURERS - - SACKVILLE, N. B.

Replenishing The Soil.

In the ordinary process of cropping the soil becomes depleted of certain essential Plant Foods, and unless means are taken to restore these, the soil will become wholly unproductive.

Fortunately the progressive farmer is now turning his attention to the use of fertilizers, which will build up and maintain the fertility of the soil.

During recent years a number of educative, illustrated Bulletins on the use of fertilizers in Canada have been prepared by agricultural experts. Amongst these are :

"Artificial Fertilizers ; Their Nature and Use."
"The Potato Crop in Canada."
"Fertilizing Orchard and Garden."
"Fertilizing Fodder Crops."
"Farmer's Companion," etc., etc.

FREE copies of these, as well as special expert advice may be obtained from

THE GERMAM POTASH SYNDICATE
1105 I. O. F. Temple Building,
TORONTO, ∴ ∴ ∴ ONT.

and neat white markings, usually a small triangular spot on the forehead, switch, legs, and under part of the body; white may, however, be found on any part of the body. In the color of the skin we have a deeper and richer one than in any other breed and the secretions in the ear and other places also possess this characteristic. In disposition no dairy breed equals or surpasses them as the bulls are quiet and easily handled and the cows are very mild tempered, while the young exhibit the same disposition and readily become accustomed to any change; in all cases, however, you find an active nervous system.

The breed has been developed for its butter qualities and it is here that its chief value lies for the fat globules in the milk are the largest and most highly colored of those of any breed and butter made from the cream possesses the latter characteristic to a very marked degree and it has won highest honors wherever it has been shown. The quantity of milk is large and the test very high and there are authentic records of cows producing over 18,000 pounds of milk and 1,000 pounds of butter in the yearly test while weekly butter ones of over 28 pounds are not unusual.

The Guernsey is an excellent animal to improve the common herd and by the judicious use of pure bred sires a great improvement is seen, even in the first year, in the quantity and quality of the product of the herd; by continuing this practise this can be greatly increased but attempts should not be made here, any more than with any other breed, to cross one pure one with another, and if one breed is kept on the farm stick to it or change entirely.

The farmer in the Maritime provinces, who is looking for a sire to improve the quantity and quality of the milk he produces, can do no better than use the Guernsey, and as good sires are available at reasonable prices there is no reason why a farmer should look around for anything that will prove a more profitable investment.

The increasing demand for young and old stock of both sexes during the past few years shows that the Guernseys are rapidly coming into their own and there is an exceedingly bright future ahead of them in our dairy districts in Canada.—D. G. McKay, President Canadian Guernsey Cattle Association, Heath Bell, N. S.

Development of Newfoundland's Resources.

Newfoundland with its innumerable splendid harbours, its creeks and coves teeming with fish, make it an admirable home for a fishing people. But its wealth is not confined to the fisheries, and while not claiming to be regarded as possessing unequalled timber resources, its wealth in this respect remains undisputed, and contributes largely to the volume of the colony's exports. The demand for native timber for local requirements is also increasing with each year. Authorities state that the lumbering industry together with that of the pulp and paper industries are worth to the colony about $2,000,000 per annum, being an increase of about 1,800,000 over that of ten years ago. It is also claimed that the mineral wealth of the colony is extensive, although somewhat varied, deposits of copper, iron, gold, silver, lead, antimony, talc and asbestos having been discovered. In this respect, however, the iron mines at Bell island form the chief mineral production of the colony. The value of mineral iron exported during the year 1911 is placed at $1,292,700, an increase over that of the preceding year of $126,835.

The total trade between Newfoundland and Canada for the year ending June 30, 1911, exceeds that of the previous year by $458,919, and the United Kingdom, $339,035, while trade with the United States increased by $673,135. The value of machinery exported by Canada totals $192,304, and that of the United States, $194,796. Canada exported for branch railways goods to the value of only $21,803, while the United States exports for the same purpose total $513,289, which accounts for the excess of imports from the latter country over that of Canada. In railway supplies Canada for some reason does not seem to be in a position to compete with her neighbour to the south.

In view of the fact that Canada enjoys the advantage of proximity, and that transportation to and from the two countries is covered in a short space of time, and as there is really no great loss in time in orders and shipments reaching their respective destinations, one naturally wonders why trade relations have not increased to far greater proportions than we find during the past ten years. Up to the present Canada seems to be quite satisfied with her Newfoundland business in flour, oatmeal, country produce, &c., and has apparently lost sight of the trade awaiting development in dry goods, haberdashery, canned meats and fruits, articles of Canadian manufacture so seldom seen on this market, that one is almost forced to the conclusion that the value of the Newfoundland market is not seriously considered by the Canadian manufacturer. This is to be deplored since Canada is in a position to offer the same lines as the United States at possibly an even price, and certainly can make quicker delivery to the Newfoundland buyer. Were Canadian manufacturers to make a study of the possibilities of this field, send capable representatives to open up the ground, command repeats by quality of commodity, correct representation and a true grasp of the system and requirements of the trade of the country, there is no reason why they cannot meet with the same success as the manufacture of heavy winter underwear, winter caps, rubber goods, &c.

Several complaints reached this office regarding the unsatisfactory methods used by certain Canadian shippers of grain. One dealer stated

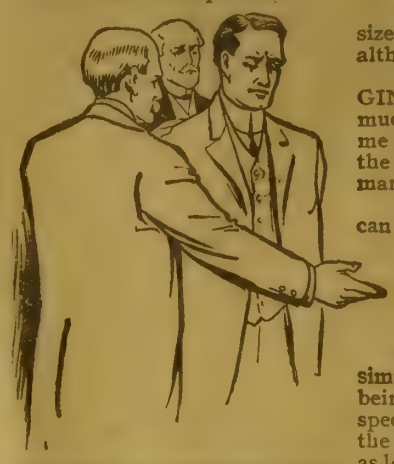
DOCTORS AFRAID TO OPERATE

Could Not Remove Stone From The Bladder. Gin Pills Enabled Him To Pass It.

JOLIETTE, P. Q.

"During August last, I went to Montreal to consult a specialist as I had been suffering terribly with Stone In The Bladder. He decided on an operation and was assisted by another doctor. They said the calculus was larger than a bean and too hard to crush, and that they could not take it out.

I returned home suffering greatly, and did not know what to do, but was recommended by a friend to try GIN PILLS. I bought a box and found relief from the pain at once. I took a second and third box of GIN PILLS after which I went back to the specialist.



THEY COULD DO NOTHING FOR HIM

He told me the calculus was reduced in size, still he could not relieve me of it, although he tried for two and a half hours.

I returned home and continued to take GIN PILLS as they reduced the pain very much, but I did not expect they would relieve me of the stone, but to my great joy, I passed the stone on October 3rd, and am now a well man and very happy.

I am sending the stone to you so that you can see for yourself what a great work GIN PILLS did for me. GIN PILLS are the best medicine in the world and because they did so much for me, I will recommend them all the rest of my life".

J. ALBERT LESSARD.

Isn't it wonderful? Just think of these simple pills, that even children can take, being able to perform what the greatest specialists in Canada could not do. Surely, the days of the miracle have not passed away, as long as we have Gin Pills. These wonderful pills dissolve stone in the bladder or kidneys because they are a natural solvent for uric acid, which causes calculus. If GIN PILLS are not sold in your neighborhood, send us 50c. for a box or $2.50 for 6 boxes. Sample free if you write us mentioning this paper. National Drug and Chemical Co. of Canada Limited, Dept. M F Toronto.

MANGA-TONE BLOOD AND NERVE TABLETS are especially for women and girls to make them well and strong and rosy. 50c. box. 113

"Simplicity" Power Sprayer

If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,
Limited
Port Williams, N. S.
Catalogue Sent on Application.

that in a single shipment no less than twelve different marks were used, while sacks containing the grain weighed 133, 136 and 150 lbs. each. Such a lack of uniformity in the weight of sacks necessitates more storage room than is ordinarily required, and causes much annoyance to steamship agents and importers. White oats in this market are worth three cents per bushel less than black. New bags of uniform size containing 152 lbs. (including bag) should, invariably be used.

The initials of the importer, exact weight, the kind of grain, should be plainly exhibited on each bag, thus:—

'A.B.'—(Name of importer).

'4 B.'—4 bushel of black oats.

or,

'4 W.'—4 bushel white oats, as the case may be.

If these instructions are closely followed no further complaints will reach us from the Newfoundland traders.—W. B. Nicholson, Trade Commissioner, St. John's, Newfoundland.

Canadian Cream for the U. S.

J. B. K., Kings Co., N. B.:—Will you please give me an idea of the extent of the Canadian cream trade with the United States?

During the year ending March 31, 1911 Canada supplied the United States with 1,823,821 gallons of cream. Figured on the basis of four pounds of butter to the gallon, the year's shipments were equivalent to about 7,300,000 pounds of butter. Much of this cream was used in the manufacture of ice cream or was consumed as cream in the cities, but in these channels it supplanted approximately an equal quantity of American cream and thus that increased by that equivalent the proportion of U. S. milk flow going into butter and cheese. Under the Payne-Aldrich tariff schedule Canadian cream enters the United States under a duty of five cents a gallon which means a duty of less than 1½ cents per pound of butter-fat in very rich cream.

Farm Laborers for Nova Scotia.

Staff-Captain Jennings has just returned to Halifax after spending three months in the "Old Land," during which time he travelled extensively through Scotland, England and Ireland, lecturing on Nova Scotia, its resources and opportunities. These lectures were largely attended and created considerable interest in this Province. The Staff-Captain succeeded (through the lectures and personal interviews) in interesting a large number of Farmers and Farm-laborers, who will come to Nova Scotia this Spring. Some of these men have a small capital, ranging from 150 to 500 Pounds. The men will arrive a few at the time on the various boats, during March and April, and will be given situations on arrival.

A number of applications have already been received, but if there are any others who will need help this Spring, they should write at once to Staff-Captain A. Jennings, Box 477, Halifax, N. S.

Conirol of Coddling Moth.

In the laboratory fungicidal tests on spare germination with summer spores (conidia) of the apple scab fungus were made. Lime-Sulphur alone diluted 1-50 reduced germination from 50 per cent. to 12.5 per cent., while with 1-100 and Lead Arsenate added at the rate of two pounds to 50 gallons it was reduced from 66 to 0 per cent.

On the trees apple scab was reduced from 79.4 per cent. to 29.5 per cent. by Lime-Sulphur 1-30 alone, and to 10.9 per cent. by the same concentration of Lime-Sulphur with Lead Arsenate added.—Cornell Bulletin 284.

Why Ventilate the Dairy Barn ?

One of the great causes of disease in animals is unfavorable external conditions, for no living thing can thrive unless the surrounding conditions are favorable for its growth. All animals have a certain capacity of enduring unfavorable influences. This capacity is usually spoken of as "vital resistance." This may be great or small, but every animal must have more or less of it or it cannot continue its struggle for existence.

It was recognized more than a century ago that impure air induces disease. Impure air is not the cause of the disease, but constitutes an unfavorable surrounding condition. The vitiated air of stables reduces the vital resistance of an animal, rendering it less adaptable to the extremes of conditions to which it may be exposed and more susceptible to infection, against which it has no sure defense.

Dairy barns are very frequently poorly ventilated. The dairy cow is then not only required to live, but to work, under unfavorable influences and she often falls a victim to such diseases as tuberculosis, pneumonia, bronchitis, colds, etc. Foul air is one of the prime factors in the production of such diseases.

Since the advent of sanitary science in connection with ventilation the air space allowed for each animal has been increased, and a number of methods of ventilation have been devised. The exercise of a little care in such matters will protect the health of animals, prevent premature death and also make possible the highest working efficiency of the herd.

A Good Start With Clydesdales.

The splendid two year old Clydesdale stallion "Royal Flash"—11840—, by "Flash Favorite" (Imp.) (12147) (4583), out of "Baron's Lily" (Imp.) (17431); bred by the Nova Scotia Agricultural College Farm, has recently been purchased by Mr. Roland Rutherford, of River Hebert, Cumberland Co., N. S. This is a colt of great promise, being of good size, splendid quality, beautifully compact and well muscled body and showing excellent action.

We are pleased to know that Mr. Rutherford, an ex-student of the N. S. A. C., as well as a graduate of the O. A. C., Guelph, has been so fortunate in his selections of pure bred Holsteins and in this, his start in Clydesdales.

Will Advertise Shire Horses.

At the Annual Meeting of the Shire Horse Society in England on February 29th, the Earl of Coventry presiding, a committee was appointed to devise a scheme whereby the suitability of Shire Horses to the requirements of the Canadian and American markets will be made known to those Countries.

"Baron Kelvin" Comes to P. E. I.

Hon. John Richards, Biddeford, P. E. I., has purchased from Graham & Renfrew Co., Bedford Park, Ont. the champion Clydesdale stallion, "Baron Kelvin" at perhaps the highest price ever paid for a stallion in Canada, which shows that the breeders of Prince Edward Island are out for the right kind of stuff.

Harding Bros. Add to Their Herd.

At the Tillsonburg Ontario Holstein sale, which was carried out on January 2nd, Mr. Thos. Harding, of Harding Bros., Welsford, N. B., bought the cows Fairy Faforit and Kate Abbekerk for $215 and $275 respectively.

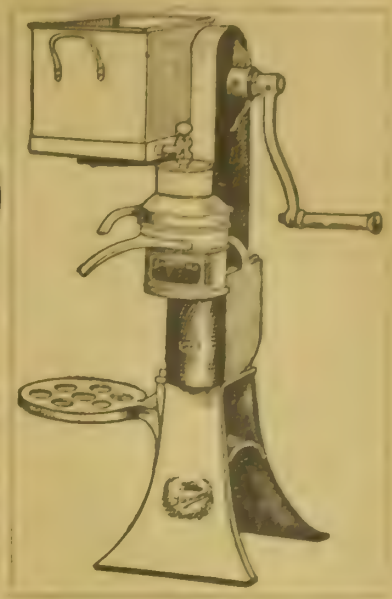
For Your Wife's Sake

Get an easy-running, easily cleaned Separator

A busy farmer cannot always be on hand to turn the separator for his wife. But if the separator is a

STANDARD

his wife will not require the services of a strong, husky man.



The makers of the Standard have built a separator that any woman can easily turn. A strong arm and a strong back are not necessary to make the Standard go. A little energy goes a long way with the Standard.

The low supply can of the Standard also makes it essentially a woman's separator. If given her choice, no woman would prefer to pour a pail of milk into a supply can at least one foot higher than the Standard's. A high supply can means a high and awkward lift, and frequent accidents.

Your wife will prefer the Standard, too, on account of its sanitary features. Milk from any source cannot reach the neck-bearing. Neither can dust get into it. The gearing, too, is enclosed, and is therefore dust-proof. The discs can be cleaned in a minute's time without the use of a brush.

But get the Standard Cream Separator Catalog and learn all about the world's greatest separator--the quiet-running, self-oiling dust-proof separator that will pay for itself in so short a time.

The Renfrew Machinery Co.,

LIMITED

Head Office and Works - - Renfrew. Ontario.

Sales Branches at Winnipeg, Man., and Sussex, N. B.

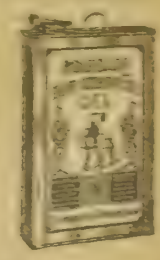
The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.



One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

Ornamental Fencing

affords protection to your lawns, flowers and children, in addition to adding a finishing touch of beauty that is most pleasing to the eye and satisfying to the owner.

Peerless Ornamental Fencing is unequaled for beauty of design, artistic finish and strength of construction.

We have spent years in the manufacture of fencing and consequently we know what is best to give real fence service and how to make such a fence at a price you are willing to pay. Don't be misled by the inferior and cheap article offered by catalog houses, because such fencing is dear at any price.

Our Agent will supply you, but if there is none near write us direct, mentioning the name of your dealer, and we will see that your requirements receive prompt attention.

Write for our printed matter. It is mailed free on request.

The Banwell-Hoxie Wire Fence Co.

Winnipeg, Man.
Hamilton, Ont.

The All Canadian Route to Montreal.

Via the Intercolonial Railway Maritime Express is the only All Canadian Route to Quebec and Montreal from the Maritime Provinces. The Maritime Express is generally admitted by experienced travellers to be the most comfortable train in America. This is especially true in regard to the dining and sleeping car service. The diners of the I. C. R. are roomy and well ventilated and furnished in the best of taste. The excellent meals are served Table d'hote at a price away below the a la carte rates prevailing on the company owned lines. The sleeping coaches are up to date in every particular, and the smoothness of the road bed makes the long journey easy and pleasant. Being popular with a class of travellers who are generally found to be the acme of good company the through journey is never found dull, and even during the winter months there is much of scenic interest in the day's ride through the Province of Quebec. Montreal is reached at the convenient hour of 6.30 p.m. and connections are made at Bonaventure Union Station with the through trains of the Grand Trunk Railway for Toronto, Buffalo, Detroit, Chicago, and other points in Western Canada and the United States.

You Can't Take Chances

If you want the Best Seeds that grow, then you want

For twenty years McDonald's Seeds have made money for a host of progressive farmers and gardeners all over Canada; they'll do the same for you. Send for 1912 catalog, FREE.

Kenneth McDonald & Sons, Ltd.

Ottawa - - - Ontario

Write to-day Dept D

Selecting the Male Birds.

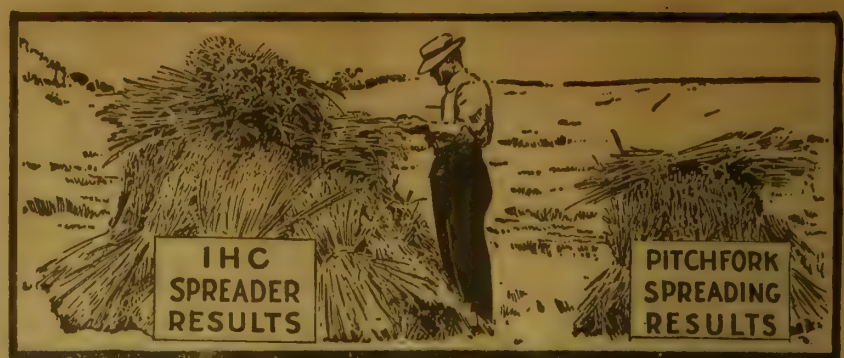
The male that is to head each pen should be selected with great care, as he is half the pen. Above all he should be strong and vigorous, and strong in the points w herein his mates are weak. Where a weak section in one parent is offset by the same sectian being exceptionally strong in the other parent the defect is reproduced only upon a part of the progeny and in a lesser degree than was possessed by the parent (where both parents are equally prepotent breeders), but where both parents have the same defect their progeny will possess the defect greatly magnified. Many breeders are mistaken in thinking they have a vigorous male because he possesses great activity in his attentions to the females. Such a male possesses strong reproductive organs, but not always a strong constitution. The male that possesses a strong constitution is the first off the roost in the morning and the last to go on at night; he is ever scratching and calling to his mates to eat the fruit of his labour; is gallant and never forces his attentions upon his mates. His comb and face are bright red in colour, and does not turn dark red or purple after service or fighting with another male. A male that has a habit of violently shaking his head, at the same time stepping backwards, is suffering from nervousness, and should never be used for breeding. I prefer a male that crows loud, long and often, as it is an indication of vigour and strong respiratory organs.

CARE OF THE BREEDERS.

A good male bird is easily ruined by improper care. If he is as gallant as he should be he will continually scratch and hunt food for his mates to his own detriment, and should be fed once a day from his mates. For this purpose a small coop on the wall of each house is convenient in bad weather, but in mild weather it is more convenient to feed the males outside the house just after the females have gone to roost. After being taken out of the house and fed for several evenings just after the females have gone to roost the males will soon learn to come out and receive their suppers when they hear the attendant coming. A small handful of grain and coarse beef scraps each evening will be sufficient. Should the male appear lazy or out of condition, he should be removed from his mates for a few days to allow him to recuperate and not waste his energy on useless service.

EGG PRODUCTION.

As great egg production can be secured by keeping the birds in close confinement as if given free range, but where fertile eggs are desired the more range that is given the better. Each pen should have a large yard well sodded over and protected from the sun in summer by trees or sunflowers, and from the winds in winter by windbreaks of old boards or straw along the nortn and west sides, so that the fowls will spend as much time as possible in the open air. The houses should be dry and well ventilated, and the floors covered with deep litter, into which the grain may be scattered in bad weather to induce the birds to exercise. In mild weather the fowls will prefer to scratch in the open air if protected from the winds. I like to have a litter pen in each yard in the corner most protected from the wind. Boards high enough to prevent the litter being scratched outside the pen is all that is necessary. The breeding stock should have an abundance of green food at all seasons of the year, and for this purpose nothing is better than sprouted oats where a grass range is unavailable. Some meat food is also necessary for best results, and they should have sufficient grain to keep them in good condition, but never have enough to make them become fat.—American Poultry Journal.



How Do YOU Spread Manure

THE above illustration shows the difference in crops, between the I H C way of spreading manure—and the pitchfork method.

The pitchfork way is slow, hard, and disagreeable, wastes much of the value of the manure, and the results hardly justify the labor and time invested.

The I H C Spreader cuts the manure into fine shreds, spreads it evenly, and makes the work easy. Spreading manure the I H C way is bound to result in better soil, bigger crops, and more profits.

I H C Manure Spreaders

Corn King—Cloverleaf

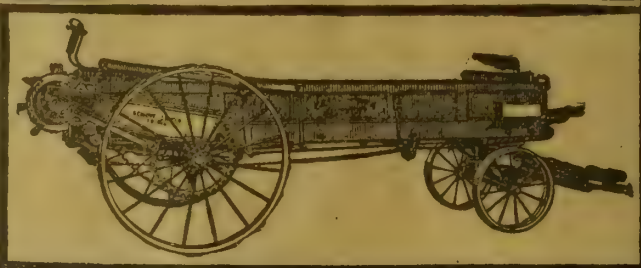
are simple, strong, and durable. They have many advantages that make them superior to other spreaders.

All working parts are extremely simple and wonderfully strong. The beater driving gear is held in a single casting, so that there is no binding—no cutting of parts caused by the gears springing out of alignment. The roller-bearing support for the apron reduces the draft. The levers are convenient. The feed changing device can be shifted quickly and easily. The wide range of adjustment allows you to spread manure heavy, medium, or light, as your judgment tells you is best for the soil.

Whether you have a large or small farm, or want a spreader for orchard use or truck gardening—there is an I H C that will suit your requirements. Why not see the I H C local agent at once? Get a catalogue from him, or, write nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY of AMERICA
(Incorporated)
Chicago U S A



I H C Service Bureau

The purpose of this Bureau is to furnish farmers with information on better farming. If you have any worthy question concerning soils, crops, pests, fertilizers, etc., write to the I H C Service Bureau, and learn what our experts and others have found out concerning these subjects.

"A Call"

To the P. E. I. Central Seed Fair, Domestic Science and Poultry Show to be held in Market Building, Charlottetown

12th, 13th and 14th March

Charlottetown being central and competition being open to the whole Province makes it an ideal place to buy seed grain, potatoes, &c.

When visiting the poultry show you can order your eggs for hatching or get birds for mating. Improvement is the order of the day and you CANNOT AFFORD to lag behind.

The educational meetings held in connection will be helpful and should have large gatherings.

EVERYTHING FREE and EVERYBODY WELCOME.

For prize list and information write

John H. Gill, Secretary,
Little York, P. E. I.

Vigor of Youth.

EVERY MAN CAN HAVE IT.

Youth with all its energy and enthusiasm can be yours. Youth is only health; it is only fresh young manhood. When your blood is warm and your nerves full of energy you have youth and health and all the force that goes with it. The fire of the nerves, dimmed by neglect and misunderstanding of life, can be rekindled and all the sparking vitality of youth restored. You are only as old as self-made worry makes you. You can get back the fire and vim of youth and feel like a young man again. Circulation will do it, and you must use electricity to get that 20,000 have used it and they join in praise of this wonderful remedy.

You may have heard of it, you may of some of its wonderful cures, but still you have been doubtful and afraid to venture. Your hesitation is due to the failure of drugs. That's no argument against electricity. You have paid dearly indeed for the little mite of relief which drugs have brought you, and it was not even permanent relief. My way of applying electricity cures to stay cured. You use it two or three hours every evening or at night at sleep. No bother, no waste of time, nothing but pleasure while treating. Circulation is revived, you feel new life, invigoration, such as only fresh pulsating blood will bring you. If your blood is stale and sluggish, there is a reason and a remedy. It's Electricity, the fire of life.

Back and Kidney Troubles.

Rutherglen, Ont., Dec. 3rd, 1911.

M. F. McLaughlin,—

Dear Sir,—Some time ago, I purchased one of your Belts and after wearing it for thirty days I am pleased to say that I feel like a different man. I am still wearing the Belt and find myself getting stronger every day, and I must say that I would not be without it on any account. With pleasure I wish to recommend it to any person suffering from lame back or kidney trouble.

Yours truly, S. Craig.

Cured of Lame Back in Two Months.

Loch Lomond, R.F.D. No. 4, St. John Co., N.B. January 22, 1912.

M. F. McLaughlin,—

Dear Sir,—I have worn your Belt for two months and it has done all that you claimed it would do, and I am in perfect health now. My back is completely cured. The Belt is as strong as ever, and has more than paid for itself.

Yours very truly, W. H. Smith.

Considerable Relief After Ten Days Use of the Belt.

166 Notre Dame St., Three Rivers, Que., Dec. 18, 1911.

M. F. McLaughlin,—

Dear Sir,—It is now 30 days since I received my Electric Belt from you and I can without the least doubt say, that it has done me a lot of good. On receiving the Belt, I immediately used it according to the instructions enclosed, and had considerable relief even after ten days. I will continue to wear my Belt till perfectly cured.

Yours very truly, Mrs. A. V. Gaudin.

BIG BOOK FREE

This edition of my book is just completed, and it's free to you for the asking. It tells you how a puny man can make himself feel like a Sandow. Of course, it's not going to grow you bigger than nature intended you, but any man who started out with a fair constitution and for some reason got on the decline, can learn something from this book that will open his eyes to how useless it is to be ailing, slow, poky, lacking in vim, ambition and self-confidence.

I want him to read this book and learn the truth about my arguments. If you are not as vigorous as you would like to be, if you have rheumatic pains, weak kidneys, prostatic troubles, nervous spells, varicocele or any ailment of that kind it would assure your future happiness if you would look into this method of mine. Don't delay it; your best days are slipping by. If you want this book. I send it closely sealed free if you inclose this coupon.

M. K McLaughlin,
214 St. James St, Montreal, Quebec

Gentlemen,—Please send me, prepaid, your Free Book.....

Name .....

Address .....

Office Hours—9 a.m. to 6 p.m. Wed. and Saturday until 8.30 p.m.

How to Build a Dairy Barn.

P. B. Tustin, Associate Royal Sanitary Institute, and Chief of Food and Dairy Division, Health Dept., Winnipeg, Man., says:—

"The Cow Stable is the Kitchen where the food of many city babies is prepared, and it is the duty of every farmer and dairyman to see that the kitchen is clean. Cow stables should be light and well ventilated, fitted with concrete floors and steel stalls which are practically indestructible and are necessary for the following reasons:

"Concrete floors do not soak up manure, which is one of the chief causes of the spread of tuberculosis in cattle. "Steel stanchions and stalls do not obstruct the light, are easily kept clean and do not soak up manure. Stables constructed in this manner are lighter, cleaner and more comfortable for the cattle."

We have just received a book entitled, "How to Build a Dairy Barn" from Beatty Bros., Fergus, Ontario, manufacturers of cow stalls, stanchions, litter carriers, feed carriers, hay carriers, horse-forks and slings, water-bowls, rack clamps and extension ladders.

Any reader of the Maritime Farmer who contemplates making changes in his dairy stables or who is going to build new ones may procure a free copy of this book by writing to Beatty Bros. and mentioning the Maritime Farmer. It contains an excellent article on Ventilating the Cow Barn by J. H. Grisdale, Director of Dominion Experimental Farms. It also shows different systems of equipment and construction that will give the intending builder a model idea towards which he may work. Send for a copy to-day.

Sweetening the Meat Barrel.

Editor Maritime Farmer:—

I notice in your issue of January 30th, your directions for Sweetening the Meat Barrel. It probably is all right but for half a century I have adherred to the theory that fire would purify all things; hence my practice is as follows: No difference whether the barrel smells of tainted meat or fish, fill it with water and let it stand for two days or more. Then empty water out and wash clean. Next take oat straw or hay and put a little in bottom of barrel and set on fire. Drop in more straw as it burns down. Turn barrel on side and roll over slowly not spilling the cinders. Shake it about or stir to burn down and if you char the inside of the barrel all the better. Empty out and wash thoroughly and I will warrant the job complete.—J. T. Hetherington, Queens Co., N. B.

Dates to be Remembered

Sussex Dairy School Creamery and Farm Dairy Course, March 19—29, 1912.

Sussex Dairy School Cheese Makers Course, April 2—12, 1912.

St. John Exhibition, September 2—7, 1912.

P. E. I. Provincial Seed Fair, Summerside, March 5, 6, 7 and 8, 1912.

Halifax Exhibition, September 11—19, 1912.

N. B. Provincial Seed Fair, Fredericton, March 21 and 22, 1912.

P. E. I. Central Seed Fair and Poultry Show, Charlottetown, P. E. I., March 12, 13 and 14, 1912.

Maritime Horse Show, Amherst, N. S., April 3, 4 and 5, 1912.

Sussex Seed Fair, Sussex, N. B., March 26, 1913.

Chatham Seed Fair, Chatham, N. B., March 28 1912

Fertilizer Requirements of Corn.

Extract from

"Fertilizing Fodder Crops"

By T. Walter Shipley.

"Corn is a gross feeder and must have an abundant supply of readily available "plant food" material. Where corn is grown on any but a clover sod or meadow, a dressing of twelve to fifteen tons of barnyard manure should be applied and thoroughly worked into the soil. While this dressing of manure would supply the necessary humus and part of the nitrogen required, it must be supplemented by the addition of phosphoric acid and potash if a maximum crop is to be grown. The addition of, say, 400 lbs. Acid Phosphate and 150 lbs. Muriate of Potash per acre would supply these necessary ingredients and, except where the land is in a very high state of cultivation, 120 to 150 lbs. Nitrate of Soda, applied as a top dressing, would be required to supply the amount of nitrogen to produce a maximum crop."

FREE copies of this and other bulletins dealing with the important subject of fertilizing, may be obtained from

THE GERMAN POTASH SYNDICATE
1105 I. O. F. Temple Building, Toronto, Ont.

Presentation to Rev. P. C. Guthrie.

A most enjoyable evening was spent at the social held at Palmer Road Hall, on Monday night, Feb. 19th. The most interesting event of the evening was the presentation of a purse containing $200.00 as a gift from the parishioners to their pastor, Rev. P. C. Gauthier accompanied by an address in French read by Mr. Moses Wedge, and the following address in English read by Mr. Gillis:

Dr. P. C. Gauthier, Reverend and Dear Father: As almost all of your parishioners are assembled here tonight; we have chosen this as an opportune time to offer to you a small token in evidence of the appreciation and high esteem in which you are held by one and all of us. Since your coming amongst us your labours in our best interests, both spiritual and temporal, have been unceasing and untiring. Always ready to lend a helping hand to each individual and to the parish as a whole, always ready to encourage us by word and example in everything pertaining to our advantage and to the further advancement of the parish as testify the establishment of the Farmers' Institute and the Creamery at St. Louis both of which undertakings have been successful to the highest degree owing to your painstaking and assiduous efforts. Therefore in consideration of your work in both enterprises we beg to offer you this purse in recognition of your interest and perseverance and hope you will accept it in the spirit in which it is offered.

We also trust that you will be spared to us many years to continue the good work which you have so nobly begun. Signed on behalf of the Committee.

Editor's Note:— We know of no one who deserves the esteem of an agricultural community more than Dr. Gauthier. He is untiring in his efforts to further the cause of agriculture by taking an active part, by precept and example, in the leadership of the onward movement. The editors of the Maritime Farmer can heartily say "Amen" to the sentiments expressed in the above address. Dr. Gauthier's example might well be followed by other members of the clergy. We feel assured that their efforts would be highly appreciated.

FLORICULTURE.

H. A., St. John, writes:—I have a fairly good sized plant that sits on a pedestal in the hall. A few days ago I discovered that two leaves were dried up, withered and curling. They seem to be dead, now. About two weeks ago the door was left open on a quite cold day and I was afraid the plant was hurt at that time; but it seemed so long before I noticed the curling of the leaves, that it is possible that the trouble is caused by something besides frost.

The trouble mentioned might be caused by excessive drouth or overwatering caused by poor drainage. It is, however, highly probable that in your case the chill has done its work. The damage would not show for at least a week, unless the plant was frozen solid, which of course did not occur, in your case. Cut off the affected leaves close to the stalk and you will probably save the balance of the plant.

Whenever the heavy storms wash off the covering of any of the hardy plants or bulbs in beds, it should be replaced at once, also see that the drainage of such beds is unimpaired. Dutch Hyacinths and also Daffodils are now coming in. Watch these bulbs if cellared and don't let them send up soft growths but bring them to the light as soon as the signs of buds appear.

A. H., St. John, writes:—I enclose a leaf taken from a Rubber Plant vesterday, which is the third leaf lost in a year. Brown spots appear and in a short while the leaf turns yellow and drops off. This plant is six years old and about six and one-half feet high and shows signs of branching out below. Can you tell me the cause of the trouble and what can be done to prevent it as well as to save any leaves not affected?

The loss of three leaves on a plant of the size mentioned during the space of a year is quite normal and would not require attention were it not for the black spots mentioned, which indicate poor drainage, and too much water. This should be corrected at once. It is also possible that the plant requires repotting. If the roots are crowding out through the drainage, repot it. Nothing can be done to save leaves that are spotted now, but the correction of the above mentioned errors should prevent any further loss of foliage.

Watch your bulb beds this spring. Do not let the water stand on them or ice will form and cause injury in the blooming time.

Let an I H C Engine Save You Hours of Drudgery

WHY should you waste hours of valuable time sawing wood, pumping water, shelling corn, or turning a grindstone by hand when a few cents' worth of gasoline in an I H C engine will do it all and let you use your time for important, profitable work?

An I H C gasoline engine will furnish cheap, steady, dependable power for running the pump, woodsaw, feed grinder, corn sheller, grindstone, emery wheel, cream separator, churn, washing machine, wringer, etc. It furnishes power to sharpen plows and disks, light the farm buildings, and do many other kinds of work.

I H C Gasoline Engines

are simple. They are economical of fuel. They are made in all styles, vertical and horizontal, portable and stationary, air and water-cooled, in sizes from 1 to 50-H. P., to operate on gas, gasoline, naphtha, kerosene, distillate, or alcohol. Gasoline and kerosene tractors, 12 to 45-H. P. Sawing, pumping, spraying, grinding outfits, etc.

The I H C local agent will show you the engine and explain its good points. For catalogues and full information, see him, or, write the nearest branch house

CANADIAN BRANCH HOUSES:

International Harvester Company of America
(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

Handling Cows for Record Work.

"It is not necessary to dry up a cow to get a record. A cow must be developed from year to year if she is to excel in record work, and the only way to develop a cow is to keep her milking. We never dry up a cow in order to get a record, and we will

MAXWELL LAWN MOWER

with its Crucible Steel Cutter Knives cuts so smooth, clean and easy, and holds its edge so well, that every man who appreciates a good lawn mower is sure to be pleased with it.

The whole mower is compact and perfectly balanced that it makes cutting the grass a light, pleasant exercise.

All sizes from 8 to 22 inches wide—with wheels 8 to 11½ inches high, and 3 to 6 knives.

MAXWELL CHAMPION High Speed Washer

has the largest opening of any washing machine, Every woman will appreciate the convenience of this big top.

Maxwell's Champion is the only washer that can be worked with side crank as well as hand lever.

The tub is Red Cypress—the wood that grows in the water and will never rot.

MAXWELL Jewel Food Cutter

chops all kinds of Meat, raw or cooked, and all kinds of Fruits, Vegetables, Crackers, Bread, Cheese, Nuts, etc., into clean-cut, uniform pieces—fine or coarse as wanted — without mashing, squeezing, tearing or grinding and with great rapidity.

Does away with the chopping knife and bowl entirely, doing the work in one-tenth of the time and producing an absolutely uniform product.

5 different cutters for coarse or fine mincing. Simple in construction—easy to clean—strong and durable.

Write for catalogue, if your dealer does not handle these household necessities.

DAVID MAXWELL & SONS, - 130 - ST. MARYS, Ont.

not do it. The only cow we ever dried up in order to get her record did not accomplish anything.

"A cow requires to be dry for two months in any case, and if we do not give her this rest she will take it out of us in her decreased production during the following lactation period.

"Just how to go about making a record with any particular cow cannot be written down in black and white. There are many things to be considered and no two cows will respond exactly the same to any given treatment. A cow has got to be right, and then get the best of care. There is no use stating just what feeds to give, since what one cow will eat another often will not care for, and then one must get something that cow will eat."—D. C. Flatt in Farm and Dairy.

Montreal Prices

BUTTER is firmer in Montreal, but demand is not as keen as it was. Choice creamery butter,33c. to 34c.; dairy, 32½c. to 33c.

CHEESE—15c. to 15½c.

EGGS—There was a shortage of eggs in Montreal last week. It is expected, however, that there will be a marked increase in supplies and decline in price during the next few days. Eggs are selling at 38c. to 40c. for strictly fresh.

POULTRY—turkeys, 18c. to 20c.; geese, 13c.; chickens, 13c. to 16c.; fowls, 8c. to 10c. and ducks, 17c.

APPLES—$2.25 to $4.50 per barrel.

VEGETABLES—The high prices are bringing in supplies from small shippers, and stocks held are quite ample to meet all requirements of the trade. The feeling is a little easier. Green Mountains, $1.65 to $1.70, on track; Irish potatoes, $1.55 to to $1.60. At this time last year Green Mountains were selling at 87½c. to 90c. per bag.

HAY—same as Toronto prices.

HOGS—$7.75 per 100 pounds; ewes, $4.75 to $5.00; bucks and culls, $4.00 to $4.50; lambs, $6.75 to $7.00.

Butchers' cattle, choice, $6.75 to $7, a drop of 25c.; do., medium, $5.50 to $6.50; do., common, $3.50 to $4.50; canners, $2.75 to $3.75; butchers' cattle, choice cows, $5.25 to $5.50; do., medium, $3.75 to $4.50; do., bulls, $3.50 to $5.50; milkers, choice, each, $75 to $80; do., com. and med., each, $50 to $65; springers, $30 to $45. Calves, $3 to $12 each.

In Montreal bran is $24.00 to $25.00; shorts, $26.00 to $27.00; middlings, $28.00; moullie, $30 to $34.

POTATOES IN NEW YORK.

In New York, No. 1 Bermuda potatoes, late crop, are selling at $6 to $7 per bbl., State, $3.50 to $3.62 per 180 lbs.; Maine, $3.50 to $3.75 per 180 lbs., and No. 1 Jersey sweet potatoes $1.25 to $1:65 per basket.

BRITISH HAY MARKET.

The London market is easier for Canadian clover mixed, and is quoted at $22.80 to 23.04.

HAY IN NEW YORK.

Prime hay is quoted in New York at $1.35 per 100 lbs., No. 1, $1.30, and No. 2, $1.15 to $1.20. Clover mixed is $1 to $1.20.

Special Excursion Fares to the Pacific Coast.

The Intercolonial Railway is offering special excursion fares (second class) to Pacific coast points, good going during March and up to April 15th. These are good to points in British Columbia, Oregon, Washington, California, Arizona, Nevada, Texas and Mexico. Particulars regarding these fares to various destinations may be learned from the nearest ticket agent. Those wishing to profit by the extremely low fares will do well to remember that the Maritime Express carries an up to date colonist car through to Montreal on which the traveller will find every comfort and convenience.

Let me Tell You, Face to Face

"Here is my question:—A $100 roof gives a $500 building several years of service. A $125 Pedlar roof gives the same building 100 years of service, because it is a 100-year roof. Is the extra $25 wisely spent?"

"I Have Learned How to Make You a Roof That Will Last One Hundred Years."

"I have been a good-roof missionary all my life. I invented Oshawa Metal Shingle for lightning protection. I made improvements in it and got my design perfect after 50 years. My roof was rain, wind, snow, ice, fire, lightning and sun proof. I still needed one thing—the longest lasting metal—non-rusting. At one step, when I found this metal, I achieved a roof to last you a whole century."

"There is No Building Made Right, If the Roof Is Not Perfect."

"Guard a building on top, and you guard the whole building. The weather beats fiercest on top. I tell you, no building ever made is better than its roof. I want to see you build a good roof. Skimp the walls, if you skimp anything. See your roof is right. Your good roof gives three-fold building service.

"Why, in 50 years, a little thousand-dollar barn protects $75,000 worth of hard-harvested product. A poor roof can easily rot, and waste, and lose for you twenty times its cost—twenty times the cost of a Pedlar Oshawa Shingle roof. With most roofs lightning may burn all—with my roof you can defy lightning to try its worst on your barn."

"I Make a Roof that Answers Every Roof Demand You Can Think Of."

"My roof has 'give' in it. It can expand in the sun. It can shrink in winter cold. It does this without drawing the nails that hold it. It is ice proof. Frozen snow cannot gouge it open. It is clean. Dirt cannot rest on it. Roof water gathered from it is pure. My roof covers its nails. They cannot loosen or rust. My roof is not too heavy or too light— it is ventilated.

"As a result, wind or storms cannot lift it bodily, like a shingle roof. It is spark proof and fire proof. It is lightning proof. It still protects a building if the frame sags. A man can lay it without special tools. He can only lay it right, the right way. Every protection, besides the protection against rust, comes with my roof. You lay my roof on ordinary framing.

"Why Do You Get Such a Good Roof from Me ALONE?"

"You can't get a roof deal like mine anywhere else in the world. This is because other metal shingles haven't my design or metal. Other metal shingles haven't my years of pioneer knowledge to back them. They haven't my ground-floor patents—my skill—my earnest and hard work of years on the one problem—a perfect metal roof. I, only, can make you a roof with the right metal in it to back the wear, because my shingle metal is the only one that make the deal honestly possible."

"Can You Lay It, and Lay It Right? Yes!"

"You, a tinsmith, anybody, can lay my roof—whoever can handle a hammer. I spent years in making my Shingle so it couldn't be laid wrong. There isn't an exposed nail, after you are done. The roof is ventilated so it is almost cyclone proof. My roof is earthquake proof, if your building under it is. It is settlement proof, sun proof—lodged ice cannot open it.

"Yes, sir, you can lay an entire Pedlar roof yourself in my Oshawa Shingle, while you are patching a few shingles on a leaky cedar roof. When you figure its service, the price of my roofing is ridiculously small. My price is very fair. Your bill for my roof is kept down, because folk all over the world are also buying. Big output means big quality at little price.

"Every Roof Owner Should Have the Help in My Big Roof Book FREE."

"My roof book, 'Roofing Right,' ought to be in your hand this very minute. I will be glad to send you a free copy. The book shows roofs, of course. It shows good buildings under them. You can get a score of hints for barn design, planning and arrangement, even if you don't buy my shingle.

"But the main point about my book is that it tells you all you want to know about Oshawa Shingles. I would like you to know its goodness. I am proud of the perfection, excellent quality, fine service, easy laying, beauty and adaptability of my clean Oshawa Shingle. It is a bigger thing than it looks to give any man weather, fire, lightning, and time-resisting protection rolled into one article. My 'Roofing Right' Book tells you all about a roof that 'Makes good' for 100 years."

"Send Me a Post-Card To-day."

"Get my 'Roofing Right' Book to-day. A post-card will bring you the whole story of my perfected Oshawa Shingle. Ask one of my branches near you. Or write me direct. Remember you better any building threefold if you put the best roof you can get on it. People on the other side of the earth know this. You write me.

F. K. Pedlar

The PEDLAR PEOPLE Limited, of Oshawa

MONTREAL 321-3 Craig St. W. | HALIFAX 16 Prince St. | ST. JOHN, N. B. 42-46 Prince William St. | LONDON 86 King St. | QUEBEC 127 Rue du Pont | 323
TORONTO 111-113 Bay St. | CHATHAM 200 King St. W. | VICTORIA 434 Kingston St. | VANCOUVER 108 Alexander St.
PORT ARTHUR 45 Cumberland St. | OTTAWA 423 Sussex St. | REGINA | EDMONTON 563 Third St. W | WINNIPEG 76 Lombard St. | CALGARY 1112 First St. W.

5

"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs and its operation is certain and immediate. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 35c., sufficient for ten days' treatment to every suffering woman who will write for it. Enclose 2 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

STRAWBERRY PLANTS

All the latest, best producing varieties including: Senator Dunlap, Williams, William Belt, Brandywine and numerous others. Send for Catalogue.

JOHN H. CHUTE,
Berwick, N. S.

BERRY BOXES—[illegible] lots of [illegible] Forms for making [illegible] Orders [illegible] O. F. [illegible] Kings Co., N. S.

FOR SALE—[illegible] [illegible] [illegible] [

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initisl or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Shorthorn bulls WALTER EATON, Upper Canard, Kings Co., N S

YORKSHIRE PIGS—Registered—Five (5) dollers, five weeks old—Prize winning stock. R. J. MESSENGER, Bridgetown, N. S.

WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

FOR SALE—Fine bred Shorthorn bull, milk strain, 2 (two) years old. WILBERT SMITH, East Mines Station, Col. Co., N. S.

BUYERS of Fresh Eggs, Dressed Pork, etc., Reference Bank of New Brunswick. JOHN HOPKINS, St. John, N. B.

FOR SALE:—Coolie Pups, born heelers, both parents splended workers, LESLIE WALKER, Lower Millstream, Kings Co., N. B.

FOR SALE:—Two (2) Yearling Guernsey Bulls, Also one unregistered Jersey. Apply to T. D. BLAIKIE, Great Village, N. S.

FARMER WANTED:—Good practical worker, married, to take charge of farm. Address DAVISON LUMBER CO., LTD., Bridgewater, N. S.

FOR SALE—Pure Bred Ayrshire Cow, freshening March 1st. Pure Bred Ayrshire Bull, 15 months old. R. S. TAYLOR, New Germany, N.S.

GOLDEN WYANDOTTES, the busy open laced kind, Prize winners. Eggs, $2.00 for 15, $3.00 for 30. PETER WILSON, Cobden, Ont.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

FOR SALE—Four Ayrshire Bulls fit for service, from eleven to twenty months old. Spring calves. Two Holstein bulls eleven months. Yorkshire pigs, farrowed Feburary 26th. JOHN A. HUGHES, Petitcodiac, N. B.

FOR SALE—Pure Bred Clydesdale Stallion, rising 3 years, great grandson of "Baron's Pride." Apply to F. E. SHARP, Midland, Kings Co., N. B.

25 FANCY EASTER POST CARDS, Birthday, Lovers, Views, St. Patrick, etc., in gold and colors, 25 cents. Also 100 extra free. All postpaid. FARMER EMPORIUM, BEEBE, QUE.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

MAPLE GREEN FARM HOLSTEINS.—Does 54 lbs. milk per day at 26 months old appeal to you as dam of your herd bull? If so, write for particulars to R. L. HICKS, Dalhousie Junction, Restigouche Co., N. B.

FOR SALE:—Four (4) good grade milk cows, two (2) Holsteins and two (2) Jerseys, to freshen in April, all large size and heavy milkers, three (3) bred to registered Guernsey bull, Blossom's Anchor, which is also for sale. W. A. SMITH, Woodward Cove, Grand Manan, New Brunswick, Canada.

HORSE WANTED—I want to buy a young mare or gelding (mare prefered), weighing from 1000 to 1100 pounds, sound in wind and limb, fairly good driver, not fussy and a quiet worker. Write, giving full particulars and price to D. W. MORRISON, Blacksmith and Horseshoer, St. Peters, N. S.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Rocks! Rocks! Rocks!

Eggs for hatching from splendid purebred utility stock. Barred, Buff and White Rocks. I am not in the show business, but in the business for utility, that's what you need. $2.00 for 15 eggs.

J. B. DAGGETT,
Centerville, N. B.

KINNEAR POULTRY CO. LTD.,

Sussex N. B.

We are now prepared to supply eggs for hatching from our Utility Pens of B. P. Rocks & R. I. Reds (bred for egg production and market qualities) at $4.00 per 100 in lots of 50 eggs or more. Order ahead of time to ensure delivery when wanted.

Fairview Stock Farm.

For sale Ayshire Bulls from one to ten months old sired by imported bulls of excellent quality, and from cows that are of splendid type and also large producers.

Booking order for Berkshire pigs of March litters from stock that is second to none in the province. Owing to having made a milk contract for the summer we will not have any skim milk for this stock so we will sell at very reasonable figures to clear them out. Write your wants or better still call and inspect the stock. We can save you money and will positively guarantee satisfaction.

T. J. HAWKINS,
McKays, Colchester Co.

S. C. Rhode Island Reds Exclusively.

I have made a specialty of this one breed, and keep nothing else. After trying many varieties, we have decided this is the best all round purpose fowl for this climate. For beauty and utility we believe it has no equal.

2 pens bred to lay, and we can guarantee these birds will lay you lots of eggs in the coldest weather. $1.50 setting 15.

1 pen extra fine birds headed by a cock from Lester Tompkins. direct, $3.00 for 15 eggs.

Try the Red-bird for happiness.

SARAH E. MOSES SMITH,
Woodward's Cove, Grand Manan, N. B.

Cattle and Sheep Labels.

Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

Bargains.

We offer at bargain prices for quick sale, balance of our S. C. White Leghorns.

7 Hens and Pullets and Cockerel (1st Amherst)

Also Peerless Incubator, 200 eggs.

ORCHARD HILL FARM,
Brown's Flats, N. B.

PROVINCIAL
Dairy School
SUSSEX, N. B.

SESSIONS FOR 1912

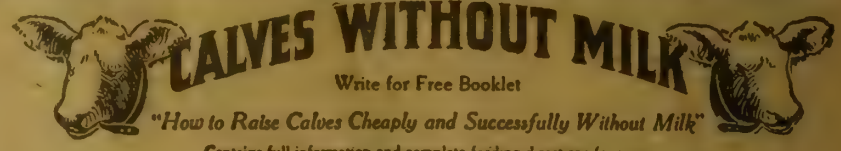
CREAMERY AND FARM DAIRY SESSION

March 19th to 29th---Soft Cheese making will be taught Farm Dairy Class during Creamery Session.

Cheese-making Course.
April 2nd to 12th

For circulars descriptive of courses apply to

C. W. McDOUGALL,
Sussex, N. B. *Superintendent.*



Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

No calves can be raised on it at the cost of one where milk is fed.
The only calf meal manufactured in an exclusive Calf Meal Factory.
Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

SUNNY SIDE STOCK FARM.

The Ayrshire herd now headed by "Greenslack Great Fortune" (imported), his dam had a record of 12840 lbs. of milk 3.9 fat in 45 weeks. At present I am offering for sale in Ayrshires, one bull 18 months, one 12 months, two 5 months and two young calves. Females any age. In Guernseys, one bull 12 months, one young heifer calf. In Chester White Swine, young sows 3 months old and am booking orders for March litters from two aged brood sows. Inspection invited. Intending purchasers met at I. C. R. Station.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

"WILLOW FARM" FOR SALE.

"Willow Farm" is situated two miles from the centre of the town of Amherst, which is a growing manufacturing town of over nine thousand population, and one of the best markets in Canada. There is a good public school within forty rods of the house.

The farm consists of one hundred and twenty three acres, forty three acres of marsh and eighty of upland, sixty five of which are under circulation.

The upland is in a high state of cultivation as a large stock of cattle have always been kept on the place and for several years a short rotation has been followed. The soil varies some but is mostly a good loam quite free from stone and easily worked. The pastures are well watered by springs and brooks.

The house is 28x38 feet, two stories with ell 16x20 with good cellar, heated by furnace. Barn 50x80 feet with basement stable which will accomodate forty cattle and six horses, also root cellar holding two thousand bushels. Carriage and impliment shed 26x86 feet and other out buildings all in first-class repair.

The fencing is nearly all of woven wire and in good order,

A wood lot of 70 acres, three miles from the farm will be included in the sale.

A retail milk trade of about one hnndred and twenty quarts a day will be sold with the farm if desired

This is one of the finest live stock and dairy farms in Cumberland County; a beautiful home and a splendid opportunity for the right man. Apply to

C. HOWARD BLACK, Owner,
Amherst, Nova Scotia.

Now is the Time

to place your orders for Baby Chicks.

Write at once to

The Maritime Poultry Supply Co.,

Moncton, - - N. B.

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

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Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

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J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
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Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

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J. R. Semple, Brule Co., N. S.

Yorkshires.

Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
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W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls, colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best herds in the country. Inspection and enquiry dairy solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

PLANTS THAT GROW.

Strawberries in leading varieties, at 75 cts. per 100. $5.00 per 1000. Raspberry and Blackberries 50 cts. per dozen, $1.50 per 100. Apple, Pear, Plum, and Cherry trees, and all small fruit plants at LOWEST PRICES. For Large Crops and Quick Returns plant our NORTHERN GROWN STOCK.

Bees and Bee-Keeper's Supplies.

Write for Price List and Free Delivery Offer. Discount for early orders.

E. L. COLPITTS - PETITCODIAC.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 25 to 40 tons of hay; lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2, Amherst, P. O., N. S.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

Rosebank Farm Jerseys

Young Bulls for sale by the imported bulls, Pogis 40th of Hood Farm and Foxhall's St. John O'Dreamwold Champion bull at Halifax and Chatham also headed 1st prize herd on the circuit. JOSSELYN & YOUNG
St. John, N. B.

SEA VIEW STOCK FARM

I have for sale several choice pure bred young Holstein Bulls, of various ages. Write or call for full information.

J. D. IRVING,
Bouctouche, N. B.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 1 Cockerel and 2 Pullets. $4.00 per Trio.

S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 K. C. R. I. Red Cockerels. $2.00 each. These must be sold to make room for Breeding Pens.

W. H. HENRY,
Shubenacadie, N. S.

For Sale
Peerless Incubators

1—120 Egg Machine.
1—200 " "

Purchased from the makers last Spring 1911—used last season only—good as new, will sell at a greatly reduced price.

My reason for selling is I have gone into retail milk business and require additional room by converting poultry house into cow shed.

WM, COWLING,
Moncton, N. B.

B. P. ROCKS

At the great Fair recently held in Amherst we won in heavy competition: 1st and 2nd, Cocks; 1st and 6th Hens; 2nd, 3rd, 4th and 5th, Cockerels; 2nd and 6th, Pullets; 1st, Breeding Pen (Pullet Mating); 2nd, Pen (Cockerel Mating). In Utility we won most and best of the prizes. We offer for sale excellent specimens in both young and old stock.

CRAIG BROS., Amherst, N. S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

THE MEN WHO ADVERTISE in the Maritime Farmer are experts in their business. It will pay you to consult them about your needs in their line. Tell them you are writing them because you saw their advertisement in the Maritime Farmer where all ads are guaranteed.

4½% For Your Money

Why leave money on deposit in the bank at 3 p.c. when you get half as much more by buying municipal bonds with it? We can sell you town bonds of New Glasgow, Dartmouth or any one of a dozen towns in the Maritime Provinces, to yield 4 1-2 p.c. or better. Send for particulars as to how to make your savings earn more.

Atlantic Bond Company, Limited,

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Herald Building, HALIFAX, N. S.
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MAPLE FOREST YORKSHIRES

Litters Dating from February 15th and After.

ADDRESS

S. J. GOODLIFFE, - - Sussex, N. B.

Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

GLEN VIEW POULTRY YARDS.

Only ten birds left for sale.—Three cocks and three cockerels, Barred Plymouth Rocks; two S. C. Rhode Island Red cockerels; one cock and one cockerel, S. C. Brown Leghorns. Nearly all these birds were prize winners at Amherst and Moncton, 1911-12.

HUGH McMONAGLE, - SUSSEX, N. B.

COBEQUID FARM HOLSTEINS

Herd headed by the only son of Helbon De Kol, the champion cow of Canada, record of 31.54 lbs. butter in 7 days and 128.57 lbs. in 30 days at 6 years old and 710.50 lbs. in 1 year at 3 years old. We offer for sale bull and heifer calves sired by him, also 2 young bulls nearly fit for service. Can spare a few young cows fresh or in calf to Helbon De Kols Prince. Inspection invited.

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Garthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

IN THE MARKET PLACE

St. John.

GRAIN—Oats, 55c. to 60c.; Buckwheat, $2.30 to $2.75.

LIVE STOCK—Milch Cows, $50 to $65.

DRESSED MEATS—Beef, (carcass), 5½c. to 7½c.; Beef, (retail), 10c. to 20c.; Mutton, 7c. to 9c.; Veal, 9c. to 11c.; Pork, 8½c. to 9½c.

DAIRY PRODUCTS—Creamery Butter, 30c. to 37c.; Dairy Butter, 30c. to 35c.; Cheese, 14c.

POULTRY AND POULTRY PRODUCTS—Eggs, 25c. to 28c.; Fowl, 90c. to $2.00; Chickens, 90c. to $2.00; Geese, $1.25 to $1.50; Turkeys, 28c. to 30c.

FRUIT—Apples, $2.50 to $3.00.

MISCELLANEOUS—Hay, $10 to $15.00; Straw, $9.00 ton; Beef Hides, $11.50; Calf Skins, 50c. to $1.00; Lamb Skins, 50c. to $1.00.

VEGETABLES—Carrots, $1.75 to $2.00; Potatoes, $2.25 to $2.50; Turnips, $1.00; Beets, $1.50 to $1.75.

The potato market is off this week, prices have fallen off 50c. per bbl. Butter still has an upward tendency and it is almost impossible to get good stock. Beef is quite plentiful this week. Veal is coming in in very good shape and commands good prices. It pays the farmers to give better attention to bringing good stock to the market as they are then always sure of realizing good prices and quick sales. Fowls bring good prices. The prospects of active markets looks good this spring.

Halifax.

GRAIN—Oats, 56c. to 57c. bagged; Peas, split, $6.75 to $7.00 bbl.; round, $5.75 to $6.00 bbl.

FEEDSTUFFS—Bran, $27.00 to $28 ton; Shorts, $29.50 to $30.00 ton; Middlings, $30.00 to $30.50 ton; Oil-Cake, $2.40 to $2.45 bag; Cottonseed Meal, $1.80 bag; Gluten Meal, $33.00 ton; Corn Meal, $1.80 to $1.82½ bag; bbl., 20c. more.

GRASS SEEDS—Timothy, 19c. to 19½c. lb.; Com. Red Clover, 24c. to 24½c. lb.; Mam. Red Clover, 24c. to 24½c. lb.; Alsike, 19c. to 20c. lb.

LIVE STOCK—Butcher's Cattle, 9c. to 12c. quarter; Milch Cows, $35.00 to $40.00; Lambs, (retail), 14c. to 16c. lb.; Hogs, (carcass), 7½c. to 9c.

DRESSED MEATS—Beef, (retail), 12c. to 22c. lb.; Pork, 12c. to 16c. lb.

HORSES—Drafters, $200.00 to $300; Roadsters, $200.00 to $250.00; Carriage, $200.00 to $250.00.

DAIRY PRODUCTS—Creamery Butter, 32c. to 34c. lb.; Dairy Butter, 28c. to 30c. lb.; Cheese, 16c. to 17c.

POULTRY AND POULTRY PRODUCTS—Eggs, 35c. to 40c. doz.; Fowl, 15c. to 20c. lb.; Chickens, 16c. to 22c. lb.; Ducks, 17c. to 18c. lb.; Geese, 16c. to 17c. lb.; Turkeys, 22c. to 26c. lb.

FRUIT—Apples, $3.50 to $4.00 bbl.

MISCELLANEOUS—Hay, $13.50 to $14.50; Straw, $8.00 to $9.00.

VEGETABLES—Potatoes, $2.25 to $2.40 3 bus. bag; Turnips, $1.25 to $1.30.

Charlottetown.

GRAIN—Oats, white, 48c. to 50c.; black, 50c. to 52c.

FEEDSTUFFS—Shorts, $1.55 to $1.60; Middlings, $1.55 to $1.65; Oil-Cake, $2.50 to $2.75; Corn Meal, $1.85 to $1.95.

GRASS SEEDS—Timothy, 15c. to 18c.; Com. Red Clover, 25c. to 28c.; Mam. Red Clover, 25c. to 30c.; Alsike, 23c. to 27c.

LIVE STOCK—Butcher's Cattle—4½c. to 6c.; Stockers, $18 to $35.00; Milch Cows, $20 to $45.00; Sheep, 3c. to 3½c.

DRESSED MEATS—Beef, (carcass), 7c. to 10c.; Beef, (retail), 8c. to 16c.; Mutton, (carcass), 8c. to 9c.; Pork, light, 7c. to 8c.; select, 8c. to 8½c.; heavy, 6½c. to 6¾c.

HORSES—Drafters, $175 to $250; Roadsters, $175 to $225; Carriage, $175 to $225.

DAIRY PRODUCTS—Creamery Butter, solids, 32c.; prints, 33c.; Dairy Butter, 25c. to 27c.; Cheese, 15c. to 16c.

POULTRY AND POULTRY PRODUCTS—Eggs, 25c.; Fowl, 8c. to 10c.; Chickens, 9c. to 14c.

FRUIT—Apples, $2.50 to $4.00 per bbl.

MISCELLANEOUS—Hay, $12.50 to $14.00; Straw, $6.00 to $7.00; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 60c. to 85c.; Lamb Skins, 60c. to 80c.

VEGETABLES—Carrots, 40c. to 50c.; Potatoes, 40c.; Turnips, 16c.; Beets, 40c. to 50c.

There is little or no change to report in prices of farm produce since our last. Eggs advanced to 26c. but dropped back one cent to-day and price is now 25c. as quoted. Dressed meats are fairly plentiful except pork which although offering in larger supply than a short time ago, is still scarce and sufficient quantity not yet being offered to cause any decline in prices worth mentioning but we look for lower prices for all grades as soon as the March supply offers freely, although it is doubtful if prices will drop below 8c. for select hogs.

Butter is scarce and prices are irregular. Oats are also offered in very limited supply, and local consumption is establishing a price beyond their value for export.

Very few vegetables are offered as yet but we expert increased offerings as soon as the weather moderates. Hay is offered fairly freely but prices remain firm or slightly higher.

Toronto.

BUTTER—Creamery prints, 36c.; solids, 35c.; Dairy prints, 34c.; solids, 33c.; real fancy prints are selling as high as 40c. per pound. The supply is not plentiful.

EGGS—Eggs have taken a sudden drop. The decline amounts to eight cents and may go lower. Present prices range in the vicinity of 27c. per dozen. Retailing prices range from 30c. to 40c. at local Ontario points.

POULTRY—Live chickens and fowls 10c. to 12c. per pound; ducks and geese, 12c. to 14c. per pound; turkeys, 17c. per pound. Dressed Poultry brings two to three cents more per pound.

CHEESE is a little higher at 17c for large and 17½ for twins.

VEGETABLES—Delaware Potatoes, $1.90 per bag; Cabbage, $3.00 per barrel; Carrots, $1.40 per bag; beets, $1.40; turnips, 60c.; parsnips, $1.40.

HAY—No. 1 extra quality, $15; No. 2 ordinary, $13.50 to $14.00; No. 3, $10.50 to $11.00 and clover mixed, $10.50.

STRAW—$8.50 to $9.00.

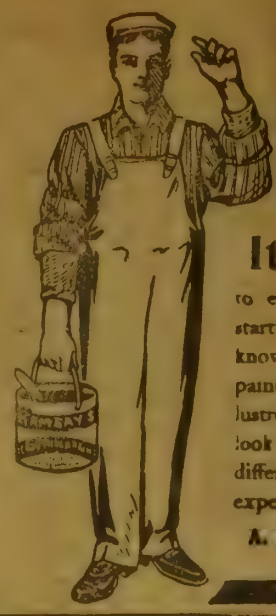
OATS are selling at 50c. to 52c.

BUCKWHEAT—70c. to 75c.; peas, $1.15 to $1.25.

DRESSED MEAT—No. 1 beef, 10c. to 11c.; No. 2, 9c. to 10c.; hind quarters, 11½c. to 13c.; front quarters, 8c. to 9c.; lamb, 14c. to 15c.; mutton, 8c. to 10c.; veal, 11c. to 13c.; dressed hogs, $9.00 to $9.50. The tendency is for higher pork prices.

SEED—Timothy, $9.00 to $10.00; red clover, $15.50; alsike, $14.00; alfalfa, $12.00. These prices are for recleaned, ready for sowing seeds.

HIDES AND WOOL—No. 1, 11½c.; No. 2, 10½c.; No. 3, 9½c.; cured hides, 11c. to 11½c.; green country hides, 10c. to 10½c.; sheep skins, 85c. to $1.15; calf skins, 12c. to 15c.; horse hides, $3.25; horse hair, 32c. to 34c.; tallow, 5½c. to 6½c.



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Easy For The Boy

A LOUDEN LITTER CARRIER changes barn drudgery into child's play. With powerful worm gear (an exclusive Louden feature) 1 pound pull on the chain lifts 40 pounds in box—a boy can hoist half a ton.

Raises and lowers any distance up to 25 feet. Stands where put; can't fall. Fill the box, raise it and give it a shove. It carries the load out of the barn to manure spreader or litter heap, wherever you want it; dumps load automatically and returns to you.

The Louden Way is the way to Cleanliness, Economy and Profit in the barn. Our 40 years experience in fitting barns is at your service for the asking. Send us rough ground plan of your barn and we will send you price.

We make full line of stalls and stanchions, hay tools and door hangers.

Write for catalog of Barn Equipment.

Louden Machinery Co., Dept. 27 Guelph, Ontario.

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Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 58 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set, exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. Our methods are honest. Don't miss this great opportunity. Write to us at once. Address.

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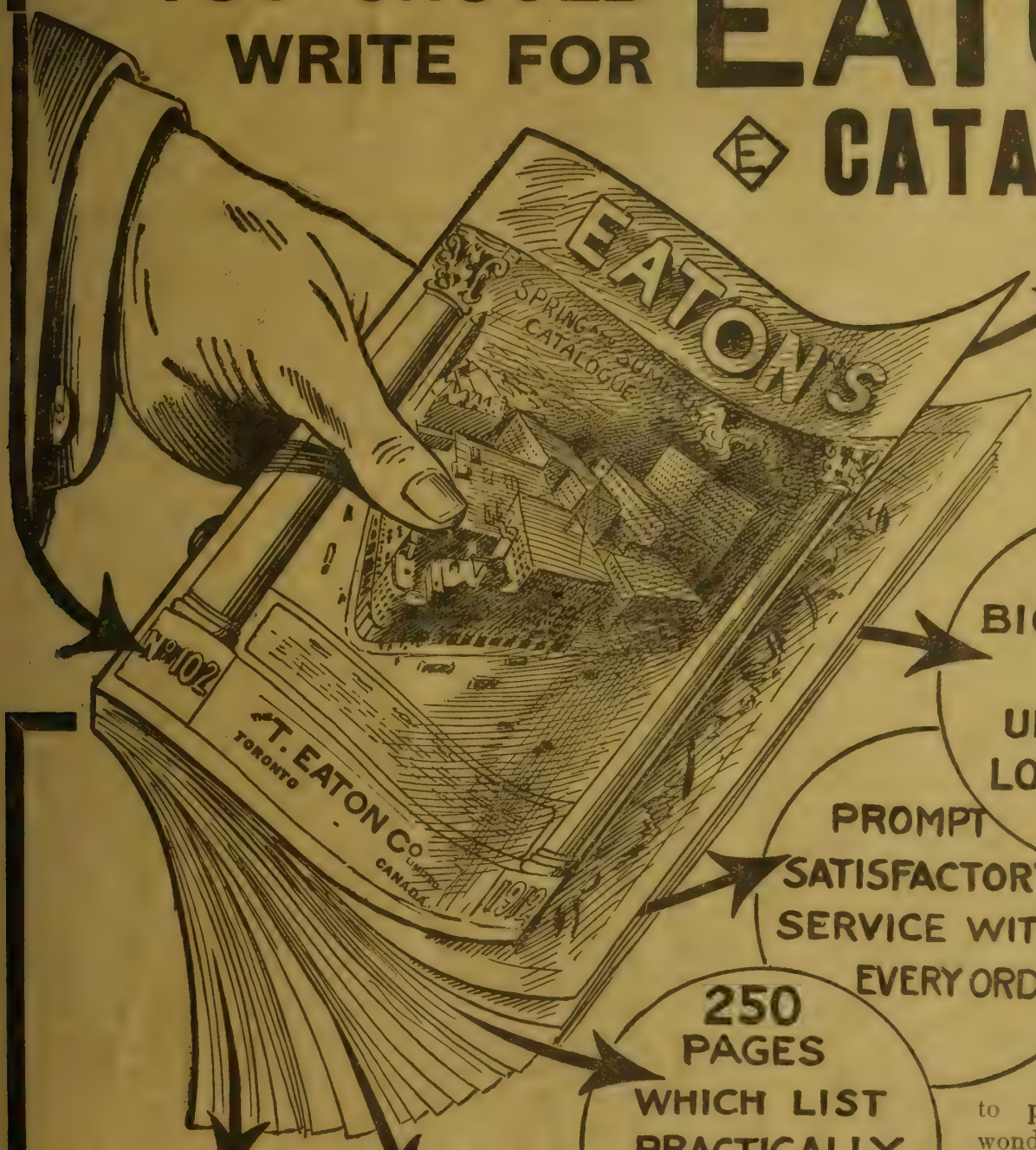

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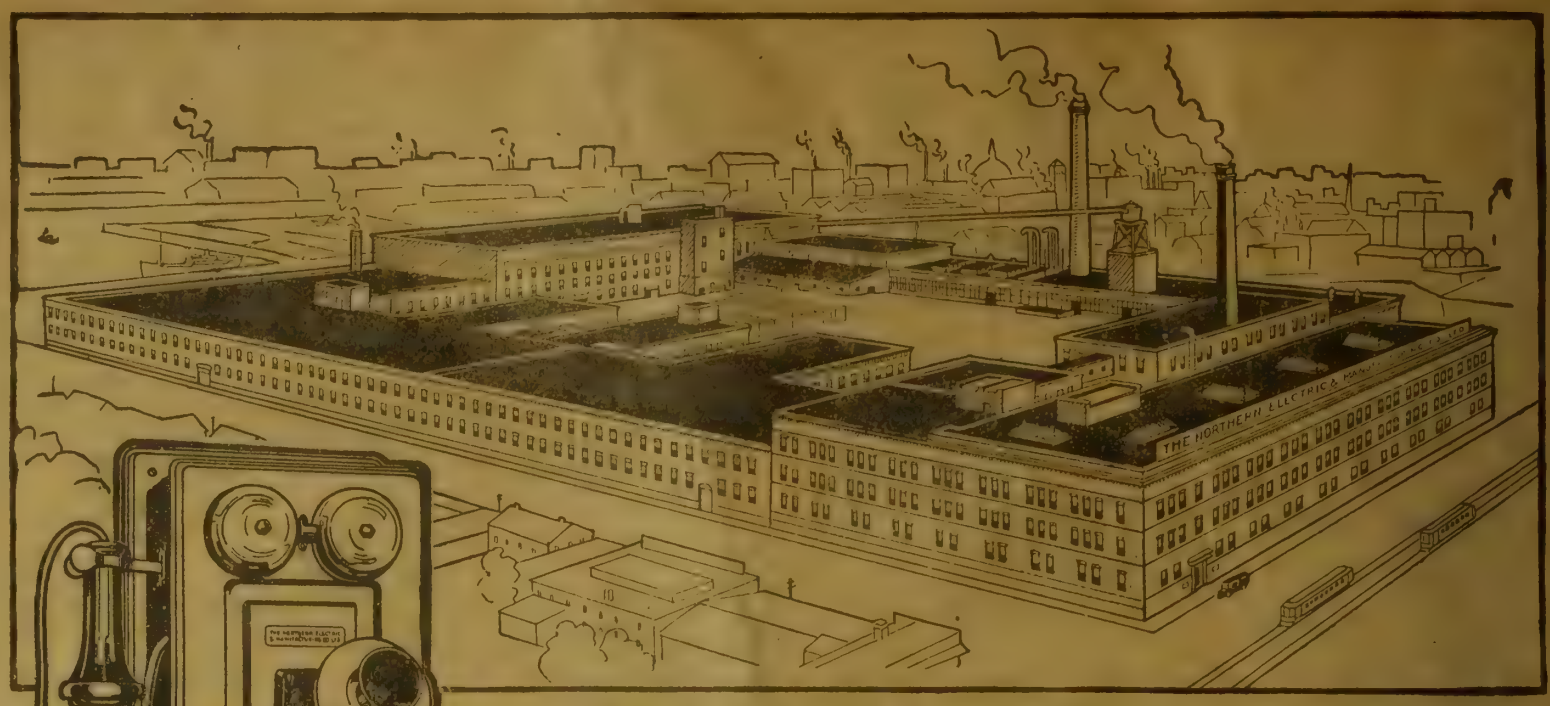

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THIS is the immense Canadian factory where Northern Electric Rural Telephones are made—in fact, where ninety per cent. of the telephones used in Canada come from. Our big organization, with its branches extending straight across Canada, is ready to help you in every detail of the formation and construction of a rural telephone line in your own community. Not only will we help you with your company-organization, line-construction, instrument-installation, etc., but our men are ready to give you much personal help out of their own telephone experience. With the help we offer, you can easily interest your friends and neighbors and operate your own self-maintaining telephone system.

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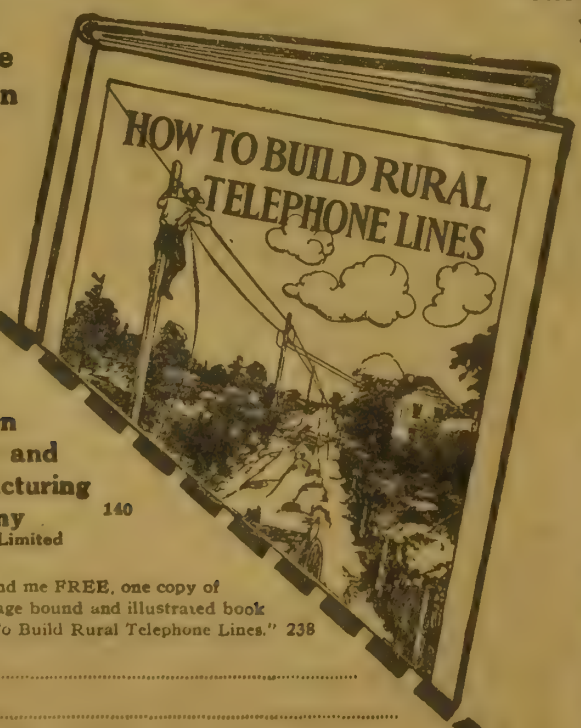

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PUBLISHED TWICE-A MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Jan 13 University Sta

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., MARCH 26, 1912 No. 12

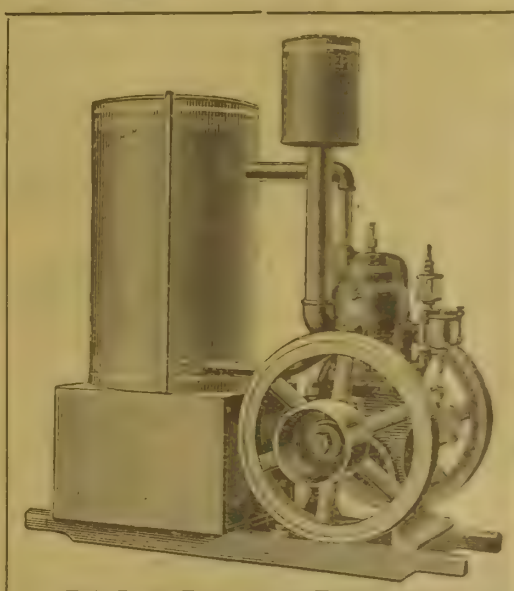
Page Work Engines

Since our first advertisement appeared a month or so ago giving particulars and prices of our engines, we have had many orders. People seem to readily realize that they cannot afford to go without an engine at prices we make—a 3 1-2 horse power at $138. or a six horse power engine for $188. The engines use for fuel either gasoline or kerosene. These engines are powerful but light and can be carried from place to place where work is to be done.

You may be wishing you had an engine to help you do your work, but may be unfamiliar with engines and have an idea that a gasoline engine is an uncertain, complicated thing. If you think so your fears are groundless, for gasoline engines are so developed nowadays as to be just as reliable as any other machine. Anyone can operate a gasoline engine, as there is no danger. No engineer is needed. There is nothing to blow up. Simply put gasoline or kerosene in the fuel tank and give the fly wheel a turn and away she goes for all day. Go off and leave it if you want to. It is safe.

A gasoline engine is started instantly. You do not have to wait to get up steam. When you are through work stop the engine and, and consumption of fuel stops at once. Hence, you can run the engine for only ten minutes, and you use only the fuel required for operating it that length of time.

As to cost of fuel, a Page engine uses only 7-8 of a pint of gasoline or kerosene per horse power per hour. Hence, if you were operating our 3 1-2—4 horse power it would use less than 1-2 gallon per hour, which at 15c per gallon would cost you only about 7 1-2c per hour. Probably you would not work the engine to its limit and fuel would be less accordingly, for a gasoline engine uses fuel only in proportion to the work it is doing.



This Page Engine on a Farm will pump, saw wood, run a cream separator, washing machine, churn, silage cutter, fanning mill, root cutter, grindstone, etc. It may be easily moved from one place to another, and is always ready to run. It does the laborious and tedious chores of the farm.

We are getting many orders from the Maritime Provinces, especially from Prince Edward Island, although Nova Scotia and New Brunswick are not far behind. Dealers find the Page engines a good line to handle as they are so low in price and so high in quality. We are getting so many applications for agency that we hope to have a thorough organization in the engine branch of our business in the near future.

Marine Engines

We have in above referred particularly to stationary or work engines. But we are also supplying marine engines from 2 to 36 horse power. Catalogue of either style on request.

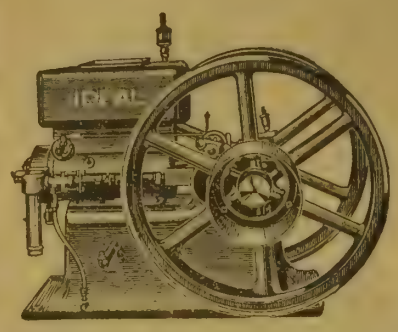
The Page Wire Fence Company, Limited

37 DOCK ST., ST. JOHN, N. B.

HEAD OFFICE: WALKERVILLE, ONT.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

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Anti-Rheumatic

Shoe For Men and Women

And get Rid of Your Rheumatism.

MADE BY

The Robert Taylor Co. Limited

HALIFAX, Nova Scotia

YOU WANT TO

Make Money

Dividend of 10% assured the first year

Five going concerns have decided to amalgamate for the purpose of not only making more money but so that they may expand and thus be in a better position to handle their increasing business in all Canada.

Each of these concerns are making good on the capital invested and it is estimated that under the proposed amalgamation that money will be saved both through the buying and selling ends and also that expenses will be cut in two, that it will be possible to earn dividends of 20 per cent in a short time.

During the next few years there will be millions of dollars spent in Canada and it is the object of these concerns to put themselves in a position to get a large share of this money. This could not be so easily accomplished if each were to operate separately.

Each of the five concerns are engaged in separate pursuits consequently no market condition can effect more than one at a time. Each are handling lines that are in daily use. The object is to have the stock of the company as widely distributed as possible. It can only be purchased in not less than $100.00 shares and not more than $1000 to one person.

We are not selling stock as a favor to the buyer, but because with additional capital the company can make money very fast.

The control of the company will be in the hands of incoming investors and the new capital is to provide for expansion.

Every Investor has an opportunity to assist in developing business and when 400 new families become customers there will be a further earning of 20 per cent. to investors.

We have no time to waste and our object of advertising in this way is to secure the names of parties that are desirious of a safe investment.

The company will be under the management of a man and a directorate that will bear the closest scrutiny. Everything will be made clear when we answer your communication.

If you have money that is not earning what it should please fill in the enclosed coupon and mail it today.

I have Money that I want to invest in a safe way and would be pleased to have you send further information.

This Does Not Bind Me in Anyway.

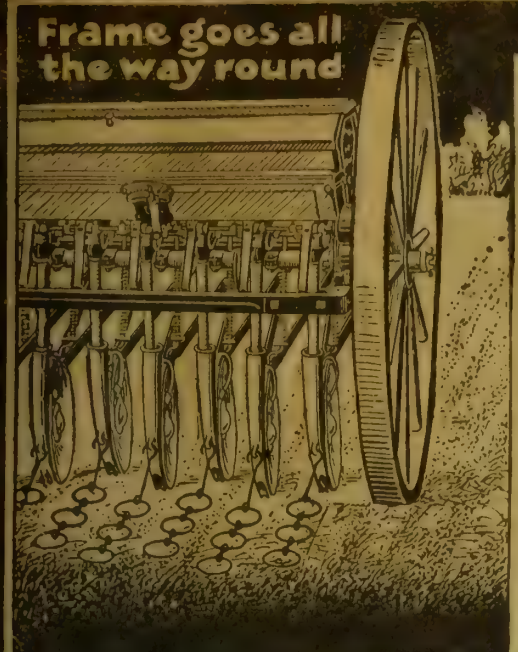
Name .....

Address .....

MARITIME INVESTORS COMPANY

CANADA LIFE BUILDING

St. John, N. B.



Sow Your Grain in Drills Get LARGER Crops More Profits

Sowing grain in the old style way is wasteful. While some spots get too little seed, most of the ground is generally too thickly seeded.

But sow your seed with the Champion Disc Drill and waste is eliminated. It sows with precision, just the right amount of seed in every inch of every furrow. The same amount of seed goes farther, produces larger crops and yields you more profits. The Champion way is the profitable way to sow your grain.

Frost & Wood

Champion Disc Drill

The Champion Disc Drill has made a great name for itself in "dirty" fields. Corn roots, tangled grasses and straw manure do not bother the Champion. It cuts right through the "meanest" field, sows the seed and covers it up.

The Champion is a wonderfully light draft machine. Instead of the usual iron to iron bearings at the hubs of the discs, the Champion has sets of dust-proof ball bearings. It's the only disc drill so equipped. This smooth-running, friction-reducing feature, together with no neck weight, make the Champion Disc Drill easier on horses than any other disc drill we know of.

The Champion Disc Drill is a strong substantial machine. It has a stationary axle to which the frame and grain boxes are solidly attached. It is built to give you many years of satisfactory service.

It is so built, too, that it is a pleasure to sow seed with it. There are no notches into which a shifting lever must be shoved. You can sow to a fraction of a pint by simply adjusting the Index. The Champion is thoroughly tested before it leaves the factory, and you are thus assured of getting perfect satisfaction when your Disc Drill bears the name "Champion."

We have a special Drill Catalog that we are waiting to send you directly we receive your name and address. Send us a card by next mail.

Frost & Wood Co. Limited, St. John, N. B.
SMITH'S FALLS. MONTREAL.
Sold in Western Ontario and Western Canada by
COCKSHUTT PLOW CO., Limited, Brantford and Winnipeg.

SIMPLICITY AND SERVICE

are what you want in an engine, and what you get in the

STICKNEY GASOLINE ENGINE

No other engine so easy to "manage"—no other does so many kinds of work with so little bother.

See our agent before you buy, or write for FREE catalogue of important engine facts.

ONTARIO WIND ENGINE & PUMP CO'Y., LIMITED.
Winnipeg Toronto Calgary.

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

The E. B. EDDY COMPANY, Limited,
HULL, CANADA.
Makers also of Wooden Pails, Tubs, etc.

DE LAVAL
CREAM SEPARATORS

No Excuse for any Cow Owner Being Without One

There is no reason why any cow owner who sells cream or makes butter should be without a cream separator and there is no excuse why he should not have the best separator.

Any creameryman or experienced dairyman will tell you that a good cream separator will give you a great deal more and a great deal better butter than you can make with any gravity or setting system, and equally, of course, more and better cream, if you are selling cream.

The DE LAVAL is acknowledged by creamerymen and the best posted dairymen the world over to be the **"World's Standard"** and the one and only separator that always accomplishes the best results possible and always gives satisfaction.

You cannot make the excuse that you cannot afford to buy a De Laval, because it will not only save its cost over any gravity setting in six months and any other separator in a year but is sold either for cash or on such liberal terms that it will actually pay for itself.

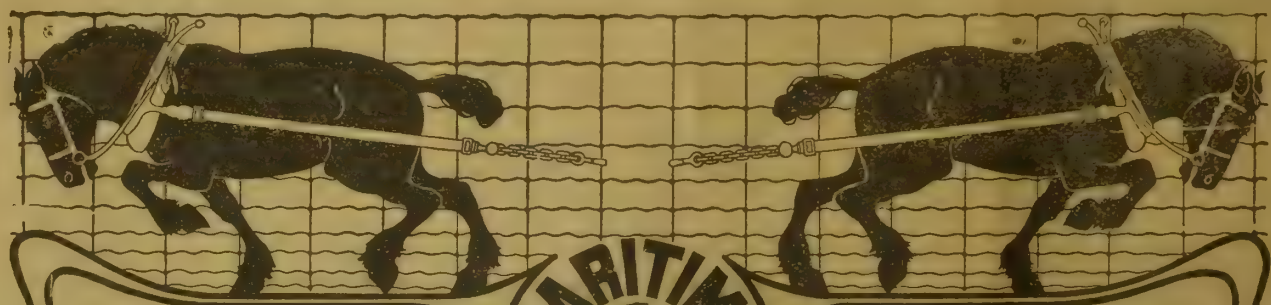
A little investigation will prove to you that the truth of the matter is that you really can't afford to make cream or butter **without** the use of a DE LAVAL cream separator.

The nearest De Laval local agent will be glad to demonstrate this to your own satisfaction, or you may write to us direct.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.



THE LOCK MARITIME WIRE FENCE CAN'T SLIP

The illustration demonstrates the phenomenal gripping-strength of our lock. Under the most unusual strain it never gives. It is known as the lock that can't slip; the lock that unfailingly holds the wires in their correct position.

Our Free Catalogue will tell you more about our can't-slip lock, and about the superior English high-carbon, hard-drawn steel wire from which Maritime Wire Fence is made. Address the card to

New Brunswick Wire Fence Co., Limited, Moncton, New Brunswick

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association and the Maritime Bee-Keepers' Association.

Volume 17. ST. JOHN, NEW BRUNSWICK, MARCH 26, 1912. Number 12.

N. B. Farmers and Dairymen in Annual Convention

A Large Delegation Present.

THE thirty-sixth Annual Convention of the New Brunswick Farmers' and Dairymen's Association convened in the Council Chamber of the Fredericton, City Hall and in the heated portion of the New Exhibition building on March 18th to 22nd inclusive.

Prominent farmer delegates from all parts of the province were in attendance to exchange experiences and carry back to their respective localities tidings of how the progressive march of Agriculture is being conducted in various other sections of the province.

THE PRESIDENT'S ADDRESS.

Col. H. Montgomery-Campbell, President of the Association, occupied the chair at the various sessions. After calling the Meeting to order on Monday evening he read the following presidential address:—

Gentlemen of the Farmers' and Dairymen's Association:

I am glad to see such a large attendance of delegates. It proves that the farmers of the province are awake to their advantages, and recognize that to keep abreast of the times they must adopt the newest methods to meet the demands of the market which is at our doors.

It is estimated that in the immediate future $20,000,000 will be expended in the construction of the Valley Railroad and the St. John Docks. A very large percentage of this must necessarily find its way into the pockets of those who provide the means of subsistence for the army of workers who will be employed in these great undertakings; and the question is, will you farmers of this province take your share of this money by meeting their requirements?

Very few people realize how much is now imported into this province that could be grown by ourselves. Even now, for instance, in our own markets, we find New Zealand butter competing with the home product.

In the dairying districts the breeding and care of cattle is as well understood and carried out as in any part of Canada; but in the growing of crops the farmer is far behind his requirements and very few grow enough crops and roots to feed the cattle from October till the middle of May, and they are, therefore, obliged to buy so much middlings and millfeed at $32 a ton that there is very little profit, even when they receive 33 cents per lb. for their butter.

To make this meeting more instructive the Department of Agriculture has brought horses and cattle of different breeds and a course of instruction will be given in the exhibition buildings during the morning and afternoons of this week. The most competent instructors have been engaged to lecture and impart information, which cannot fail to benefit us in our endeavors to improve the condition of agriculture in this province.

Useful and instructive as this course will be, however, it does not go nearly far enough, and I think the time has come when the government should establish a chair of agriculture at the University of New Brunswick. If this were done I am satisfied that our farmers would appreciate its advantages, and their sons attend in large numbers, and thus availing themselves of the opportunities afforded, would cause the advantages of practical and systematic farming to become general.

During the last few years great progress has been made in the planting and care of orchards, particularly on the St. John river, and with proper care and selection this will add great wealth to these districts. A thorough study of the soil and conditions has been made and the optimism of the people is so great that they are bound to make a success of the undertaking. The fruit exhibitions that have been held in St. John for the last two years have proved that this province can grow apples equal to any in America.

Perhaps one of the most important matters we should strive for, is co-operation. The manufacturers and merchants would find it impossible to continue their business if they did not watch the markets, and place their products on sale at the proper time. Farmers, on the other hand, often overload the market by all selling at the same time, and the result is prices go down until there is little or no profit. This was the case with pork last year. The market opened at a fair price and everyone hurried to sell—in consequence the price went down and very few had anything to sell when the market came to its normal condition. The retail price did not change and the middleman got the benefit.

I have heard of a creamery that begins making butter in the spring, and instead of putting the butter on the market as it is made, waits until it has several cwts. and then sends it to be sold. The result is a low price, not only for themselves, but for all the butter sold to the same market. Whereas with co-operation and a little forethought, the former prices might have held for some weeks.

If the directors of agricultural societies would meet once a month and talk over the prospects and market reports, it would be a long step in the right direction.

It is only by co-operation and by standing together that farmers can accomplish the work they are destined to do in making this province, with all its natural advantages, its seaports and railway facilities, the leading agricultural centre in the Dominion of Canada.

WELCOME BY MAYOR OF FREDERICTON.

In introducing His Worship, Mayor Hooper, of Fredericton, who extended to the delegates the city's official welcome, President Montgomery-Campbell said the city of Fredericton could not make a choice of Mayor that would be so satisfactory to the farmers of New Brunswick as Mr. Hooper, who has been closely allied with the farmers of the Maritime Provinces in their onward march of progress, by his popularity and his efficient management of the Fredericton Exhibition.

His Worship referred to the pleasant relationships and dealings he had had with the farmers and stock breeders of the Maritime Provinces during the years he has been managing the Fredericton Exhibition. He was pleased that one of his first official duties, as Mayor of Fredericton, was to welcome the various N. B. F. & D. A. delegates to his city. The farmer was the live wire that formed the basis of the country's wealth. He invited each and every delegate present to visit the industries of his city of which every citizen was proud. He also referred to the Immigration Congress recently held in Fredericton and pointed out the relationship that existed between that Convention and the Farmers' Parliament. Our resources should soon attract the young people of Canada so that their slogan would become "Go East Young Man Go East" instead of the old saying "Young Man Go West." The "Back to New Brunswick" slogan should be forwarded by every good-thinking citizen putting his shoulder to the wheel and boosting for all his worth. He advised the farmers to take for their battle cry the words on the Convention button: "I am for New Brunswick" and they would find that ere long the beautiful province of New Brunswick will come to its own; it requires work but it can and will be done, if we all remember the saying: "It takes a live fish to go up stream; any dead one can float down."

THE REPLY.

In the absence of Mr. Anders Jensen, Vice-President of the Association, who was scheduled to reply to His Worship's Address of Welcome, Mr. Bliss M. Fawcett, the Secretary, referred to the hearty welcome that the citizens of Fredericton had accorded the Farmers of the Province in the past and concluded by stating that he would like to see the farmers put their shoulders to the wheel and have a New Brunswick farmer occupying a chair for Agriculture at the University of New Brunswick.

THE COUNTY VICE PRESIDENT'S REPORTS.

overflowed with optimism and faith in the possibilities of their respective counties. The most salient points in the various reports will be published in other columns of the Maritime Farmer.

FRUIT GROWERS' PRESIDENT.

President C. N. Vroom, of the New Brunswick Fruit Growers' Association, brought the greetings of his Association and said that both Associations had similar work to perform.

Mr. Vroom referred to the impetus that the St. John Fruit Shows had given the fruit growing industry of the Province. The fruit shows had been good advertisements for the Province. The New Brunswick Apples exhibited at the recent Fruit Growers' Convention at Ottawa compared favorably with those from the other Provinces of Canada.

In the progress of fruit growing he was pleased to be able to say that 40,000 apple trees had been set out during the past year and that 60,000 trees would be set out next season.

But figures showed only a small portion of the work being accomplished. The publicity work accomplished had attracted great attention from everywhere. The fruit shows held at St. John showed that New Brunswick apples were the equal of any grown and were particularly well colored.

The McIntosh Red was the highest priced apple and according to Prof. Macoun, the Dominion expert, could be grown to better advantage in New Brunswick than in any other place in Canada.

The Provincial Government was doing a good work in supplying the farmers with high grade nursery stock at cheaper prices than they could secure them themselves.

There were many syndicates taking up commercial orcharding in the Province and he understood that just recently an inquiry had been received from a party in Calgary anxious to secure a tract of 2000 acres to take up commercial orcharding.

Mr. Vroom urged New Brunswick farmers to grow the best and most profitable varieties of apples, pointing out that the trees bearing profitable apples took up no more room on their farms and would be much more profitable investments than scrub trees. He said that every farmer in New Brunswick should have at least five acres of his land as an orchard. He pointed out the excellent conditions in New Brunswick for marketing apples in the Old Country, and urged those engaging in fruit growing to keep to one profitable variety in each neighborhood so as to have proper quantities for shipping.

CANNING INSPECTOR.

Mr. C. S. McGilvary, the Dominion inspector of canned goods, was then introduced by Mr. W. W. Hubbard, secretary for agriculture.

Mr. Hubbard drew attention to the important economic question of all stores of the province having their shelves loaded down with canned fruit and vegetables all from outside the province while there were such excellent opportunities for carrying on the canning industry in this province. Mr. McGilvary had been sent here to meet some gentlemen interested in the establishment of canneries in New Brunswick.

Mr. McGilvary, who was well received, said that he was just back from the Canadian West, where they boost their country, talk about their possibilities and believe what they say. He told of the immensity of the fruit growing industry in British Columbia, where he has been told, there were seven million fruit trees and in New Brunswick and Nova Scotia he had seen districts where apples could be grown just as well and the fruit would be of just as good a quality as could be grown in British Columbia.

Mr. McGilvary gave an interesting review of the history of the canning industry, explained the possibilities of the business and told the meeting that there were canned fruits and vegetables to the value of $1,591,393 imported into Canada in 10 months.

In closing, Mr. McGilvary spoke of the advantage of proper education for one engaged in agricultural pursuits and told his audience that the East offered opportunities equally as good as those of the West, without as hard work.

THE FINANCE COMMITTEE.

Messrs. Lewis Smith, Henry Wilmot and Edgar Shamper were appointed as finance committee.

TUESDAY EVENING.

On Tuesday evening, Mr. Armitage, representing Dodd & Struthers, Lightning Rod Manufacturers, gave an interesting demonstration with his artificial thunderstorm machine, on how lightning strikes buildings and how it may be avoided by a proper system of rodding. The audience was highly interested in Mr. Armitage's remarks and demonstration.

BREEDING, FEEDING AND CARE OF HORSES.

Following the electrical demonstration, Geo. J. Dickson, of Chatham, read an interesting paper on Breeding, Feeding and Care of Horses. Mr. Dickson's paper will be published in a future issue of the Maritime Farmer. The interesting account of Mr. Dickson's practical, every day practice in the care of horses was much appreciated and at the close of his address the Association tendered him an unanimous vote of thanks.

DRAFT HORSES IN NEW BRUNSWICK.

The outlook for horses in New Brunswick, with particular attention to draft type was the subject of a carefully prepared and interesting paper by Morris Scovil, of Meadowlands. Mr. Scovil's paper will also be published in a future issue of the Maritime Farmer. That Mr. Scovil put a great deal of practical thought and the result of careful observations into his paper will be evident to all our readers.

Col. H. Montgomery-Campbell highly complimented Messrs. Scovil and Dickson on their instructive papers, after which he explained the origin of the horse and the various methods of breeding that have been practiced in bringing about the evolution from a small nondescript animal to the magnificent specimens of the various breeds we have to-day. He strongly scored the folly practiced by farmers who sell their best brood mares. He thought, the service fee of $10.00 was too small to cover the risk incurred in buying and maintaining first-class sires. In Scotland, the service fee for the famous Clydesdale stallion, Baron's Pride was £25 with a first option on the progeny of approved mares.

Dr. Standish was questioned re Naval Ill disease in foals. He explained that the trouble could be avoided by keeping the mare and foal in sanitary quarters and by taking the precautionary measure of washing the foal's navel with some reputable antiseptic.

POTATO GROWING.

In the absence of F. DeL. Clements, who was to have spoken on the subject of "Potato Growing," W. W. Hubbard reviewed the progress made by the province in recent years in the growth of potatoes, stating that last year the province produced 3,000,000 bbls. Few countries could boast a soil so well adapted to the growth of the tuber as New Brunswick. He believed New Brunswick had reached that place where, having achieved a desirable reputation, it was essential to retain it by producing the best grade and marketing it by means of the best sources. Good cultivation of potatoes was necessary and a careful selection of fertilizer alone would ensure the best results. The commercial product had proven satisfactory but the natural fertilizer of the farm with the exception of clover seed had seldom been used with success.

Mr. Hubbard told of one New Brunswick farmer whose entire crop for the next five years was contracted for by Montreal concerns at a figure below the present market price, but still one to ensure him a good profit. Other producers had been able to sell their crop in advance for seed purposes.

There is practically an unlimited demand for Canadian potatoes, said the speaker, and the outlook for the future of this industry if present high standard is maintained, is very bright. Rotation of crops had not only proved of great benefit to the soil of many farms but had a marked effect in the quality of the crop produced. The most effective alternation yet tried under conditions prevalent in this province is potatoes followed by wheat and oats and then clover. Fertilizer is used when clover is young and later crop fed to cattle.

T. W. Butler advised Agricultural Societies to get together for the growing of uniform crops of one or two commercial varieties in their respective districts.

Mr. McNally said there was no difficulty in growing potatoes in New Brunswick even on poor soil if proper methods were followed.

PROFITABLE FERTILIZER.

R. G. Murray, of St. John was called upon for his views of the fertilizer question. Mr. Murray said that according to figures published in the agricultural report of 1909, the retail price of chemical fertilizer could be reduced by about one half, were a farmer to procure the necessary ingredients and mix them on his own premises. At the present price, said the speaker, it is practically impossible for the small farmer to realize profit from the use of fertilizer. In conclusion, Mr. Murray proposed the following resolution, which he pointed out had been endorsed by various agricultural societies of the province:

L.E. KNIGHT, PRESIDENT — L.C. PRIME, MANAGER

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St. John, N.B. March 14/12.

PURCHASING DEPARTMENT

Messrs. The "MARITIME FARMER"

St. John, N. B.

Gentlemen:-

We have been using space in your Paper for the last few months advertising our MOLASSINE MEAL, and feel quite satisfied with results; in fact, this is the only Paper in which we advertise, through which we have received cash with orders, showing you that MOLASSINE MEAL is selling much more rapidly and giving better satisfaction than we anticipated.

We are, Very truly yours,

Molassine Meal is not a food but a tonic

L. C. PRIME CO., Limited,
J. T. Merseresu — Sales Manager.

"Resolved, That it is of the utmost importance to the farmers of the province to be able to get at a minimum price the constituents of chemical fertilizer, and this association accordingly strongly urges the government to obtain and furnish to the farmers of the province the constituents of fertilizer as nearly as possible at manufacturers' prices."

The resolution was seconded by Mr. Legere and referred to the resolutions committee.

W. W. Hubbard explained that the department of agriculture had some time ago submitted just such a proposal to the government undertaking in six months' time either to have fertilizer or its equivalent in money, but on further investigation had learned that many of the farmers would be unwilling to expend the necessary amount in this way. He also showed that when freight charges and mixing expenses were considered a small profit only was left for the manufacturer and dealer, and that the farmer in paying the present price was merely paying for the convenience of obtaining the ingredients ready mixed.

The meeting then turned its attention to the appointment of committees and the following were elected to form the nominating committee:— S. L. Peters, chairman; A. F. Johnston, P. L. Alexander, M. McLaughlin, T. A. Goggin, J. T. Prescott, W. H. Moore, John Moody, E. J. Dickson, W. S. Stevens, J. F. Williams, J. W. Stevenson, W. O. Murray, J. A. Bernier.

The resolutions committee was also appointed with Lewis Smith as chairman.

THE IMPORTANCE OF THE FARM.

His Lordship Bishop Richardson, who occupied a seat on the platform, was next called upon, and in responding expressed his sense of the honor of having opportunity to address a gathering of men in whose hands lies the future of New Brunswick. He referred to the magnitude of production of potatoes on small areas in Great Britain and Ireland and said after conversation with authorities on this side of the water, he became convinced that New Brunswick has not yet reached the limit of possibilities in this important industry.

ON WEDNESDAY EVENING.

The first subject on the programme was "Co-operation." A. C. Fawcett, of Sackville, who read a carefully prepared paper on this question, in his opening remarks took issue with statements, appearing in the public press, that have a tendency to depreciate the integrity and activity of the agricultural class. Statements to this effect had recently appeared as coming from a well-known New Brunswicker and Mr. Fawcett was ready to denounce any statements that attributed indolence to his co-workers. He deplored at length the prevalence of party politics and the extent to which party took precedence over principle in questions of vital importance to the development of the country. He advocated public owned utilities and the organization of the farmers to support all legislation in the interests of the agriculturists.

THE PREMIER.

Hon. J. K. Flemming, was present to express to the Convention the interest he has always taken in the work of the association. It was a pleasure for him to meet the representatives of the great agricultural industry of the province.

The premier went on to express his belief that the future of the province lay in effecting an increase in the quantity of our farm products. The consumer is not supplied at present. Thousands of dollars of good New Brunswick money is annually sent abroad for the purchase of foodstuffs, etc., that might be grown at home.. What we want is not more market but the ability to supply the market we have. If we want to get the wealth out of this country, continued Mr. Flemming, "we want the increased production of the farmers now residing here, and one new farmer for every one we have now. The most important problem we have to face is to keep our young men on the land. We should help to remove the feeling of isolation and loneliness which is the cause of much of the present emigration from the land. The rural telephones would prove invaluable for this.

"Good roads enhance the value of farm properties and facilitate the transfer of products. The farmer is a partner of the government in the maintenance of roads. As premier I am going to try to make the life of the farmer more attractive and offer more inducements for the son to take up land adjoining that of his father. A new day is dawning for the Province of New Brunswick."

In conclusion Premier Flemming referred to the importance which he attached to meetings of this nature and expressed the hope that deliberations of the present meeting would prove of benefit, not only to the delegates in attendance, but to the entire farming community.

THE RESULTS OF COW TESTING. were discussed by C. F. Whitley, of the Cow Testing Division, Ottawa.

This subject was ably handled by the speaker and as it is a subject of vital importance, not only to the dairymen of New Brunswick, but to the dairymen of the whole world, we will publish Mr. Whitley's address in full in an early issue.

THE DAIRY COW, HER CARE AND FEEDING.

was discussed by M. H. Parlee, one of the foremost Ayrshire breeders in the Maritime Provinces. Mr. Parlee's address will also be published in full in our columns.

Another excellent paper by J. F. Roach, another prominent Ayrshire breeder, was not read owing to lack of time but nevertheless the delegates may all read its contents in a future issue of the Maritime Farmer.

SOILING CROPS IN RELATION TO DAIRYING.

was the subject of a highly instructive address by Prof. G. H. Cutler, of McDonald College. This subject of Soiling Crops is of vital importance to all breeders of live stock, particularly so to dairymen. Prof. Cutler handled his subject in terms that were easily understood and showed how much cheaper milk could be produced by the use of green crops than by any other system. The subject will be discussed in future issues of the Maritime Farmer.

THE DUAL PURPOSE COW.

P. G. Mahoney, of Westmorland Co. said he had had an interview with Dr. Landry re the importation from England of a number of bulls of the milching Shorthorn strain. He had been assured that if the farmers needed forty or more a man would be sent to buy the bulls. On arrival in New Brunswick these bulls will be sold at public auction and the Government will make up the difference between the cost price and the retail sale cost of the animals.

THE FINANCIAL STATEMENT.

showed collections during the year of $195.34 and disbursements of $172.65 leaving a cash balance of $22.69.

CHANCELLOR JONES

of the University of New Brunswick spoke briefly expressing his pleasure on being able to attend a meeting of farmers and get their views on the questions of agriculture. Dr. Jones laid claim to some experiences as a farmer and believed that farms in the province are an unquestioned asset. Most of the farms in the province are increasing in yield and in value. This is a desirable state of affairs which cannot be duplicated elsewhere. If the farmers can increase the value of their farms there will be a great future for the industry in this province.

He believed the time is not far distant when the University of New Brunswick will be able to help the farmer in more ways than one. The schools can scarcely accomplish what the university will do for the farmer.

Col. Campbell believed an agricultural chair in the University would be a great help to the farmers and endorsed the views of Chancellor Jones.

THURSDAY EVENING.

Beef Production in the Maritime Provinces was the subject of interesting addresses and papers on Thursday evening by Prof. E. S. Archibald, Truro, N. S., Chipman Harper, Sackville and C. Ashley George, Upper Sackville. The general trend of these addresses was that the Scotch type of Shorthorn was not as profitable an animal for the average farmer to to raise as was the English milking strain. Cows of the former type only produced sufficient milk to raise their own calves, while the English strain had individuals with records of over 10,000 pounds of milk in one year, thus giving a profit from the dairy as well as from the beef standpoints. Prof. Archibald outlined the breeding, feeding, housing and general management of beef steers laying particular emphasis on good ventilation, cleanliness and plenty of light in the stables. Growing steers did not require warm quarters providing they were kept dry. He advocated raising fall calves and showed how the fall calf would in nearly every case outclass the spring calf.

Mr. Harper, had been successful in procuring a calf from a dairy bred Shorthorn bull and by comparison with his beef bred calves he would say that to him the dairy Shorthorn calf looked more satisfactory.

Mr. George's paper will appear in a future issue.

PATRONIZE HOME BREEDERS.

T. W. Butler again emphasized the necessity of putting forth a plea for legislation that would have the tendency of forever doing away with the scrub bull. In reply to a statement by Mr. Hubbard re the importation of bulls from Ontario, Mr. Butler said it would be more encouraging to New Brunswick breeders if it were ascertained how many bulls could be bought in New Brunswick. After the local supply was exhausted was time enough to send money out of the province to encourage competition against our own local breeders.

SHORT COURSE IN LIVE STOCK JUDGING.

The morning and afternoon sessions of the Convention were devoted to Short Courses in judging Horses, Cattle, Sheep and Seeds in the New Exhibition Building.

Dr. J. Standish, Truro, N. S., lectured on Light Horses and Heavy Horses during Tuesday's morning and afternoon sessions respectively. Thoroughbred, Standard Bred and Clydesdale Horses as well as some Grades were shown in the ring and with a score card in the hands of each delegate, the Doctor explained the various points in the conformation of the respective horses, showing the points to look for and also those to avoid in breeding.

Dairy Cattle and Beef Cattle were studied on Wednesday. Prof. E. S. Archibald and Andrew Elliott, Galt, Ont., being in charge of the classes. As in the horse classes of the previous day, each student was given score cards and Prof. Archibald went over the various points required for an ideal animal and instructed the class to score the various animals. Holsteins were furnished by Harding Bros., of Welsford. There were also a few Ayrshires and B. M. Fawcett showed two dairy type Shorthorn cows and two steers, the get of similar cows.

Sheep were shown on Thursday morning by Wm. H. Moore, Scotch Lake, and Prof. Archibald instructed in the art of judging from the mutton breeder's standpoint. After which Jas. A. Telfer, lectured on the breeding, care and management of a commercial flock of sheep.

The discussions on the various classes of live stock were very interesting and undoubtedly each and every delegate felt that they could return to their homes with a better knowledge of what to look for when purchasing stock.

SEED JUDGING.

On Thursday afternoon and on Friday morning and afternoon sessions, Prof. G. H. Cutten, of McDonald College and S. J. Moore, of the Seed Division, Ottawa, conducted classes in Seed Judging. Oats were judged on Thursday afternoon, Clover Seeds on Friday morning and samples of the Seeds shown at the Seed Fair on Friday afternoon. The New Exhibition Building was admirably adapted for this work. The delegates sat down at long tables and each one was given several samples of grain or seeds and by a process of questions and answers the instructors enumerated the desirable and undesirable qualities of the respective samples and thus the students were led to judge the samples for themselves.

THE SEED FAIR

held concurrently with the Farmers' Meetings in the Exhibition Building was, without exception the best ever held at Fredericton. We were pleased to note that the grain from some of the prize winning fields in last summer's standing crops competition stood at the head of the list.

The number of entries were as follows:—wheat, 32 entries; oats, 49 entries; barley, 10 entries; buckwheat, 11 entries; peas, 17 entries; beans, 19 entries; timothy seed, 2 entries; corn, 8 entries; potatoes, 57 entries; onions, 9 entries; turnips; 9 entries; mangels, 4 entries.

Owing to lack af space the list of prize winners is crowded out of this issue.

One of the exhibitors was Mr. E. Jarvis, Stanley, N. B., who holds a bronze medal for the heaviest bushel samples of white oats, black oats, wheat, barley and buckwheat awarded to him by the Colonial and Indian Exposition in London in 1886. There are two other medals of a similar character owned by other parties in Stanley.

RESOLUTIONS.

The following resolutions were adopted:

Resolved that a vote of thanks be tendered to the Mayor and City Council of Fredericton for the use of the Council Chamber for holding of Annual Meeting.

* * *

Resolved that a vote of thanks be tendered to Hon. D. V. Landry for providing lecturers, judges and live stock for the short courses held during the Annual Meeting of the Association.

* * *

Moved by Bliss M. Fawcett; seconded by Lewis Smith:—

Whereas the Beef industry in the Province of New Brunswick has declined very rapidly in the past twenty-five years and is steadily decreasing, and,

Whereas, large sections of the Province are very suitable for beef production, and,

Whereas private enterprise cannot meet or help this rapid decline,

Therefore resolved that this Association ask the Legislature of the Province to import from England a number of dairy Shorthorn bulls, whose dams have produced from 6,000 to 10,000 pounds of milk annually and that such importation be sold in at least two places in the Province.

* * *

Moved by R. G. Murray; seconded by Alex. Smith:—

Resolved that it would be greatly in the interest of the farmers of this Province if they were enabled to obtain at the manufacturer's price the constituents of chemical fertilizer, and this Association strongly urges upon the Government of this Province that it take such measures as it may to obtain and furnish to our farmers the raw materials for the home manufacture of chemical fertilizer at as near as possible to cost price.

* * *

Moved by Morris Scovil; seconded by S. L. Peters:—

Whereas, the horse raising industry of this Province is in a far from satisfactory condition owing to the pollution of stock due to the use of unsound stallions, and,

Provinces of the Dominion have taken action to do away with this condition,

Whereas, other Provinces of the Dominion have taken action to do away with this condition,

Therefore resolved that this Association place itself on record seeking legislation to do away with this condition by making it compulsory that all stallions standing for service be inspected for soundness by a veterinary inspector authorized by the Government and that all stallions showing hereditary unsoundness be prohibited from standing for service.

* * *

Moved by J. T. Prescott; seconded by C. Ashley George:—

Whereas in the near future the Legislature of our Province will be dissolved and the electors called upon to choose their respective representatives, and,

Whereas the feeling of Agriculturists that their profession is not as fully represented in our Legislative

(Continued on page 442).

NITRO-CULTURE.

Editor Maritime Farmer:

I have had a number of inquiries, asking whether nitro culture bacteria for alfalfa, red clover, alsike clover, peas, beans, etc. would be supplied from this College, as here-to-fore. We will continue as before to supply bottles of nitro bacteria, each containing sufficient to inoculate 60 pounds of seed. In general, I might say that we have extremely favorable reports from those who have used these nitro cultures on the various leguminous crops in the past.

M. CUMMING,
Truro, N. S.

N. S. A. C.,

THE MARITIME FARMER

And Co-Operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers, and Dairymen's Association of New Brunswick; The Nova Scotia Farmers' Association; The Nova Scotia and P. E. Island Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The Newfoundland Agricultural Board, and The New Brunswick Poultry Association.

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MARCH 26, 1912.

DATES OF ISSUE.

April ..... 16—30

May ..... 14—28

EDITORIAL NOTES.

Improved machinery is naturally taking the place of inefficient help on many farms.

* * *

An untidy roadway mars the attractiveness of the farm and in so doing it detracts from its value.

* * *

Owing to the small majority by which it was carried at the annual meeting of the Canadian Ayrshire Breeders Association, the resolution charging $5.00 for diplomas for each cow that qualified in the Record of Performance test has been cancelled. The Directors thought it wise to reconsider this resolution at the next annual meeting before putting into effect.

* * *

Have you everything in readiness for the coming of the lambs and young pigs. The success of your year's work will be measured by the profit you reap. Every lamb or young pig that dies an untimely death through neglect, or otherwise, is a direct drain on your resources. Do not be caught unprepared. A few minutes and forethought properly executed may save you many after regrets.

IS IT WORTH WHILE ?

There are many enterprising young farmers in the Maritime Provinces who are doing their level best in an honest endeavor to make their country more prosperous and better because they live in it. They are slowly but surely climbing the ladder of success but owing to lack of capital and the difficulty of obtaining same at reasonable rates they are hampered in their operations. Could these young men have access to a little extra capital, ninty-nine per cent of them would make good use of it and they would be enabled to scale the ladder of success in much shorter time. The transformation that would take place in Maritime Canada during the next decade would be amazing. The soil would be better cultivated and better fertilized and as a consequence larger and better crops would be raised. Live stock would increase in point of quality and quantity. Better and more commodious buildings would be erected in which the live stock, crops and farm machinery would be cared for. The farm homes would be equipped along more modern lines so that the contrast between rural and urban dwellings would not be so noticable. Young men, who are under present conditions forced to leave the farms, in order to earn some capital, and are spending the best years of their lives in this attempt would remain at home and devote their energies and their best years to the upbuilding of their own locality. The improved conditions would make it an easy matter for these young men to return the borrowed capital with reasonable interest in the course of a few years. Every industry in the country would feel the uplifting influence of the farmers prosperity.

At the recent Immigration Congress at Fredericton, N. B. Dr. C. H. McIntyre of Boston outlined a scheme whereby a government could handle a financial aid to farmers schemes. Dr. McIntyre's address will appear in full in our next issue. After you have read it over and seen how other countries are profiting by the adoption of such plans, we think you will say that the plan is feasible and worthy of the earnest consideration of our government. It would certainly be a boost in the right direction—the casting of bread on the waters with the prospect of having it returned buttered on both sides.

AID TO FARM LAND SETTLERS.

The Premier of Nova Scotia has introduced a bill to his House of Assembly, the purpose of which is to encourage settlement on farm lands in Nova Scotia. The bill as introduced by the Premier, is one of the most advanced pieces of legislation ever presented to any Legislature and in this respect Nova Scotia takes the lead in progressiveness.

The preamble of the Bill draws attention to the fact that there are numbers of people in various parts of the British Empire and elsewhere, some of them former residents of this province whom it would be desirable to induce to settle on farms in the Province.

In order to be of assistance to such people the Government is impowered to give a guarantee to any loan company, making an advance, to an amount not exceeding the difference between fifty per cent. of the appraised value and the amount of the loan with interest. At present loan companies will advance only fifty per cent. of the value of the farm lands, which amount is frequently not sufficient to enable a farmer to purchase a farm, in addition to necessary farm stock, machinery, etc., which must be provided.

The Government may further arrange with a loan company to advance an additional amount not exceeding the difference between fifty and eighty per cent. of the loan, the total loan in any one case not to exceed $2,500. The first repayment in all cases to go to the reduction of any Government loan or guarantee.

The Act also applies to persons already engaged in farming in this Province, who will have the same benefit under it as new settlers.

The Government is also authorized to borrow on the credit of the Province, the sum of $200,000 to carry out this legislation. The Government is further authorized to buy real estate which may be subdivided into farms or lots, on which buildings and fences may be erected, the Government to resell such farms or lots so made. The Bill further provides for the appointment of appraisers or other officials necessary for the carrying out of the Act.

COMMUNITY ANIMAL BREEDING.

In all lines of agriculture co-operation is desirable, but in no branch is community cooperation of more importance than livestock breeding. When once a community is found suited to breeding a certain breed of animals much can be gained by organization to promote that breed. This enables farmers and stockmen of limited capital to breed animals when without organization they could not secure the service of high-class sires.

Certain countries in Europe have become famous in breeding a single breed of animals and the progress made by community co-operation could not have been achieved in any other way. The government, too, has in many instances rendered valuable assistance which of course it could not do as effectively if a number of breeds had been kept. As examples we may cite the Rambouillet sheep, the Percheron and Belgian horses.

Community breeding generally simplifies marketing high-class animals. When it is known that desirable animals may be found in a certain section of the country, buyers do not hesitate to visit that section and make their own selections. It is expensive to travel over several stations and visit a few isolated localities where perhaps there are only a few animals in each locality to see.

When the community is organized to promote a single breed it is an easy matter to advertise this breed. All of the distant fairs may be visited and large sales advertised and the expense borne by the association. A campaign of education in animal breeding can be inaugurated and much information disseminated. These are only a few of the many advantages that co-operative breeding affords.

LEARN TO DO SOMETHING.

Boys, don't be afraid of the overalls. Prepare for your life work by getting the most knowledge possible about the particular line of work you want to make a lifework.

It is the day and the age of utility; and when you come down to brass tacks, usefulness, actual service, is the only thing worth having. There are spheres of usefulness removed from overalls, but the preliminary and formative stages of the usefulness of whatever kind or quality has upon it the badge of labor. The technical school is where the theory of useful service is explained and taught. It ought to have 10,000 where it now has 100 students.

The Formation and Cultivation of Soil.

The formation of the soil is a subject about which many volumes have been written, so you will not expect me to deal exhaustively with it.

The formation of the soil is due to erosion, to the action of air and water upon the rocks and to glaciers. Formation of soil is going on all the time. It is forming at the bottom of every river and wherever frost and sunlight are attacking rocks it is constantly forming. Soil, then, is formed by erosion, by washing of glaciers, by action of frost and sunlight. The formation of soil as we understand it means an intermixture of mineral matter in fine form, and a certain amount of vegetable matter. Until the vegetable matter is added, the soil is of small value. In the West where we have virgin soils, the thicker the layer of vegetable mould, the more valuable is the soil, and the earliest settlers were aware of this as they carried with them a spade and dug down to see how deep the layer af vegetable and mineral matter was. In some places it is two or three inches, and other places five or six feet. In these Maritime Provinces, the vegetable mould is in most cases very shallow. The mixture of mineral matter and humus or decayed vegetable matter is especially in the woods, very shallow indeed, and the only place where it is found in abundance is on the marshes and the cleared spots in the valley bottoms—there the mixture of this mineral matter and humus is usually very thick.

We cannot, however, confine ourselves to such areas. We must include the uplands; there we have to handle the soil in such a way as to increase vegetable matter and bring about such conditions as are capable of producing crops. Soils, as generally recognized by the farmers, divide themselves into three or four classes. We hear a man say he has a clayey farm,—clayey loam, or a sandy farm, and sometimes of a farm where there is a great deal of black muck. All these soils are capable of producing crops if properly handled. The crop that is produced to advantage on any good soil is supposed to be distinctive. Clayey and loamy farms will grow roots best, sandy farms are in a good position to grow apples and roots, black muck will grow hay. My experience is that if the soil is fairly well drained and at the same time such cultivation given during the growing of the crops, where cultivation is possible, any kind of soil will grow any kind of crop. The kind of crop will depend not upon the soil, but climatic conditions and what the farmer is after, the cultivation given that crop and sequence of crops handled. Every crop depends upon the farmer to a much greater extent than we are willing to admit. There is scarcely a farmer who has not accused his farm for not producing better crops.

The cultivation and crop sequence are the agencies which control the crop returns from the farm. I have been handling a farm whereon are to be found all these varieties of soils I have mentioned, and every grade between these classes from a heavy clay and light sand down to the deepest black muck, and I know that no matter what the soil the crops depend upon the cultivation given almost entirely. Our experience will bear this out. To show you what cultivation will do, and indicate the possibilities and averse conditions on this farm without the addition of commercial fertilizer, and with the purchase of barnyard manure, we were able to produce about three times the crop the average farmer in Canada produces. The average farmer, according to bulletins of that year produced $15.50 per acre worth of crops. On the experimental farm, we produced $43.14. It costs the average farmer, $4.00 per acre to cultivate, and it costs us some $12.00 per acre to cultivate our fields. The average farmer has a net profit of between $5 and $6. We had a net profit, over and above cost of rent, labor and manure, of between $31 and $32 about six times what the average farmer had. That quite remarkable difference was due almost entirely to the different methods of cultivation followed by us as contrasted with the average farmer. I do not say that every farmer follows a bad method, but so many fail as to bring down the average. I have often said that I wish it were possible to reach the bad farmer. Nearly every farmer that comes to these meetings comes from the best farms and is already agreed that the remarks I have to make and contentions I have made are his opinions. The only thing we can do as long as they are loath to come out, is to talk to the good fellows.

As told you, we have had good results on the experimental farm at Ottawa; in fact, I need not confine my remarks to Ottawa. The Truro Agricultural College returns have been much superior to those of the average farmer. The MacDonald College in Quebec returns are very much superior, and are due in every case to proper methods of cultivation and right crop rotation. I know that a good many of you have heard me speak on soil cultivation previously. I feel as though I ought to have a new message, something new, to be able to tell you of some marvellous way of handling the soil that has never been known, to readily, easily, quickly get the soils in such condition as to increase crops.

After all these years on the experimental farm, my own experience, study of the question, and especially the effect of cultivation and rotation I am still convinced of the importance of rotation. The rotation is being gradually introduced into farm practice in Ontario. In investigating the farm practices, only about 40 per cent. of the farmers in Ontario had rotation in actual operation on their farms; in Quebec only 4 per cent.; in these Maritime Provinces, the percentage is not much better than the Province of Quebec. No system of rotation seems to be in operation on the average farm. Rotation seems to be, in many cases, a term of unknown meaning. It means things done in order, in succession. Example: The following of one crop with another on a given field, and the following of each crop with such crop as is likely to do best after that crop. If you are producing crops for dairying in this province, you would require a certain amount of clover hay and would also find it necessary to provide yourself with a quantity of roots, or succulent forage for the winter; a certain amount of straw, some short feed to supplement the roots and hay. There are three crops required on your farm. You must therefore make provision for these three. You might set aside a certain field for hay, another for roots, another for grass. I must say that many farmers as so ill-advised as to follow such lines. Some farmers do, a good many do in many parts of this Dominion of Canada do just such foolish things which mean small crops, exhausted soils, and highest cost of production. The most foolish things any man can do. Just the result of following such methods as are commonly followed. On the contrary, where a rotation is introduced, where the light crop follows the crop it should follow, there is a sequence of crops: roots, grain, clover, peas. I do not suppose it is necessary to devote any arable land to pasture, because going through on the railroad one can see a fair proportion of land which cannot be used for crop production. I would follow a rotation of three years, roots, grain, clover, then begin with roots again. We have tried this year after year on given areas, and find there is no rotation which can begin to give the wonderful results in crop production and in low cost of unit production as this rotation. The grain crop materially increases the humus in the soil, which, added to the nitrogen, forms the most important fertilizing constituency of any soil. The rotation will have a wonderful effect in reducing the cost, and reducing the cost should be the aim of every farmer, and that is one reason why we so strongly advocate the introduction of the rotation. If the farmer does not desire to grow merely clover hay, and wished to include some timothy, he should adopt the four year rotation: roots, grain, clover, timothy hay, and then roots again. Another rotation is the five year. This is a rotation you would find satisfactory where you are growing roots to a considerable extent. With us in Ontario and Quebec, and with you in many parts of this Province where you can grow corn to advantage, corn is a profitable grain crop. We can produce corn more cheaply than roots. In the average year, a ton of corn will cost only ⅓ or ¼ as much as roots. Under these conditions, a ton of corn is worth just as much, and makes just as many tons of ensilage as roots, but here where roots must continue to be the staple production, this rotation is as follows: First year, pasture or timothy hay, then that soil or sod should be turned under in August, cultivated, and handled in such a way as to keep weeds down and cause sod to decay; next year, grain with the clover seeded down; next year, roots; the next, grain; and seeded down one year in clover, then pasture again. This five year rotation enables you to double crop returns in six years, so you see it is a very effective rotation in building up the fertility of the soil and on this depends the crop returns.

Seeding down: I would not say how much to sow. We sow about 8 pounds of red clover, 6 or 7 of Alfalfa, 2 pounds Alsike, 6 or 8 pounds of timothy. If Alfalfa will not grow, make the red clover 12 instead of 8, and use three pounds of Alsike. You will notice that I am advocating a very heavy seeding whether Alfalfa will grow or not, for this reason. While the seeding may be expensive, it would cost you $3.00 or $4.00 per acre to seed down properly, cultivate it and wait for results and you will be much more than reimbursed, and you will be sure of a good catch, and your crop is in very much less danger of not appearing at all than thin seeding. You will have a much superior quality of hay, more hay, better hay; in this way more nutritious and easily digested. The hay, as we cut it, consists of stem and leaves. If the stem is woody and hard to digest, the percentage of hay digestible is much lower than when the hay is cut at right stage, therefore heavy seeding is better in three ways: quantity, quality and certainty of crop.

A year or two ago at the Experimental Farm, we had a good catch, but our neighbor had none at all, because he would not handle his land properly. He used just as much manure, but he was unwilling to put in operation those methods which we considered scientific, and stuck to the old plan. Our methods have demonstrated over and over again their value, and everyone can do just as much.

I have in my mind's eye, a field which some ten years ago, we handled on the Experimental Farm. I took a forty-acre field and divided it into five lots: Timothy, Orchard grass, Alsike, red clover, and a mixture of the various classes of Alfalfa. On one side of the Alfalfa, we had red clover, on the other side, timothy. The next year we broke the field up and sowed corn. You could see a difference in the crop of Alfalfa; not so much where the red clover had been, but certainly eighteen inches higher on Alfalfa than on the timothy, therefore, Alfalfa is one of the best crops we can grow for preceding a root crop.

A sod is essential to rotation. A two year rotation of roots and grain is not a rotation in the best sense of the word. A rotation should give you better crops year after year; it does that by the adding of humus to the soil, and humus is added by the turning under of the sod. The best part of rotation as to improving soil fertility and consistency is the year when it is sod; if it is pasture, better still.

Your retiring president said something about the depopulation of rural Canada. Your Agricultural College principal, Prof. Cumming, has said that the depopulation of rural Canada was not so important as many people made it out to be. I agree with him. It is not important for the reason that a man with a team or with four horses to-day can do as much as his grandfather and all his neighbors could do in the same length of time. I remember when I was a lad of seeing my father go out with a half-dozen hired men and tackle a field of hay. When I was twelve years old, we got a mower, and I went out with a horse and mower and did as much work as five or six men. It is the same in all lines. We have been compelled to introduce machinery on our farms, and are able to do six times as much as our fathers did in the same time, and do it better, therefore, we don't need the same amount of help to produce farm products on our farms, but we could do better. That is a point in soil cultivation that has been receiving my attention for twelve years. This cry of rural depopulation was taken up, and has been gaining in volume and intensity for the last ten years. It has been treated from the wrong point. It is not merely the using of more men on the farm we want to make better use of the men we have, and we can do it. To begin with the plowing operation. We have been experimenting at Ottawa with the single, two, three, and five furrow plow. The five-furrow plow was handled by a gasoline engine. I would not recommend your introducing it around here. There are parts where it can be used to advantage, and you can introduce other methods that will materially lessen the cost of plowing. Where we have good big horses at Ottawa, and average hired men, it costs $2.00 per acre with single furrow plow. Two horses on a two-furrow plow costs a little over $1.00.

I took a disc harrow with 16 discs 16 to 18 inches, and a double and single harrow and put them all on the same field, one-third to each. The single cost 90c. per acre, the double, 70c., and the double cutaway 45c. Do not be satisfied with a little bit of a harrow with two sections, with a big team in front and a good husky hired man, but get three or four horses, and a harrow with five or six sections and cover the ground in half the time. The same way with

(Continued on page 437).

HORTICULTURE.

P. E. I. Fruit Growers.

At the Fruit Growers' meeting held in Summerside, P.E. I., in connection with the recent Provincial Seed Fair, Mr. Albert Schurman occupied the chair and Mr. T. A. Peters, the Island fruit inspector, in the course of an interesting address, explained why apple trees do not fruit heavily every year, the reason being that the fruit buds for the next year have no chance to form in the midst of a heavy crop. A moderate bearer bears more regularly year after year. He commended the Duchess apple as one that, shipped promptly, can be sold to advantage in the British market as well as in the local markets.

One of the reasons why fruit growers did not realize what they would call a satisfactory sale was due to the fact that in many cases the fruit was badly handled in packing . Mr. Peters favors box packing and showed from actual returns from sales that apples in boxes brought more in the British market than apples in barrels. He demonstrated the packing of apples in boxes and barrels so that the least possible amount of bruising would occur. Mr. Peters advised the Island fruit growers to stick to a few commercial varieties, grow them extensively, pack them carefully and the home and foreign market would take care of all they could raise at remunerative figures.

Prof. Ross, A. A. McNeil and others took a lively part in the discussion and helped by the aid of timely questions and advice to make the meeting profitable and interesting.

Bowker's Pyrox.

W. E. E., Kings Co., N. S.:—The Bowker Insecticide Company are putting out a preparation for spraying fruits and vegetables, known as "Bowker's Pyrox" which is very highly recommended by orchardists in various States. I would like to know if any persons in Canada are using this and how it compares with Bordeaux and Lime-Sulphur sprays. Can you give me any information about it? Is there any danger of burning the fruit or foliage?

The above inquiry was submitted to Prof.P. J. Shaw, Truro, N. S., A. G. Turney, Provincial Horticulturist, Fredericton, N. B. and Prof. Macoun, Horticulturist, Ottawa, and we have the following replies:

"In reply to your inquiry of the 9th inst., would say that I do not know of any persons using the preparation you speak of and cannot give you any information concerning it."—A. G. Turney.

"I am not acquainted with "Bowker's Pyrox" and do not know of its being used in Nova Scotia by fruit growers. Lime-Sulphur and Lead Arsenate are the most satisfactory substances for speay mixture for apple trees just now and if a better one comes along we will look to the experiment stations to tell us of it, I suppose."—P. J. Shaw.

"In reply to your questions of recent date, in regard to the Bowker's Pyrox, I may say that I do not know any fruit growers in Canada, who are using this spraying material.

Mr. Shutt, the Dominion Chemist, may have analyzed this material, and I have handed your letter to him, and no doubt you will hear from him shortly."—W. T. Macoun.

"We have not analysed a sample of Bowker's Pyrox, nor indeed have we seen the material, but I quote the following analysis from the Report of Massachusetts Experiment Station 1911.

BOWKER'S PYROX.

Moisture	58.09	per cent
Copper Oxide	4.21	"
Arsenic "	6.79	"
Lead "	16.35	"
Calcium " (lime)	5.27	"

—Frank T. Shdtt, Dominian Chemist.

LATER.

"Since writing you the other day on this sdbject we have come across some additional data, which seem to show that this material has both insecticidal and fungicidal properties. It is sold in the form of a paste and is apparently a mixture of lead arsenate and Bordeaux mixture. An analysis from the Bureau of Chemistry, Washington, D. C., furnisnes the following results:

Water	50.0	per cent
Lead Oxide	27.0	"
Copper "	2.5	"
Arsenic "	9.0	"
Sulphur Trioxide	.7	"
Calcium Oxide	.75	"
Undetermined	10.05	"
	100.00	

From these figures we may deduce that pyrox contains in the neighborhood of 35 per cent. of lead arsenate, or a little more than half that found in good brands of lead arsenate pastes. As to fungicidal value, 100 lbs. of pyrox would make 80 gallons of spray of approximately the same strength as the 4:4:40 Bordeaux Mixturef"—Frank T. Shutt, Dominion Chemist.

Work of New Brunswick Horticultural Branch.

During the past two weeks a number of the illustration orchards have been visited and pruned by R. P. Gorham. Work was begun at Waweig, Charlotte County, in the orchard of Mr.W. E. Armstrong. The Hoyt Station, Golden Grove, Sussex, Salisbury, Sackville, Baie Verte, Upper Queensbury and Stanley orchards were visited successively. In general the trees appeared to have passed through the winter remarkably well, only a few branches being found broken by snow, and no evidence of girdling by vermin noticed.

The character of the winter has been very uniform over the whole southern section of the province where the above mentioned orchards are situated. The fall remained open and mild so long that even where the trees made a late growth the wood had a chance to ripen up well before cold weather came in. No storms of any consequence occurred until after the beginning of the New Year and up to the present there has been no great depth of snow in any of the orchards. Only one sleet storm occurred during the winter and it was so slight that no damage was done. The temperature was very low in all parts of the province but so far as can be determined at present none of the trees have been seriously injured. All the illustration orchards have been supplied with spraying outfits and materials and will this year be in good shape to resist the attacks of the insects and fungi. The prospects for a good season of growth and a fair crop of fruit on the older orchards looks particularly bright at present.

The 1911 report on Horticulture and the proceedings of the Fruit Growers' Association will be ready for mailing in a few days. A thirty-two page pamphlet on "Orchard Opportunities in New Brunswick" has been prepared by A. G. Turney, provincial horticulturist and is now being printed. It is splendidly illustrated and 10,000 copies are to be issued, many of which will be distributed in the British Isles. A small illustrated leaflet on "The Forest-Tent Caterpillar" will also be issued shortly and should prove timely and useful as this pest has become quite serious during the last few years, especially in Charlotte County and portions ol York, Sunbury and Queens and gives every promise of being exceptionally numerous this season. Arrangements will be made for spraying demonstrations in the districts where this pest promises to be very destructive.

NIAGARA LIME-SULPHUR SWIFT'S ARSENATE OF LEAD.

Knocks Spots off Anything ! ! !

Spraying is an Insurance, differing from an Insurance Policy on personal property, inasmuch on buildings a loss has to happen before the insurer recovers. Spraying with NIAGARA LIME-SULPHUR AND SWIFT'S ARSENATE OF LEAD protects your fruit crop against destruction from the dreaded Black Spot and the revenges of insects.

Place your order at once, our factory is now running.

A one cent postal card will give you our Spray Calendar telling how to use our Spray to the best advantage.

Niagara Spray Co. of Nova Scotia Ltd.,

KENTVILLE, NOVA SCOTIA.

Methods That Bring Fine Syrup.

To insure a successful sugar season I would suggest that you commence the year before to prepare the wood and have it stored under cover, so as to have it well seasoned. I prefer a mixture of hard and soft flashy wood, the hard wood to make the body of the fire and the soft to make the blaze to boil tne sap at the back end of the arch. The wood should be stored in a shed outside the sugar house. In my own case the arch of the evaporator projects into the partition between the boiling place and the woodshed, with a hood connecting the arch with the partition, so that when the arch is being fired no dust can rise, be moistened in the steam and then fall into the evaporator to discolor the boiling sap.

The sugar house should be placed on a side hill, so the sap will run by gravity from gathering tank to holder and from holder to evaporator. The storage tank should be in a leanto or shed on the north side of sugar house,so that the sap can be kept as cool as possible.

You should be prepared for the first run by having your sap buckets, spouts, evaporator holders, etc., clean and ready for business, for it is the first run that is the best. Buy a spout that can be used after reaming as well as before. I consider reaming necessary to make a good quality of syrup the latter part of the season. I use a $\frac{7}{8}$ bit for tapping and $\frac{1}{2}$-inch reamer. This takes out all the foul stuff and cuts out the discolored wood andleaves a new, clean cut.

You should use tin buckets, spouts, evaporator and the storage tank and gathering tub either tin lined or made of tin. Do not let the sap come in contact with wood or galvanized iron. It is almost impossible to keep them clean. Do not tap too deep, about $1\frac{1}{2}$ inches. Remember that the most sap and the best sugar are found next to the bark, and the deeper you bore the darker and stronger the sugar. On the larger trees I use two buckets, but never two spouts to the bucket.

GATHER SAP PROMPTLY.

Almost as soon as the sap begins to run commence gathering, and as soon as gathered commence boiling, and boil as fast as you can. Use an evaporator that will permit of shallow boiling, for rapid and shallow boiling are necessary for a fine article. Gather the sap as fast as it runs, even if there should be but little in the buckets, so that when the

THE SIN OF OMISSION

It isn't the thing you do my friend
But the thing you leave undone
That gives you the bitter heartache
When the work of the year is done.
When your apples are all worm eaten
And the "taters" blighted and small
When the use of a "PERFECT SPRAY PUMP"
Would have saved them one and all.

Oh, the apples, you might have had, my friend,
If you'd only sprayed the same,
"Oh, the "tater's" you've thrown away, my friend,
That would have been clear gain,
These would have paid for your spray pump,
And have left you a happier man.
Then buy the best "A PERFECT"
And save them while you can.

The "Perfect Spray Pumps"

ARE MANUFACTURED BY

R. B. WESTHAVER, MAHONE BAY, Nova Scotia.

AGENTS WANTED. Write for Catalogue.

storms come you will not have a lot of rain-water and sap to boil or throw away, for usually the sap has After the storm take a small, short-handled mop and wash out the buck- . nailed mop and wash out the buckets. Turn them down to drain, and then hang to the tree again.

With covers this cannot be done, as you have no water in which to wash them. Wash the evaporator after every run, as well as the gathering tank and storage. Strain the sap into the gathering tank, again into the holder, and also the syrup when drawn from the evaporator. For straining the syrup I use a conical strainer made from the heaviest and finest all-wool flannel I can find. This will take out the malate of lime if the syrup weighs 11 pounds per gallon.

Keep the lime off the bottom of the pan, as it will darken and injure the flavor of the sugar. This can be done by letting stand in the bottom of the pan for a short time a dilute solution of muriatic acid and then thoroughly cleaning it, or it can be removed by a careful man and a sharp chisel. Boil until the syrup will weigh 11 pounds per gallon; can and seal while hot, about 180 degrees.

It is much less work to make the syrup than the sugar, keeps much better, and usually sells better. One gallon syrup will make about eight pounds pail sugar cooked to 230 degrees, or 7½ pounds at 240 degrees. While there are some sugar orchards where it is impossible to make a nice flavored and light-colored article, still you should strive to make the best you can. People are being educated up to demand and are willing to pay for such goods.—L. K. Osgood in N. E. Homestead.

Second Canadian National Apple Show.

From present indications, it is altogether likely that the second Canadian National Apple Show will be held either in Toronto, Ont., or Montreal, Que., before the end of the present year. We are pleased to see that the fruit-growers of the eastern provinces are finally awakening to the importance of boosting and taking advantage of this national enterprise which had its origin in the far west.

We trust, however, that the gentlemen who devote themselves to the promotion and management of the exhibition, will see to it that vegetables and other fruits are not allowed to mar the beauty and educational features of the show, or invade the sacred courts of King Apple. Do not make it an agricultural exhibition, but a National Apple Show pure and simple.

The Dominion Government should contribute at least $5,000, the Provincial Government $10,000 and the city in which the show is held $10,000 toward the work. Then the transportation companies and the gate receipts should roll the total up to the neighborhood of $50,000, which is necessary to successfully carry out the undertaking; and no better investment, from an educational and publicity standpoint, was ever made. Let there be one or two National Apple Shows in the eastern provinces during 1912 and 1913, with British Columbia properly represented, and there will be no trouble in bringing large and representative exhibits from the east to the National Apple Show at Vancouver in 1914. Everybody lend a hand to convince the Canadian people of what they have, what they can do and what may be done in the Apple line.—The Fruit Magazine.

Vanco Did it

When the Buds on your fruit trees are swelling, spray the trees from the top to bottom with

"Vanco" Lime Sulphur Solution

Clean trees mean sound fruit. Spring spraying means fall profits.

San Jose Scale, Apple and Pear Scab, Aphis, Fire Blight, Mildew and other Fungi attack fruit trees before the leaves come out.

The time to attack them is before they can damage the tender buds.

One spraying before the leaf buds burst, and another just before the blossoms come out—with perhaps a third when most of the blossoms have fallen—will mean hundreds of dollars profit when the fruit is ready for packing.

"VANCO" LIME SULPHUR SOLUTION is a true chemical solution of uniform strength and efficiency. It is prepared by scientific men in a scientific way—with the specific gravity on every barrel.

It does away with all guess-work—saves the trouble of home-boiling. It is ready for use after mixing with water—has no sediment—sprays easily—and does not clog the nozzle.

You get results when you spray with "VANCO" LIME SULPHUR SOLUTION—because it is strong, uniform, clear, efficient.

FERTILIZERS—We are the only house in Canada selling only the straight Fertilizing Chemicals—Nitrate of Soda, Muriate of Potash, Sulphate of Potash and Acid Phosphate.

YOU CAN SAVE FREIGHT by buying your Fertilizers and Spray Chemicals together, and have all come in one shipment.

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CHEMICAL LABORATORIES LIMITED, 148-158 Van Horne St., TORONTO. 88

MONEY IN POTATOES

You Bet There's Money In Potatoes When You Get 60c. A Bushel For Them

Last year, the average selling price all over Canada, was 60c. a bushel, compared with 45c. a bushel in 1910. Last year, Canada's potato crop increased in value OVER SIX MILLION DOLLARS.

In February, Potatoes were quoted in Toronto at $1.60 a bag in carload lots. You bet there's money in Potatoes.

Here's a hint that will bring you in a bag of money

Plant Potatoes on your *summer fallows,* instead of letting the land lie idle. By growing a potato crop, the necessary cultivation will destroy the weeds as effectively as any summer fallow.

And the best hint of all is this—

Write for our big free book—"Money In Potatoes." Of course you grow enough Potatoes for the table. But grow more of them for the big money there is in them.

This book shows just what there is in potato growing *for you.*

It tells you what the most successful potato growers in Canada and the United States have learned about planting, cultivating, fertilizing, spraying, digging and marketing Potatoes. It tells what soils are best—which potatoes are best payers—and gives a host of hints that a man of your ability will quickly turn into money, this summer.

Make up your mind that you are going to make money out of Potatoes. Sit right down—clip out and fill in the coupon—and send it off to us to-day.

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DAIRYING.

Selling Cream Vs. Whole Milk.

If a market for cream can be secured it will generally prove more profitable than selling whole milk. The cream market, however, is not always easy to find. Cream selling is so generally recognized as a desirable trade, that there are many looking for a chance to engage in it. The cream trade belongs to two classes. First, if one lives in the suburbs of a good sized town or city, he may find opportunity to sell to a caterer or proprietor of an ice cream factory. The manufacturer of ice cream makes a place for a great deal of cream, but it is a demand that fluctuates very sharply with the weather conditions. While this trade will pay better prices, it is often unsatisfactory because it means some days there will not be enough and other days there will be a surplus.

The second, and the most satisfactory method, is to make arrangements with some city milk dealer to handle the entire supply. He has an outlet for cream for coffee and breakfast food in other words, the private family trade, which is constant and regular and which he can depend upon.

The first thing in selling cream is that it must be sweet. In the private dairy there is no way so satisfactory as separating twice a day while the milk is still warm from the cow and then immediately cooling the cream to 50 degrees or lower. This makes a distinctly high-grade which needs no pasteurization and which will stand fairly hard usage at the hand of the customers.

Cream made from milk 12 to 24 hours old and well started toward souring must be pasteurized if it is to give satisfaction—and even then it will never have the perfect flavor and bloom of that made from new milk. It should be remembered that high-grade cream means milk of good quality, separated as soon after milking as possible and the cream cooled at once and kept cool until delivered.

The percentage of fat in market cream varies widely with the locality and special trade, but in a general way the standard shipping cream contains about 40 per cent. of fat. Little is sold in this way, but it undergoes varying degrees of dilution. Cream with 22 to 24 per cent. of fat will whip nicely. Only 16 per cent. of fat makes excellent cream for coffee and breakfast foods.

Taking all things into consideration, the usual advantages of selling cream are as follows: It is more remunerative than whole milk and it leaves the skim milk to be used for feeding upon the farm. Then, too, so far as labor is concerned, it is fully as easy to separate and draw to the station a small bulk of cream as to care for ice and transport a large amount of milk, but in the winter the advantage of labor is on the side of milk-selling.

Calving Notes.

Many a good cow has lost her life by being permitted to drink too heartily of cold water just after her calf has been born. It is a good plan to keep the cow up for two or three days and give her only water that has been warmed a little. This most always prevents milk fever.

A good warm bran mash is fine to give a cow just after calving. Helps to bring away the afterbirth. Some feed dry oats, but we prefer the bran mash.

Pointers for Milker and Feeder.

Two parties determine whether or not the cow works to her limit, the milker and the feeder. Both alike must enjoy their work. A wonderful thing in the way of arousing the interest of the milker is the dairy milk sheet, as it must also be a guide to the observant feeder.

With what delight does the interested milker add pound after pound to the dairy yield of milk! With what solicitude does he recognize a gradual shrinking from day to day! How careful he is to get the last few drops of rich strippings that add many points to the fat test of his pets. How cheery are his merry whistled tunes, his snatches of song as he watches the foaming milk mount higher and higher, even to overflowing the capacious bucket. His satisfaction as he announces 23 lbs. 10 ozs., a new record for Daisy or Buttercup!

MILKER AND FEEDER CO-OPERATE.

The milker from his position behind the cow is able to give valuable hints to the feeder looking to increased capacity on the part of the cow. Taken all in all, we must acknowledge the milker plays no small part in the production of the dairy cow.

But after all it is the feeder who holds the whip hand. His observation, his judgment, runs to every phase of the question. The old proverb has it: "The eye of the master fatteneth his cattle." This saying has a very wide application and can refer figuratively to thousands of varying conditions and circumstances. Our adaptation of it would be, "The eye of the feeder produceth the highest results in the functional development of the dairy cows under his charge."

NO TWO CASES ALIKE.

As the skillful physician must suit his practice to thousands of different cases, no two of them requiring the same treatment, so the wise feeder realizes that every cow in his charge demands of him a ration differing in both kind and quality.

Some cows freshening begin to milk moderately, increasing gradually for weeks; other cows start off at full blast from the first with all possible gradations between. Commonly the cow that does her 35 or 40 lbs. a day at first will soon moderate her stroke, fall off in flesh and sometimes go all to pieces in a few weeks and a magnificent possibility turns out a dismal failure. The true feeder anticipates all this and by widening and increasing his ration carries her over the critical period to a long term of high production and usefulness.

TO OVERCOME BAD TENDENCIES.

Another cow runs too much to fat on her ribs; narrow the ration more and more to counteract this tendency and get more milk as well. Another tends to run down in flesh. A wide ration is the corrective. Another is easily thrown off her feed by crowding. Cut down her ration till her appetite sharpens. Another is too loose. Vetch hay, clover hay, alfalfa hay, bran, pumpkins, squashes, turnips, kale, green corn, any one or two or more of these feeds may be responsible. Find out and rectify.

Perhaps the greatest blunder of all blunders is the waste of food involved in trying to carry too many cows. What is fed to two cows as a maintenance ration can be fed to one cow at a handsome profit and with less labor. Of man's stupendous mistakes this seems to me to bear the palm. Cut out your poorest cows, sell them to the butcher for whatever you can get, or failing in that, bury them. Don't sting your neighbor with them or the stranger within your gates.

The world will be better off from the gradual extinction of scrub cattle and the upbuilding of the better

Fragrance

WHEN you open a tin of Red Rose Coffee, you will surely be pleased with its unusual fragrance, and you will note particularly the small, even grains, free of the yellow flake or chaff which you have always been accustomed to see in the ground coffee you have used. This is the result of our new crushing process. The small grains settle quickly, so the coffee is never muddy, but always bright and clear. You will be convinced before you taste it, that it is a coffee of unusual quality. 224

Red Rose Coffee

Advantages of a Good Pasture-Replace by Using

HERBAGEUM

Twenty-five Years' Test Without Failure with

HORSES, COWS, FAT CATTLE, SHEEP, PIGS AND POULTRY

IT INSURES GOOD HEALTH AND BETTER RETURNS

It keeps Sheep free from Ticks and Assures better Wool and Heavier Clip.

Flavor of Milk and Butter are improved when Herbageum is given regularly.

MAKE YOUR OWN CALF MEAL

None Better—Costs only 1½c. per lb.

HERE IT IS—100 lbs. Oil Cake Meal; 300 lbs. Shorts; 4 lbs. Herbageum; about 1 lb. Salt. Mix well. Stir about two cupfuls in a gallon of scalding water and feed warm.

Leading Poultrymen Assure Us that Herbageum has no Equal. Now is the Time to Use It.

AND REMEMBER—NOTHING ELSE IS QUITE SO GOOD

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Galt, Ont. - - Sole Manufacturers.

Maritime Farmer Ads. Give Best Results

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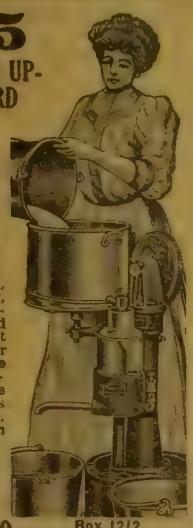
Swept The Boards At All The Fairs

1911 was a triumph for Windsor Dairy Salt. Practically every prize for butter-making was won by someone who used Windsor Dairy Salt.

Those, who make their living out of their dairies, say that Windsor Dairy is their old standby. They always rely on it because they know it is pure—because it makes the richest, most delicious butter — because they win the prizes and get "Top prices" for their butter—when they use WINDSOR DAIRY SALT. 66D

15.95 AND UP-WARD



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THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for $15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address:

AMERICAN SEPARATOR CO. Box 1212 BAINBRIDGE, N.Y.

BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton, Ont.

Chamberlain's Cough Remedy has won its great reputation and extensive sale by its remarkable cures of coughs, colds and croup. It can be depended upon. Try it. Sold by all Dealers.

half. Breed and feed, breed and feed; lay well to heart the word of the Holy Writ, "There is he that giveth and yet increaseth. There is he that withholdeth and it tendeth to poverty." I would impress this truth upon your minds and add yet another maxim of which I also pray you take heed and be wise, "Seek ye first the typical dairy cow and her produce and all other things shall be added unto you. So shall your barns be filled with plenty and your cans be bursting with sweet cream."—J. M. Dickson, Oregon, U. S. A.

Abnormal Milk.

Milk abnormalities are important owing to their secondary action in producing disease in man.

Watery Milk—This is distinguished by an absence of fat and casein, and an excess of water. It is bluer in color and of a relatively higher specific gravity. It is caused by poor, watery food, by disorders of the stomach or bowels.

Curdling Milk—Premature coagulation of milk is of common occurrence in cows milk. It may be caused by any of the following conditions.

Digestive disorders, sour foodstuffs; from diseases of the udder, especially inflammation and swelling in advanced pregnancy.

Nympomanical Conditions—Overheating of the body from movement or exercise.

Non-Buttering, Fermenting, Frothy Milk—This is to be found in digestive disorders, also in udder diseases and in the presence of micro-organisms. Always presupposing, of course, that the fault does not lie in the method of making the butter.

Slimy and Stringy Milk—In this condition the milk can be drawn out in long, tough threads. It is the result of bacterial infection. The casual organism seems to be bacillus lactis viscosus, a form first found by Ademetz in surface waters. Ward has found this germ repeatedly in water tanks, where milk cans are cooled, and under these conditions it is easy to see how infection of the milk might occur.

Soapy Milk—A soapy flavor in milk was traced by Weigmann and Zurn color-producing bacteria that are able to grow in milk, but their action is presence of blood, which is most frequently caused by some disease of the udder. There are a number of to a specific bacillus, bacillus lactis saponacer, which they found gained arcess from the litter in the stall.

Blue Milk—Blue milk has been known for many years; it appears on the surface of milk, first as isolated particles of bluish or gray color, which later become confluent. It is from bacterial origin.

Red Milk—The most common trouble of this kind in milk is due to the so slow that they are not of much consequence.

Foreign Matter in Milk—Of foreign substances in milk, the most important are: Dirt, abnormal flavoring matter, scents, pigments, drugs and poisons, also morbid substances, such as blood, pus and various bacteria already named.

Dirt—This comes from the cow's udder, which is often smeared with dung and urine, and consists therefore almost entirely of this filth. If the cow be diseased (diarhoea, entitis, tuberculosis), infection may be conveyed to those drinking the milk. —Dr. E. F. Jarrel, Fort Worth, Tex.

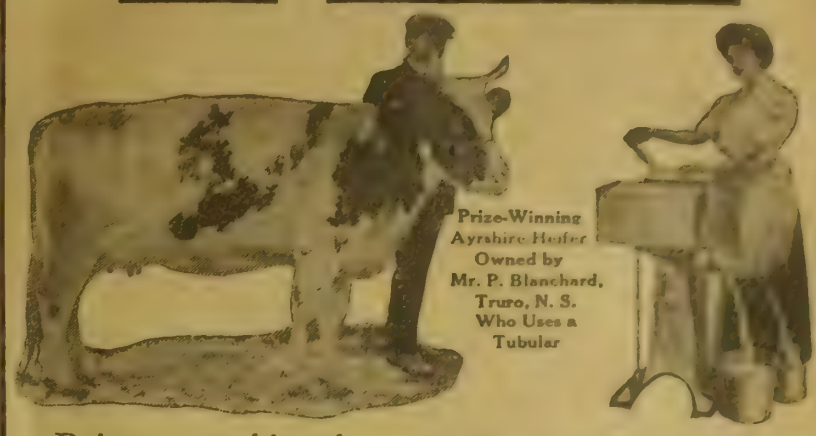
Silos and Ensilage.

It does not pay to devote high-priced land, for long periods, to pasturage and the production of hay. The land can be put to more profitable use. In order, therefore, that dairying may continue profitable, instead of depending, as in the past, wholly upon the pasture for the chief food-supply of their herds, many of our farmers are turning toward the silo as affording a beneficent solution of the feed problem. It is doubly beneficent in that it not only does away with the necessity of devoting so much land to pasture; but also, by making available a cheap supply of succulent and highly-relished food all the year round, it deprives stall-feeding of some of its objectionable features, while keeping the milk flow at a higher level. During the past two or three years, more silos have been built than in all previous years combined. The more prosperous farmers are often supplied, not merely with one, but with two good silos.

The economic value of this method of handling feed being generally recognized, the only real obstacle to the general introduction of the silo seems to be the first cost of the structure and of the machinery for filling it. More stock can be kept and profitably fed, per acre, when ensilage is grown, than by almost any other method of feeding.

The silo practically increases the producing capacity of the farm at least 10 per cent., and often more. A 160-acre farm with a silo will produce as much revenue as one of 180 acres without. Therefore, the first cost of a silo—like that of a dwelling-house, a barn or a team—should be considered part of the initial investment; and, if one's capital is limited, it is better to buy a farm smaller by 10 per cent., rather than dispense with a silo. The producing value of a silo on $50 land would be equal to that of 20 acres added to the 160-acre farm, or $1.000; on $100 land, it would be $2,000. This is a low estimate; for the stock-carrying capacity of the farm will often be increased fully 25 per cent. by the adding of a silo. As compared with its producing value, the cost of constructing the silo is small. Round wooden silos cost from $1.50 to $3 per ton of capacity; those of stone, brick or cement, from $2 to $4. It has been shown by actual experiment in Minnesota that—working co-operatively in the purchase of materials, etc.—a number of farmers in a locality may erect on each of their farms a stave silo, of 140 to 150 tons capacity, for about $275.—George P. Grout, Minnesota University Farm.

THE WINNERS



Prize-Winning Ayrshire Heifer Owned by Mr. P. Blanchard, Truro, N. S. Who Uses a Tubular

Dairymen making the most money realize that it pays them well to use only high producing cows and the highest producing cream separator. That is why Mr. P. Blanchard, successful dairyman and popular agricultural speaker of Truro, N. S., who owns the prize-winning Ayrshire heifer shown above, uses and recommends the

SHARPLES

Tubular Cream Separator

Mr. Blanchard is but one of many who are equally businesslike and use Tubulars. Tubulars are prize-winners. Have twice the skimming force of other separators. Skim faster and twice as clean. Dairy Tubulars contain no disks to chop or "taint" the cream or [illegible] flavor.

By producing the best cream and the most cream, Tubulars make a profit no other separator gets. This extra profit is simply Tubular "velvet" which Tubulars make for other kinds, [illegible] farmers and will make for you.

Sharples 31 yrs

Ask for Catalog No. 194 and our book, "Business Dairying." Both FREE.

THE SHARPLES SEPARATOR CO.

Toronto, Ont. Winnipeg, Man.

FREE $100.00

WIN A PRIZE

8	21	14	4	18	5	4
4	15	12	12	1	18	19
7	9	22	5	14		
1	23	1	25			

WIN A PRIZE

GIVEN AWAY

And many other Prizes according to the simple Conditions of the Contest (which will be sent).

Each one of the above four lines of figures spells a word. This most interesting puzzle can be solved with a little study, as follows: There are twenty-six letters in the alphabet, and we have used figures in spelling the four words instead of letters. Letter A is number 1, B number 2, C number 3, etc., throughout the alphabet.

USE YOUR BRAINS. Try and make out the four words. **ACT QUICKLY.** This is a chance for clever persons to win Cash and other Prizes with a little effort. Write the four words, with your name and address, neatly on a piece of paper or post card and mail to us, and we will write you at once, telling you all about it. You may win a valuable prize. **Act Promptly.**

DOMINION PREMIUM CO. 210 St. James St. (Dept. 91C MONTREAL

LIVE STOCK.

An Ingenious Device for Lamb Feeding.

There may be some hostility to the conservation movement in the West where it relates to trees, water-power or some of those allied natural resources, but certainly the wide-awake sheepmen who instituted the conservation of mutton chops by artificial means are true conservationists.

Careful sheepmen in the West have always used many schemes to save the lives of the little lambs because after waiting a year for the crop it seemed hard to lose it for want of a little personal attention. Yet each year thousands of new-born lambs were and for that matter are lost for want of better methods of saving them from starvation when for some cause their natural parents fail in their duty. Many of these tricks are well known to all familiar with the manner of handling a lambing band on a western sheep ranch. A careful herder will watch his band and, if a ewe loses her lamb, deftly strip off the skin before it is cold and sew it onto some unfortunate orphan that is just about ready to drop out to find its final resting place under some handy sage bush. The lambless ewe knowing no way of recognition but by her sense of smell, tests the masquerader, which the herder shoves under her nose and, finding it satisfactory, allows it to suck. Sometimes a foolish young ewe will refuse to own her offspring; then she is shut in a little pen, of which a good shepherd will have many close to the big corral. This pen is so narrow and close that she cannot turn or fight off the hungry little thing that clings to her side like a leech and it is not long before she surrenders to its persistence. From then on she carries out her maternal obligations in good faith.

I have seen owners who had a string of holes dug around a lambing corral, just deep and wide enough to hold a ewe and her lamb. Into this such a ewe was placed and over it a sheepskin was laid, held down by a couple of heavy logs or rocks. There in the darkness the lamb quickly found "what he most needed"—milk—and the ewe could be relied on to do her duty thereafter. Sometimes the herder catches such a ewe and, holding the little one up to her distended udder, allows it to get its fill. Generally she will not offer any further objections to its attentions because of the relief she feels when the overcharged udder is emptied, and another lamb is saved for the fall shipments. Of late years sheep values have risen to such a point that it paid to find other methods of saving them, because at the best but a small percentage of the orphans were saved by such means.

Up in Montana on the Yellowstone River ranges one sheepman has solved the problem by having a galvanized iron tank built around the outside of which he placed 20 rubber nipples over as many little tin pipes set into the tank. When set up on a frame just high enough to allow the lambs to reach it readily, and filled with warm cows' milk, it took two lively boys but a few minutes to teach the lambs to find their "daily bread" at this "galvanized iron ewe." Once taught the trick, they needed no further attention. By bringing them up in relays a large number could thus be raised. Of course not every sheepman is prepared to save orphan lambs in this manner, but where it can be done it gives big returns.

Down in Utah I found a pet cow which was doing her very best to prove to the world that the old theory that cattle and sheep could not get along together on the same range was pure fiction. She was raising half a dozen lambs which were brought to her in couples, and as fast as one couple filled up the next was brought into action. The only discordant note in the whole process was that coming from the cow's own infant, which, shut up in a nearby pen, voiced its opinion of the entire system in no uncertain tones. When I found it was being fed skimmilk from the house it had my hearty sympathy. However, as it was as fat as a calf could be and in addition to the skimmilk had all the fresh alfalfa it could eat, with a little corn chop mixed in the milk, I decided that while it possibly had a kick coming at being deprived of a mother's affection at such a tender age (and that, too, to make way for the despised sheep), yet it was really doing quite as well as it could ask for. There be many kinds of conservationists in this world.—Will C. Barnes, in Breeders' Gazette.

The Runt.

The problem of the runt in hog breeding continually comes up. There is almost sure to be at least one undersized pig in any large litter, and as this pig usually has a poor teat to suck the difference between the runt and the other pigs grows larger each day as the stronger pigs grow faster than the runt, owing to his lack of nourishment. It is an easy matter for the larger pigs to steal the runt's supply of milk, and this is what they are continually doing.

In-breeding and cross-breeding is the cause of the birth of many runts, the work of building up the breed being undone in those processes of breeding, etpecially when carried beyond the first cross. Often the litter is too large for the sow's milk supply and the runt should be transferred to another sow if possible. This will work only when the pig is less than a week old—a day or two is best—and the pig should go to a litter not older than himself, else he will be robbed in his new home and be no better off than he was before.

Wrong feeding is another reason for the stunting of a pig after he has been born into the world with sufficient size to make a proper growth. The feed may not be properly distributed and a few large pigs may get it all. Care should be taken to insure troughs and feeding space large enough that all may share equally. Some farmers allow their boar to run with the other hogs and he can camp in the middle of a feeding floor and scatter the younger hogs when they encroach on his table.

Again the small pigs may become stunted from too much feed. This is not only harmful to the weaker pigs, but is a waste of feed. Pigs should be sorted and only those of near the same size fed together. Worms, thumps, constipation and other sicknesses cause the pigs to become stunted and show lack of thrift. Plenty of pasture, good water and a gradual change in the balance of the feed are the best means of putting the stunted pigs on their feet again. Feed plenty of slops with as much milk in their make-up as possible. Some oil meal in the ration will often have a wonderful effect in bracing up the faded looking shoat.

The First Milk.

Nature has provided something in the first milk that is very essential in getting the calf's digestive machinery started right, and I think it should be permitted to have it. We usually leave the calf with the cow a couple of days, until it is nicely straightened up, then comes the most important time in the life of the calf, when we take upon ourselves its feed and care; and here is where

An I H C Manure Spreader Will Save Your Farm

THE whole future of American farming depends upon the farmers' attitude toward fertilizing. Already Middle Western farm lands are issuing a warning to their owners by producing smaller and smaller average crops. If the warning is not heeded, and fertility immediately restored to them, the lands of the West will soon be in the same list as some of those of the East—worn-out farms.

Immediate action is imperative. If your farm has not yet shown signs of reduced production you are fortunate; you can save it without a long, tedious system of upbuilding. Whether your farm is "as good as new" or not, your duty to the soil and to your children—the farmers who will follow you is: Practice rotation of crops, begin using an I H C Manure Spreader and spread enough fresh manure each year to replace the plant food drawn from the soil by the previous crop.

I H C Manure Spreaders
Corn King, Cloverleaf

are best for the work because they get 100 per cent efficiency out of the manure. When spread by an I H C Spreader, one ton of manure will produce more and better results than two tons spread by hand.

I H C Spreaders are constructed to completely pulverize manure and to spread it in an even coat, light or heavy as may be needed, over all the soil, at the same time requiring the least effort on the part of driver and horses. They are simple but effective, strong, but not too heavy; and exceedingly durable.

The beater gears are held by a single casting which keeps them in line under every strain. The beater teeth are long, strong and chisel pointed. They pulverize the manure and do it thoroughly.

The I H C local agent will show you the I H C Spreader and help you select the machine best adapted to your needs. Made in many styles and sizes. Get catalogues from the local agent, or, write the nearest branch house.

CANADIAN BRANCH HOUSES

INTERNATIONAL HARVESTER COMPANY OF AMERICA
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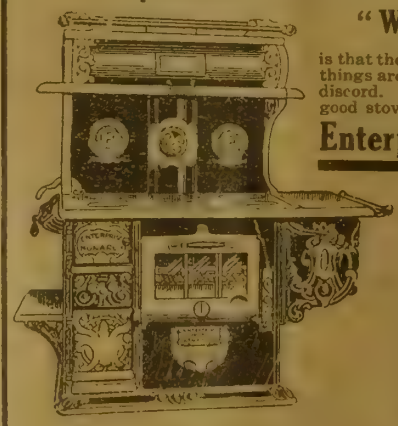
At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

"Votes For Women"

is the slogan of a mighty agitation just now. Some women claim to know—others do not know why such extremes are pursued; BUT—



"What Every Woman Knows"

is that the kitchen is the keynote of the Home and that if things are out of tune there, it frequently causes family discord. The first requisite of harmony in a home is a good stove The

Enterprise Monarch Steel Range

will do the work required of it and prevent family jars on account of poorly cooked meals. It has all the good features necessary to ensure quick and accurate results in the preparation of food and the daily routine of housekeeping.

Hundreds of users will endorse this claim. That's why all reliable dealers prefer to handle the "MONARCH." If your dealer does not, write us direct for circular and price.

The Enterprise Foundry Co.,

MANUFACTURERS - - SACKVILLE, N. B.

A Convincing Argument

A Pair of Cattle Gained 550 Pounds in 34 Days

ON October 7th last, L. C. Prime Company, Limited, purchased from Nova Scotia a pair of cattle which were in fairly good condition weighing respectively 1465 and 1585 pounds each. These animals were purchased for making a test of **MOLASSINE MEAL.** They were stabled for thirty-four days and fed on one pint of Corn Meal mixed with two pints Molassine Meal three times a day. On November 10th the animals were again weighed and tipped the scales at 1745 and 1855 pounds each, making a total gain of 550 pounds. They were sold to Mr. M. J. Collins, Fairville, New Brunswick. A copy of a letter from this gentleman is published below.

We do not propose to say anything further with reference to the quality of **MOLASSINE MEAL,** as this is conclusive proof that Molassine Meal is the best food on the market for fattening purposes.

The price is low, especially as compared with other feeds at the present time.

FARMERS! Is This Not Interesting to You? Let Us Hear From You.

If you wish to try a bag of this Molassine Meal and your grocer or nearest general store cannot supply you, we will see that it is delivered to you. **MOLASSINE MEAL is made in England.**

We can furnish you with the names of a great many satisfied customers and will be pleased to hear from any farmer with reference to it.

L. C. Prime Co. Ltd., St. John, N. B.

Letter From Mr. M. J. Collins.

Fairville, N. B., Nov. 15th, 1911.

Messrs L. C. Prime Co., Ltd,,
South Wharf,
St. John, N. B.

Dear Sirs:—

"The pair of Cattle purchased from you were knocked down the first of the week and I am now writing to inform you that we have never handled better beef. This beef was equal to anything coming from the West and weighed when dressed 2185 pounds."

"I can honestly say that I know of nothing that is equal to Molassine Meal for bringing Live Stock into good condition quickly."

Yours truly,

(Sgd) M. J. Collins.

we want to exercise a lot of kindness and gentleness, for if we are impatient and rough in our treatment with them they will distrust and fear us, and the chances are they will never forget those first lessons and impressions. A cow will never do her best unless she has perfect confidence in us.

It is an old saying that you can catch more flies with molasses than with vinegar; so you can do more by coaxing than driving. When teaching the calf to drink, don't push its head into the pail; wet your fingers in the milk and let it suck, and coax its head into the pail, and usually the second or third time it will drink of its own accord.

These are three essentials at this time: The quantity of milk, the temperature, and quality. Calves are injured more by not observing carefully these rules for the first few weeks of their lives than any other way. At this age their little stomachs are not strong, and a little care exercised at this time often means the difference between an unprofitable and a profitable animal.

The amount of feed at this time will depend largely on the calf and somewhat on the nature of the milk. This amount must be determined by the feeder, but this precaution is always advisable—better to begin carefully and work up to what they can handle, rather than to begin with a large amount and get them off their feed and then have to commence all over again.—F. H. Scribner.

FREE
Here is Your Chance to Obtain FREE a High-grade RING
Our Magnificent Genuine 14K Solid Gold Shell Rings are in the very latest solid gold patterns. We absolutely guarantee these beautiful rings to give satisfaction, and you will be surprised at their great beauty for the small amount of work you have to do to obtain them.
Just send us your name and address and we will send you postpaid 15 packages of our Marvel Bluing to sell at only 10c per package. We send a beautiful gold finished Turquoise Brooch to give to every customer who buys a package from you. When sold send us the money, only $1.50, and we will send you absolutely free, one of these beautiful gold shell rings. Address Dept 125
MARVEL BLUING CO., Toronto, Ontario

Inflamation Among Lambing Ewes.

The condition, which in bad lambing seasons often causes such a high rate of mortality in the breeding flock, and the shepherd describes as "inflammation," is invariably one of the group of diseases technically known as parturient fever, puer peral peritonitis, metro-peritonitis, parturient septicaemia, etc., and for all practical purposes may be regarded as septicaemia originating through lesions of the genital organs, from the putrefactive decomposition of parturient products, retention of foetal membranes, decomposition of the retained foetus, or the introduction of septic matter from outside sources. Septicaemia is caused by organisms which abound in putrid solutions, and when these invade the system the blood undergoes putrefactive changes. The entry is generally through a wound, and, needless to say, the genital organs and passages of the ewe at parturition are in a condition to favour the absorption of septic matter. The means by which the germs are conveyed is by the animal lying on ground or litter previously infected by one suffering from diseases of this class, or by the introduction of instruments, cords, or the hands contaminated with septic material. The latter is by far the most fertile cause of the spread of "inflammation" when the initial case has occurred in the lambing pen, and as parturient septicaemia often causes losses amounting to 20 or 30 per cent. of the flock, it is worth while to take all possible precautions against extension, for the expense of antiseptics and any trouble entailed are nothing as compared to [illegible] may result from the neglect of general sanitary precautions and special attention to sick ewes.

WISE PRECAUTIONS.

It should be a fixed rule in every flock, small or large, that the shepherd or attendant should not be allowed to make post-mortem examinations of ewes or to skin dead lambs; and when there are ewes suffering from parturient septicaemia, or any of the troubles which are lumped together as "inflammation," "heaving," etc., they should be waited on by a separate attendant, and the shepherd should confine his attention to the healthy, or, for the time being, unaffected or yet-to-lamb members of the flock. In some cases the pelts of dead lambs are regarded as the perquisites of the shepherd, and this is a most mischievous arrangement; much better results are obtained by allowing a bonus on each lamb weaned. If circumstances prevent the adoption of precautions as regards that complete isolation of sick ewes which only separate attendance can properly secure—and when a man is single-handed, and engaged in the lambing down of his own small flock, we can conceive of a difficulty—over-all clothing should be worn that will bear sponging or sprinkling with weak carbolic acid solution or other recognised fluid disinfectant, and the boots should be rubbed in a disinfectant whenever isolated sick ewes have to be visited. Under all conditions, even when perfect health appears to prevail among the ewes and all are doing well, the shepherd should, before affording any assistance in a difficult or delayed labour, carefully srrub his hands with carbolic soap, with which he should be provided, along with other suitable disinfectants, and see that his finger-nails are short, smooth and clean.

In spite of precept and example, groups of farmers over many parts of the country still persist in breeding from positively bad mongrel sires and weedy pure-bred ones. No doubt there has been improvement, but some districts that are fairly well farmed often make a wretched appearance in matters pertaining to live stock. The advantages arising from the use of a first-class pure-bred bull have been everlastingly proclaimed, yet the man who journeys over all parts of the country finds individuals who think any bull good enough. At one place there can be seen a Shorthorn and an Ayrshire, elsewhere some nondescript past finding out in blood constituents, and so forth.

THE HORSE.

Good and Bad Shoulders in Horses.

Good shoulders comprise one of the leading attributes to be sought for in a horse, and unquestionably this point is relatively of more vital importance than any other as regards equine conformation, at any rate in the case of light-class horses. With cart horses there may be other points that rank as equally essential to their usefulness. The chief characteristic of a good shoulder is a sloping position of the shoulder-blade ("laid well back," as the horseman terms it); and upon this in the main hinges the difference between good and bad shoulders. Lightness, however, is also important, especially in relation to horses used for saddle work. These must have "riding" shoulders—that is, shoulders which are light as well as exceedingly long and sloping, running back well into prominent and strongly defined withers. Such shoulders are characteristic of the thoroughbred and well-bred hunter. The "harnessy" shoulders, as seen in most Hackneys and other horses of the typical harness order differ from the riding shoulder in being more loaded and massive, while not quite so long and well laid back. This kind of shoulder in a riding horse is very objectionable, and would put a hunter straightway out of court, whereas riding shoulders are quite as well adapted for harness as lor saddle. Hunters and horses of hunter cut do excellently in harness, but horses with thick, loaded and not sufficiently sloped shoulders afford an uncomfortable ride, and from a hunting point of view are no good as jumpers, nor can they gallop properly in heavy going, especially over plough land, their galloping being more or less lumbering. Practically the conformation of the shoulders makes or mars a hunter; and this is one of the principal reasons why so many young horses, bred by farmers with a view to sell as hunters, turn out misfits and fail to come up to hunting standard, and have to be sold as troopers to remount buyers, or as general utility nags at correspondingly lower values.

SLOPING SHOULDERS.

Turning, however, from hunters to light horses generally, the reasons why sloping shoulders are such a very desirable feature, and why straight ones call for condemnation, are that the former confer light, elastic action, and enable a horse's forelegs to stand the wear and tear which work at fast paces entails of them much better than when the shoulder-blades are placed more upright. The fact that they assist in minimising the injurious effects of wear on the legs is due partly to the more springy action they ensure, so that the feet are not pounded upon the ground so much; partly because they serve to break the force of the concussion; and partly because with this kind of conformation, less weight falls upon the horse's forehand, and the body is better balanced. Well-sloped shoulders are, furthermore, eminently favourable to a more speedy pace, be it at the walk, the trot, or the gallop. At the walk, in particular, perhaps the superiority of the sloping shoulder over a straighter one, as far as it affects the rate of speed, is very noticeable. A good-shouldered horse is able to walk away briskly, moving with a free, roomy stride, and so covering ground rapidly, whereas one with poor shoulders walks in a more or less stilted and clumsy fashion, and can only take comparatively short strides. On that account an oblique shoulder proves a most valuable asset in cart horses as well as in those of light breed, for a long-striding and active walk is greatly to be desired in the former, in view of their having to perform their work wholly or mainly at a walking pace. It also saves their legs from wear when used for draught work in towns or on the road. One does not expect to see the same degree of slope in the shoulders of cart horses as in the case of light-legged ones; that is neither necessary, nor would it be feasible to attain, the cart horse type being what it is. What in horses of the light class would be considered as an unduly straight shoulder might in a cart horse be quite sloping enough to meet the most exacting requirements. Beyond the advantages just noted, which undeniably are vital ones, it would not appear that sloping shoulders alone enhance a cart horse's powers of draught, or that they are in that particular respect superior to more upright ones, for when they throw themselves into the collar in drawing heavy loads horses have always to straighten their shoulders. Therefore an upright shoulder-blade does not place a heavy draught horse at any mechanical disadvantage in hauling a load. While everyone in this country is agreed that oblique shoulders are in every way desirable in draught horses, on the Continent they very generally consider that our Shires and Clydesdales are unnecessarily sloping in their shoulders; and they prefer to see rather more upright ones in heavy cart horses. When last year a party of members belonging to the Agricultural Society of Germany visited England and Scotland the sloped shoulders and pasterns they saw in Shires and Clydesdales elicited qualified approval, whereas we, of course, consider these to be among their best points. What struck them most in connection with the Shires probably was their free-striding and active walking action, which they considered very remarkable in such heavy and massive draught horses. Apparently they failed to appreciate the intimate relationship existing between this latter feature and an oblique position of the shoulder, as well as of the pastern.—Argus in Farm and Home.

Colts the First Season.

The pregnant mare should be watched very carefully and cared for during the winter months so that her system will be in first-class condition for the strain to be put on her at foaling and for the few months to come. I keep my mares at light work during the months they are growing the unborn foal. They are never asked to travel over deep snow or soft land, or are they asked to hit a fast clip on the road. They draw the milk cutter or sleigh at a good walk or slow trot, haul light loads of wood and the manure sleigh. They are kept well shod to avoid slipping.

Their food consists of well-cured hay, either mixed or timothy with whole oats, corn in the ear and wheat bran. This is divided according to my own notion. There are various rules for feeding that are very good. I never feed over 20 pounds of hay a day, and that depends on the weight of the horse. The water that a pregnant mare drinks should have the chill removed and she should never

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'SC ONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevets the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunche sof all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR:--I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.
Hillsboro, N. S.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASIER THORNTON & CO. LIMITED, Cookshire Que.

HAWK BICYCLES

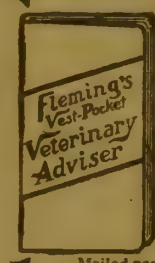
An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump, and Tools $22.50

Send for FREE 1912 Catalogue, 100 pages of *Bicycles, Sundries and Repair Material*. You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

How to Completely Cure

farm stock ailments is told in FLEMING'S VEST POCKET VETERINARY ADVISER. We will send you this 96-page book, illustrated, indexed, and well bound, free on request. It tells how to cure



HEAVES

Generally considered a lung or windpipe trouble, Heaves is really caused by stomach derangement, which, through the nerves, affects the breathing. The heaving disappears when the stomach is put right and the whole system toned up by

Fleming's Tonic Heave Remedy

Mailed prepaid for $1.00 per package. Your money back if any of Fleming's Remedies does not do what we claim—you to be the judge.

FLEMING BROS., - Chemists,
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain; Cures Spavin Lameness, Allays Pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. Book 1 E free.

ABSORBINE, JR., liniment for mankind. For Synovitis, Strains, Gouty or Rheumatic Deposits, Swollen, Painful Varicose Veins. Allays Pain. Will tell you more if you write. $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

MORE POTATOES PER ACRE

Do you want to increase your potato crop 10 to 57 bushels per acre and thereby increase your profits $5 to $57 per acre?

The Iron Age Planter is the one machine with which an absolutely perfect stand can be obtained. At the Maine Experiment Station the yield where the

IRON AGE

was used was 57 bushels per acre more than where one of the best of the "Picker" machines planted. It makes no misses, no doubles, injures no seed

In Idaho, Herbert Lambing, a former Iowa Agricultural College student, has gained attention by his big crops, due to scientific methods. He writes in part; "The *Iron Age* means just one half my crop this year." Let it secure for you a perfect stand, a bigger yield and more profit. Ask your dealer to show you the Iron Age Planter, with or without fertilizer attachment. Write us for special booklet and Mr. Lambing's complete letter. Both will interest you. This planter is but one tool in our complete line of Iron Age farm and garden implements. You should know them all.

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SOLD BY

C. Fred Fawcett,
Upper Sackville, N. B.

J. E. Clark & Son,
Fredericton, N. .

Ocean Limited Early on Route.

SUMMER TIME CHANGE ON INTERCOLONIAL RAILWAY JUNE 2.

The summer change of time on the Intercolonial Railway will go into effect on June 2nd, when the famous Ocean Limited will be placed on the route between Montreal, St. John, N. B. and Halifax, N. S. with connections for and from the Sydneys and Prince Edward Island in anticipation of an early rush of summer travel. The time schedule is expected to be practically the same as last year which means that the "Limited" will leave Montreal at 7.30 p.m. reaching Levis at midnight, and giving through passengers the opportunity of seeing the famed Matapedia Valley during the earlier hours of the morning and a view of the Restigouche River and the blue waters of the Baie des Chaleurs. The beautifu, valley of Wentworth, N. S. will be seen in the more mellowing light of early eventide, and the train will reach Truro at 8.00 o'clock connecting with the through night express for the Sydneys and arriving at Halifax at 10.00 p.m.

The Maritime Express under the summer schedule will leave Montreal at 8.15 a.m. and through passengers will have the daylight journey through Quebec, and a view of the majestic St. Lawrence as it widens in its course to the sea. Making connection at Moncton with morning express for St. John the Maritime continuing eastward will reach Halifax at 13.30.

The Ocean Limited will leave Halifax westbound at 8.00 a.m. and the Maritime Express will leave as usual at 15.10 thus there will be a through week day service by two trains equal to the best ob the continent.

have over 12 quarts at a time. Ice cold water will cause abortion many times. I watch the mare very closely after the wax shows on the teats without appearing to do so, as some mares object to close attention at this time. A mare, when everytning is normal will foal, as a rule, in 20 to 30 minutes from the time labor pains commence. But if the foal is large and the mare weak, she will become exhausted just at the time when the head has appeared in sight. In a case of this kind the foal needs to be grasped by the limbs and pulled quickly into the world or it will be strangled in less than five minutes. If it is born and the placenta membrane is still on the end of the nose it will smother unless it is quickly removed.

Again, when the foal is born with the hind feet first, help will be needed or in most cases the foal will be lost. It is not, as many suppose, necessary for every foal to die that is born with the hind feet first. They die because birth is too prolonged. Aid of the proper kind by the person in charge will generally save the foal. When a mare is within one to two months of foaling, do not let her roll. Give her a chance to gnaw the earth 20 or 30 minutes a day and slow exercise. Too much grass might unbalance her first milk and cause bowel trouble with the foal. See that the foal drops on a nice clean bed of straw. Wet the navel cord with same antiseptic if it severs of its own accord. If it does not sever, tie it about an inch from the abdomen and sever an inch from the tie, then wet it as I said before. This will prevent septic poison of the blood and joint ill. Use for this one teaspoonful of carbolic acid in one-half pint of water.

Do not turn the colt and its dam out in the hot sun too long the first few days of the colt's life; gradually increase the time until they are running out all the time, provided they have a good box to run in out of the bad weather. Fresh air and exercise are all-important in producing healthy, growthy young horses. They will not amount to much if kept in a box with no exercise to grow bone and harden the muscles. Let the colt have a little feed box of its own, large enough to spread the feed out thinly on the bottom, and as soon as it will eat feed, give it all it will clean up with a relish, but no more. I always use ground oats and bran equal parts for the foal and its mother for a while after foaling.

For seasoning horse feed I use a dessertspoonful in every feed of the following; Common salt, two pounds; charcoal, one-half pound; powdered gentian, four ounces. For colts I add fine bone meal one-half pound. Give the colt a teaspoonful in feed twice a day. Watch the colt's feet and keep them rasped or pared. Many a horse has poor feet through life be being neglected when young. The most successful horse breeders feed their colts well and give plenty of exercise through colthood, and by so doing realize a good profit as well as does the horse industry by this same act. —Jay F. Hammond, Tompkins Co., N. Y.

Scratches.

J. B. D., Kings Co., N. B.:—I have a driver suffering from a slight kind of scratches in the heels. It is not through neglect, but just through ice and snow. Have used all sorts of salve and vaselines, but fail to cure it. The fetlocks keep breaking out in clusters of scabs and directly one lot disappears, another lot comes. Do you think there is any cure? I have washed them regularly with warm water, but all of no use.

Ans.—Scratches is a derangement of the blood. Treatment: Give a ball composed of Aloes and follow up with a condition powder and clip the hair from the legs that are affected. Use hot water and poultice with linseed meal and use zinc sulphate and lead acetate, one ounce each in a pint of water. Apply on the affected parts and keep the parts soft with glycerine.

Gombault's Caustic Balsam

The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
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SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin cure made. Every bottle sold is warranted to give satisfaction. Write for testimonials, etc. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure in Results.

None genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S.A. & CANADAS. CLEVELAND, O.

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.
The Lawrence-Williams Co.
TORONTO, ONT. CLEVELAND, OHIO.

Are Your Horses troubled with Sore Shoulders?

The cause in all probability is from ill fitting collars. You can avoid it by using Currie's High Grade Horse Collars. They are made to fit the horse perfectly and have a good hair facing and will not sore your horse even when doing the heaviest kind of work.

Ask your dealer for the Currie Collar and if he has not got them in stock write, wire, call or phone to

R. J. CURRIE, 100 Brussell St., St. John, N. B.

Specialist in the manufacture of Horse Collars.
'Phone Main 1730-11. *Harness Making and Repairing.*

Bickmore's Gall Cure

The old-time remedy for keeping horses in [illegible] high-priced horses. Bickmore's Gall Cure cures [illegible] horse works. Approved remedy for cuts, [illegible] by dealers, money back if it fails. Stop horse trade [illegible] and valuable 81 page horse book sent on receipt of a stamp [illegible]

WINGATE CHEMICAL CO., Canadian Distr's, 811 Notre Dame St. W., Montreal, Can.

An Advertisement in the Maritime Farmer will sell your surplus stock.

POULTRY.

Mating Fowls for Egg Production.

In common practice mating for egg production deals only with a few essential characters. Whatever the type or variety, when eggs are the special object the male should be an active, vigorous bird, and one that grew quickly and matured a little earlier than the average for males of his race. He should be of at least average size or, in a variety having a standard for weight, should closely approximate that weight. The hens should be selected for the same points, except that, as each hen influences only a small proportion of the offspring, and the mating ratio is usually made as wide as possible, it is not so necessary to give special attention to the point of early maturity in individual cases. If the mating is made, as it should be, before February, any pullets that are then well developed and laying may be used with reasonable assurance that the proportion of slower-maturing birds is not large enough to materially affect the general result, provided the male is not one that developed slowly. The matter of size is more important in selecting breeders to produce layers than in selecting layers. Slightly undersized hens often lay as well, or better, than larger hens, and lay as large eggs. A male a little under size may give offspring not notably smaller than those of a somewhat larger male, but the continued use of breeders of less than average size for their kind quickly reduces the average size of the stock. Even with care to use only birds not below medium size, the proportion of smaller stock is usually larger than desirable. Many poultry keepers who are indifferent to this point in mating offset their error by careful selection of the eggs set, taking only such as are of good size, form, and color. When only a small proportion of the eggs are to ient and economical way to select; be set, this may be the more convenbut since the hens of medium size, or larger, are usually the hens that lay the kind of eggs selected, it is better, when the object is to get as large a proportion of selected eggs as possible, to exclude small birds from the matings.

Good Egg Layers.

Editor Maritime Farmer:—

I noticed a letter in your valuable paper of March 21, 1911 concerning the Ottawa Experimental Farm report on the egg laying capacity of the poultry raised there. I may say that V. P's. letter expressed my sentiments exactly in regard to the small average of eggs gathered.

I have had only a short experience in the poultry business and only on a very small scale, but it has been more successful as far as average goes, than the report shows.

I started a flock of poultry by purchasing a brood of chicks which were hatched the middle of September 1909. The hen, evidently not believing in the theory that late hatched chickens are undesirable, had stolen her nest and hatched nine chicks, three of which were pullets, which I have kept. They all began laying before they were six months old, and within a year from the time they commenced laying, one of them had laid 208 eggs another 195 and the third laid 138 eggs and hatched and reared two broods of chicks. Twelve of these chicks were pullets, the younger ones being hatched August 1st. These twelve pullets and the three yearling hens laid 339 eggs in March. One of the pullets had laid 4 eggs when she was five months old, their average age on beginning to lay being less than six months, the younger pullets laying quite as well as those hatched earlier; the older ones laying more at the time when eggs were scarce and the price high.

By inserting this letter in your paper, you may induce others with more experience and perhaps greater success, to give your readers the benefit of their experience, and convince V. P. and others that poultry raising may be engaged in, in Nova Scotia with success and profit.—F. Harvie, Hants Co., N. S.

Better Eggs.

Ten per cent. of all the eggs sold during June, July and August are 'rotten,' while 35 per cent. are 'seconds.' These 'rots' and 'seconds' represent an average loss of $1.05 on every case of eggs which the farmer sells. A large part of this loss can be stopped if the farmer will follow these suggestions in handling his eggs:

1. Don't keep mongrel stock.
2. Don't hatch your next winter's layers after June 1.
3. Don't allow the male birds with the flock after you are through hatching.
4. Don't compel the hens to make their nests in the weeds and under the buildings. Provide one nest for every four hens.
5. Don't allow the nests to become filthy.
6. Don't set hens where other hens can lay in the same nests.
7. Don't wait until ready to go to town before gathering the eggs. Gather them at least twice a day during hot weather and on rainy days.
8. Don't keep eggs in a damp place.
9. Don't keep eggs in the kitchen, or near a fire of any kind.
10. Don't sell eggs that have been gathered from a stolen nest. Such eggs should be used at home.
11. Don't wash eggs.
12. Don't expose the eggs to the sun's rays when taking them to town.
13. Don't sell eggs case-count, but demand that your eggs be candled.
14. Don't market eggs which have been in an incubator.
15. Don't keep eggs in a tight vessel of any kind.
16. Don't keep eggs near oil, onions, etc., as they readily absorb odors.
17. Don't market the extra large, small, or dirty eggs. Use them at home.
18. Provide sufficient feed and shell for your hens at all times.
19. Keep your eggs in clean cases and fillers, with excelsior on the top and bottom of each case.
20. Male birds have no influence on the number of eggs laid.

Bee-Keepers Attention.

Editor Maritime Farmer:—

Bee-keepers in the Maritime Provinces will be pleased to learn that at the 1912 St. John Exhibition, the prize list of which will soon be in the hands of the public the class for bees and bee products will be more extensive than ever. Mr. H. A. Porter, manager-secretary, has guaranteed his assistance and we have already in our hands more special prizes than ever appeared in any Exhibition Premium Book in the United States or Canada.

We hope all interested in bee-keeping will unite in making the Show a grand success.

Send your entry early and meet us at St. John.—Todd Bros., Charlotte Co., N. B.

3 FEEDS FOR ONE CENT

We Positively Guarantee

That a 25-Pound Pail of

International Stock Food

Will Save You $7.00 worth of Corn or Oats

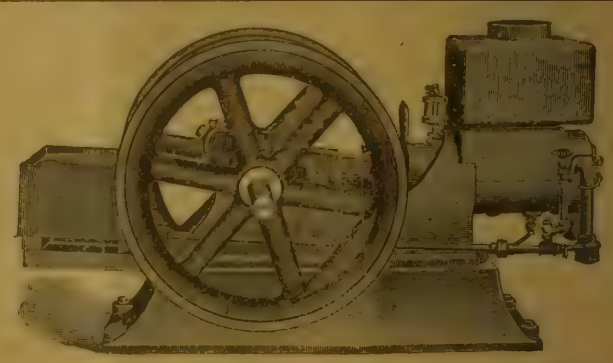
Because it promotes digestion and assimilation, and enables you to cut down the grain ration 15% to 25% and still get better results. This saving of grain represents a saving of good hard cash to you.

WE WANT YOU TO FEED 100 LBS. AT OUR RISK

It will not cost you a cent if you are not satisfied.

See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16x22, of our three champion stallions.

International Stock Food Co. Limited, Toronto



The Waterloo Boy Gasoline Engine

is like a lot of people you and I know. It improves on acquaintance You must know it to appreciate it.

The Waterloo Boy will developmore power and do a lot heavier work than you ever expected.

You can always depend on it. You know what it will do. It is so simple your 10 year old boy can be engineer with perfect success.

The old reliable fly ball governor keeps the speed steady. It has a patented mixer and new positive igniter. Automatic fuel regulation makes it economical.

The speed lever will vary the speed from 50 to 75 revolutions while running.

Starts easy in the winter; always ready without fuss or bucking; open jacket frost proof Nearly all parts interchangeable.

Farmers are "boosting" Waterloo Boys more than any other engine. Does that prove anything?

Let us tell you more. Our Catalogne is free. Write to-day.

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

Poultry Pointers.

Coax the hens with good homes and good feed.

Don't expect good returns when you are giving indifferent care.

No successful poultry plant was ever built up with mongrel stock.

Never cover eggs up tight while you are holding them. Give them plenty of fresh air.

Feather-eating may be stopped by giving more meat scraps. It is worth while trying.

Linseed meal is a good feed for hens, but do not feed too much at a time.

BAD BLOOD CAUSES BOILS and PIMPLES.

Get pure blood and keep it pure by removing every trace of impure morbid matter from the system.

Burdock Blood Bitters has been on the market about thirty-five years, and is one of the very best medicines procurable for the cure of boils and pimples.

PIMPLES CURED.

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Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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is entirely different from the ordinary food chopper. The barrel is in two closely fitting sections, clamped together by one set-screw. Canadian made machine.

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In the curtain front type of house a feature of the original plan on which considerable stress has been laid was the canvas curtain in front of the roosts. This curtain, together with the back wall of the house and the droppings board under the roosts formed a closet in which the birds were shut up at night during cold weather.

When the curtain-front house was first devised it was thought essential to provide such a closet to conserve the body heat of the birds during the cold nights when the temperature might go well below zero. Experience has shown, however, that this was a mistake. Actual test shows that the roosting closet is of no advantage, even in such a severe climate as that of Orono. On the contrary, the birds certainly thrive better without the roost curtain than with it.

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The above advertisement occupies considerable space in New York medical journals that go to doctors. We understand that this party is not able to supply the demand for "virgin" eggs at a dollar a dozen. By virgin eggs is meant eggs from hens that have always been kept apart from the rooster. Such hens are fed with the best food, especially alfalla, beans, peas, soja beans or other vegetable foods rich in protein or albumen. They also get some meat, but care is taken that it is fresh meat, free from decay or disease of any kind.

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The P. E. I. poultry men held a good meeting at Summerside during the Seed Fair. Mr. Frank Glydon occupied the chair and Rev. Dr. Gauthier, D. M. McDonald, J. E. Wyatt and others addressed the audience. In the course of his remarks Dr. Gauthier said that in his experience the chief essentials of successful poultry production are plenty of air, light and good feed, approximating as closely as possible to the food attained by the hens in summer. He fed with sprouted oats and other grains, mangles, turnips, clover, cabbage, and other food of like description. He laid great stress upon the wealth, the hen brought to the country, and remarked that, instead of an eagle the United States ought to have selected a hen for their coat-of-arms, for the revenue obtained from United States poultry is more than that obtained from any other single source.

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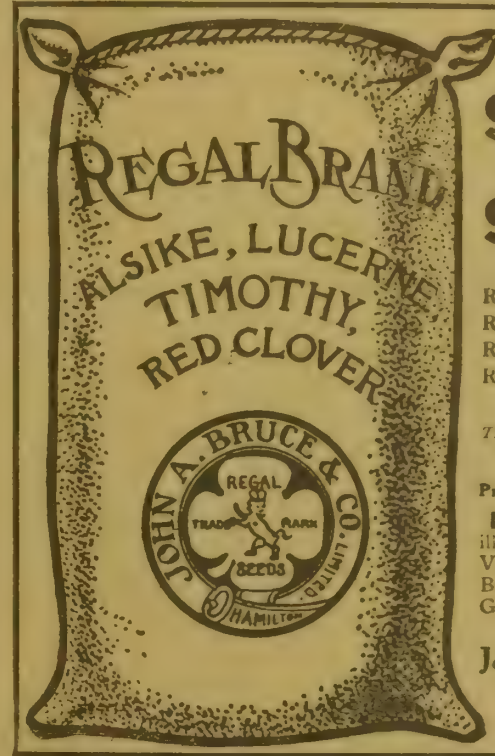

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Be a Booster.

Do you know there's lots o' people
  Settin' round in every town,
Growlin' like a broody chicken,
  Knockin' every good thing down?
Don't you be that kind o' cattle,
  'Cause they ain't no use on earth,
You just be a booster rooster,
  Crow and boost for all you're
    worth.

If your town needs boostin', boost'er;
  Don't hold back and wait to see
If some other fellow's willin'—
  Sail right in, this country's free.
No one's got a mortgage on it,
  It's just yours as much as his,
If your town is shy on boosters,
  You get in the boostin' biz.

If things just don't seem to suit you
  And the world seems kinder wrong,
What's the matter with a-boostin'
  Just to help the thing along?
'Cause if things should stop agoin'
  We'd be in a sorry plight;
You just keep that horn ablowin'—
  Boost'er up with all your might.

If you know some feller's failin's,
  Just forget 'em, 'cause you know
That same feller's got some good
    points,
  Them's the ones you want to show.
"Cast your loaves out on the waters,
  They'll come back" 's a sayin' true,
Mebbe, too, they'll come back "but-
    tered"
  When some feller boosts for you.

Love's Barrier.

(Continued from last issue).

CHAPTER XX.

THE TRYST.

"Admirable," murmured Hunt with a curious inflection in his voice. "Admirable. You have certainly missed your vocation, Helen. Another Rejane or Bernhardt undoubtedly has been lost to the world."

Helen played a few more notes, and not one rang false.

"Come round to the other side," she said in a low, quite clear voice. "I have something to say."

Hunt obeyed her at once, his pulses thrilling a little with the piquancy of the moment, and with a feeling that was something deeper. He had not forgotten this woman, and he knew now as he looked at the exquisite poise of her head, the sensitive outline of her beautiful face, that he never would forget her. He had met nothing to compare with her since they had parted three years ago.

"What did you mean to-night?" he asked in a low tone that had a touch of passion in it. "Why couldn't you say quite frankly that we had met before? It would have been much easier for us both."

She played on, her eyes dwelling with strange intentness on his face.

"I had my reasons," she answered at length. "But I can't give them here. I have something to say to you. Find out where the Low Ghyl in Mardocks Wood is, and meet me there to-morrow afternoon at three o'clock."

"I shall have a job getting out, but I shall be there, Helen; thank you very much."

"Pray don't thank me, you will not have any occasion," she answered, and bringing the bar to a sudden and crashing conclusion, she rose from her seat and glided away. "Claude, dear, I think I should like to go now if you are quite ready," she said when she was half across the room. At the moment the servant appeared to say that the carriage was at the door.

The adieux were quickly made, and Geoffrey Hayes was the only person who observed that Mrs. Secretan and Major Hunt did not shake hands. He dismissed the incident, however, concluding that it only marked the difference between the manners of what his wife called the lower and the upper ten. Undisguised frankness in all the relations of life is the particular privilege of the poor, and has its advantages.

"Don't you admire Mrs. Secretan, Gerald?" asked Audrey as she hovered about her lover the moment the door closed. "She seems out of sorts to-night, and I'm afraid she didn't like you, Gerald. It is not like her to be cold like that."

"Nonsense, Audrey, you know that Mrs. Secretan could never by any chance be called a gushing person. She has a way of looking at people as if she had no further use for them. I've seen her look like that," said Gerald—and immediately corrected himself—"more than once to-night; downstairs, she did. But, by Jove, can't she talk, and to some purpose too!"

"You like the Rector, I am sure?" said Mrs. Hayes eagerly.

"Yes," answered Hunt. "He seems a very decent sort of a chap, but of course he's hardly a mate for her. It is quite obvious that she belongs to a different world."

Geoffrey Hayes returned at the moment from having speeded the parting guests at the door.

"Mrs. Secretan did not seem quite like herself to-night, I thought. You liked them, Gerald?" he said cheerfully. "We consider ourselves very fortunate in having such a Rector and his wife in Midcar. Wait till you hear him preach on Sunday morning. Undoubtedly his gifts are far above the place. But promotion is certain to come."

They continued to discuss the departed guests, Hunt in no way averse to hearing as many items as he could. It would help him on the morrow, for he had not the remotest idea what sort of an interview he was likely to have. The mere anticipation of it made the blood course faster through his veins. He loved intrigue, though he had imagined himself done with it. And he still loved Helen. The sweet flower-like face of the girl who was going to be his wife lost its appeal.

As the carriage drove away from the lighted doorway, Secretan turned anxiously to his wife, feeling her leaning somewhat heavily against him. He put his arms about her, and drew her very closely to his side.

"My darling, I'm afraid it has been too much for you. Are you very tired?"

"Not tired at all, Claude, but it was very dreary, don't you think? People should not invite strangers to family functions which really have no interest except for those immediately concerned."

Secretan looked the surprise he felt.

"They don't look upon us as strangers at High Ridges, surely. It was a compliment they paid us to-night, and I appreciated it to the full. Well, how did you like Major Hunt?"

"I hardly know. I had so little opportunity of judging, but I do think he is too old for Audrey. I would rather, oh, much rather, they gave her to John Ridd."

"You surprise me more and more. I formed quite a high opinion of him. He is far more intelligent than the average soldier."

"Why did you go back to the dining-room when Mr. Hayes came up to us?" she asked almost feverishly.

"We happened to be discussing missions in India, and I wanted to ask a few more questions. It is so seldom one obtains information at first hand."

Helen suddenly laughed a little shrilly.

"Missions! You discussed missions with that man! How awfully funny!"

"Why should it be funny? He has been on the spot for three years, and may be expected to know something about them. As a matter of fact he does know a great deal."

"And what was his verdict?" asked Helen in a voice of cold, faint amusement.

"He admits the good that has been done, but criticises some of the methods. I don't think you are quite just to him, Helen, and it is not like you to be prejudiced like that at the outset of an acquaintance. You won't let Audrey know you were not favourably impressed? I'm sure it would be very disappointing for her."

"What else did you talk about besides missions?"

"Oh, a good many things. He was very friendly and interested, and asked a lot of questions. I told him where we met, and how long we had been married."

"Claude, that was very provincial, and you had no right to discuss me with a strange man."

"I didn't discuss you. He admired you, of course, and I must say I never saw you look so brilliant. I don't understand you to-night, dear, and I'm afraid you are over-tired. There, there, don't say another word."

His amazing tenderness, which had a touch of protecting care in it, was round about her, and she gave herself up for the moment to his care. Her nerves were unstrung, her heart beating wearily, because of the load that oppressed it. The morrow loomed before her like a nightmare, but her mind was made up. Her duty was before her quite clearly, and would be undertaken at any cost to herself. She would not permit Gerald Hunt to take the pure sweet young life of Audrey Hayes into his keeping. He would call it revenge, of course, not being able to appreciate any other motive, and if there should be a price to pay she would pay it.

"Claude, may I ask you something?" she said suddenly.

"Why, yes, dearest, of course."

"Lately I've been thinking quite a lot about duty. You have taught me," she said in a low voice, "and all sorts of questions arise in my mind. If I had known you in the old days, how different it would all have been."

Secretan thrilled at the words, which filled him with a joy that was singularly pure and impersonal.

"Supposing a case arose," she went on without waiting for his answer, "where a person, by speaking out, could prevent what would be a wrong, do you think it would be that person's duty to speak out at whatever cost to himself?"

"I certainly do think so," he answered without a moment's hesitation.

"Even if it involved suffering and disappointment to quite a number of people?" she pursued anxiously.

"If the nature of the wrong were clearly defined, Helen, it would be easier to answer; but speaking generally, duty should come first."

"At any cost?"

"At any cost."

"But supposing it were to cost you personally something?"

"I hope that I should still have the courage, Helen. If our religion teaches us anything at all, surely it teaches that self should come last and not first."

"I have never known anybody who lived up to that ideal, except Jane, and a little way after her, you," she said quietly, even wistfully. "And I don't believe it is a universal or even a general rule of conduct. Most persons think of self first."

"Hence much of the misery of the world," he answered quite simply. "But why all this very grave ethical discussion. Have you a case in point?"

"It was something which happened long ago. If I had known then it would have been different."

Secretan had not a prying mind, and his confidence in his wife was supreme. Since she had given herself absolutely to him, his happiness was not only complete, but the spiritual side of him hah deepened, and become a more powerful as well as a more gracious factor in his life. Happiness undoubtedly brings out all that is best in us.

"Well, perhaps it is rather stupid to discuss such things late at night after a particularly dull dinner party," she said, rousing herself as they approached nearer the few twinkling lights of Midcar. "What time do you start out for Iffley tomorrow?"

"Immediately after lunch. If you could give it to me a little earlier, I

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THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

should be glad. I always like to get back for tea, if possible, you know. You have spoilt me for all other tea tables whatsoever."

She hardly smiled.

"You shall have it just when you like, surely. The house is yours to order as you will."

He had never seen such humility in her, and as he helped her to alight at the door he peered anxiously into her face. It was very pale, and her eyes seemed shadowed. He voiced the immediate anxiety which took possession of him.

"I shall be all right to-morrow. Don't make a baby of me, Claude. I don't want to be spoiled, but to be a strong, self-reliant woman. All this is not good for me, though"—she added with a sudden quiver of the lip—"it is very sweet."

Secretan slept the sleep of the strong man, physically tired by a healthy day, and without a care on his conscience or his heart. He had not the slightest idea that his wife was up part of the night, sitting in her own sanctum with a thick dressing-gown about her, staring out in the moonless dark of the uncurtained window, longing, and yet fearing for the day.

She did not wish to undo what she had done nor to shrink from it. She was only conscious of a great, sad weariness and wonder at the hardness of fate. She had found shelter and anchorage at last, like a ship that had been beaten by wind and wave, and lo, the anchorage was not safe. She had not asked so very much, after all: only the chance to pursue her quiet way along the pathway of happiness and peace, that had opened so unexpectedly before her. She had married to escape, and without expectation of the good in store.

The year that had passed had been full of wonderful experiences for Helen Secretan; for the first time she had obtained a glimpse of the real meaning and purpose of life. Her whole being rendered plastic and easily influenced by gratitude and personal happiness, had risen to respond to the appeal to her higher womanhood. And now, just when life was at its fairest, lo, there came from out the past a dark shadow which threatened to engulf her.

Towards morning she crept back to bed, strangely strengthened by her communion with the night, and was able to sleep. But she was still pale when she appeared at the breakfast table, though Secretan did not find her less cheerful than usual. It was Friday morning, and he had to betake himself to his study without delay, so that Helen had her morning to herself. They met at their early luncheon, immediately after which Secretan set out on his bicycle to take an afternoon service for his neighbour at Iffley Bridge.

Half an hour later Helen, dressed in a walking coat and skirt, and carrying her shepherd's crook, left the house. She crossed a small section of the moor, and then branched off by a cart track which led to the woodman's entrance to the Mardocks Wood. At five minutes to three she reached the appointed trysting place, a lonely dell through which ran a turbulent stream which fell, a little higher up, over an overhanging rock, which scarcely, however, justified its somewhat ambitious name. Hunt was already there, leaning against the stump of a tree finishing a cigar, which he took from his mouth and threw away as he beheld Helen in the distance gliding through the trees. He wore a tweed shooting suit and a cap, which he raised and kept in his hand until she came out from the trees, and they were face to face on the little open space by the side of the stream. Her face was quite grave, and she ignored his outstretched hand.

"So it isn't true, Helen," he said lightly, yet with evident disappoint-

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ment. "If you knew the trouble I've had to keep this tryst, you would be a little kinder to me."

"I won't keep you long," she said steadily. "I only wish to tell you that you cannot marry Audrey Hayes."

He slightly elevated his brows in amusement.

"And why, pray, since you have so quickly consoled yourself? Why is the same consolation barred to me, eh?"

The situation continued to pique and interest him, and though Helen looked less brilliant than she had done on the previous evening she had nothing to fear from the clear, searching light of day. She had not gone off at all, he decided, and she was always interesting; such a woman could never pall upon a man. He cursed the hard fate that had parted them.

"Look here, Helen, old girl, you've got your knife in me, and I don't altogether blame you, but you see as I was situated we couldn't go on. We couldn't live on my pay, the thing was impossible; I told you from the first that, while our dream was very sweet, it couldn't last. Things haven't turned out so badly for you after all. Your parson is a first-class chap, and from all I can hear you are a great success here, and quite happy. Why not comfortably bury the hatchet, eh?"

"I don't want to talk about the past as you seem to think, or to throw any reproaches at you," she said with a faint flicker on her features. "I have only come to tell you that you can't marry Audrey Hayes."

"In Heaven's name, why can't I? What do you mean? What are you playing for, anyhow? It's a poor, mean sort of spirit. Speak up, and tell me what you mean."

"She is too good for you. You would break her heart in less than a year," she said steadily.

"If I did," he replied, stung by her tone, "it is no concern of yours."

"It happens to be my concern. These people have been kind to me. The child herself is the sweetest thing God ever made. She is young, good, full of ideals which you would destroy one by one, leaving her nothing but the husks. At whatever cost to myself I will prevent it."

He stood looking at her steadily, reading in her clear, unwavering eyes, in the set expression of her tense features, an indomitable resolve. He shrugged his shoulders.

"And I," he said slowly, "am just as determined that nothing shall prevent it, and I think you will find that I am the stronger of the two. How do you propose to do it?"

She leaned for a moment against the trunk of a tree, and her eyes, wandering down the glade, had a far-off expression in them.

"I don't know what I may do, but I am giving you fair warning. It is open to you to withdraw of your own accord. It is her money you want, the money the lack of which made you leave me to be the sport and mock of a whole town."

He winced ever so slightly.

"I admit that I behaved badly. I admit everything, Helen, and I've often wished to write and explain and beg your forgiveness. But, as I said, I couldn't help myself. Don't bear malice, and do, if you can, give me credit for a little spark of the true thing. You are the only woman I ever really cared for or ever will care for," he added, watching her narrowly, but the deadly pallor of her face remained unrelieved. "But, honour bright, I will turn over a new leaf and make her a model husband. She won't be hard to satisfy. Happily she has the bourgeois mind."

Then, indeed, did the flame leap in Helen's cheek.

"It is intolerable to hear you. You have not changed one bit; you are the same cold, calculating, self-

Mark the Flavor

of Quaker Oats. That means rich grains---the choicest oats---prepared by an ideal process.

We get but ten pounds of Quaker Oats from a bushel of the choicest oats. That's because we select just the rich, plump-grains—the finely flavored oats.

The rest are all discarded.

Yet Quaker Oats, despite all this selection, costs but one-half cent per dish.

Don't you think that it pays, in this morning dish, to serve it at its best? Do you want to lose half the delight.

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c
Regular size for city trade, 10c
} Except in Extreme West

The Quaker Oats Company

PETERBOROUGH, ONT.

Look for the Quaker trademark on every package.

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RENNIE'S SEEDS
ARE SUPPLIED TO YOUR DEALER DIRECT FROM US - AFTER EACH HARVEST - AND ARE ALWAYS FRESH AND RELIABLE - TESTED BY GOVERNMENT - BUY THEM IN SEALED PACKAGES - CATALOGS FREE
WM. RENNIE CO. LIMITED
TORONTO MONTREAL
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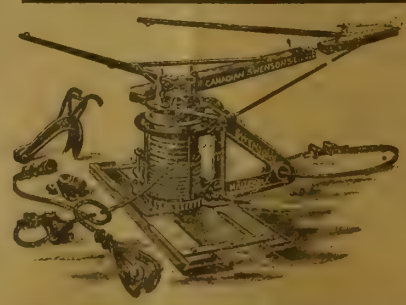
Swenson's Malleable Stump Pullers



Manufactured in five difierent sizes. The only All Malleable Machine on the market. Sold on a guarantee to be better than anything else made. No matter what your work is, we have machines adapted for the purpose.

Write for Catalogue "F" and full description.

CANADIAN SWENSON'S LIMITED, LINDSAY, Ontario, Canada.

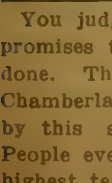
Quality Butter

That's the kind you make with Maxwell's "Favorite" Churn.—

Maxwell's "Favorite" is used all over the world—in Denmark, the butter country of the world—in the United States, in spite of high tariffs and in every Section of Canada. Our Agricultural Colleges and Govt. Inspectors recommend it, because it is the finest butter-maker in the world.

Write for catalogue if your dealer does not handle it.

DAVID MAXWELL & SONS,
ST. MARY'S, ONT. 94



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It's an honest guide to better profits through the use of

McDONALD'S SEEDS

FREE

Send for your copy to-day to Dept. D

Absolutely the most vigorous and reliable on the market. Also complete stock of farm and garden necessities.

Kenneth McDonald & Sons, Ltd.
Ottawa Ontario

FREE GIRLS

Girls, Here is Your Chance to Obtain FREE a Handsome Bisque DOLL

Do you want to receive *Free* a beautiful doll? We have them for you. Our large handsome doll will sit down, fold its arms, turn its head, shut its eyes and go to sleep like a real baby, the best kind of a doll, 18 inches tall, with long curly hair, real eye lashes, handsome turning Bisque head, full jointed body, pearly teeth, very stylishly dressed, fancy underwear, with hat, shoes, stockings, etc., dressed completely from head to shoes, *free* to you for selling only 15 packages of our famous Marvel Bluing at only 10c per package. We send a beautiful finished Turquoise Brooch to give to every customer who buys a package from you. This makes them sell quickly

Return the $1 50 when sold and we will promptly send you this handsome doll Write to-day Address Dept 77

MARVEL BLUING CO., TORONTO, ONTARIO, CANADA

You judge a man not by what he promises to do, but by what he has done. That is the only true test. Chamberlain's Cough Remedy judged by this standard has no superior. People everywhere speak of it in the highest terms of praise. For sale by all Dealers.

ish creature. No woman's happiness would be safe in your hands for one hour."

"We managed to steal a good few, Helen," he interpolated meaningly.

"More than ever I am resolved," she went on passionately, "that I will save Audrey from you."

Then his brief attempt at conciliation was swallowed in the flood-tide of his wrath.

"If you persist in this dog-in-the-manger policy," he said quietly, but with the sinister gleam deepening in his eyes, "I can act, too. There are always two sides to a story. And your parson chap is a man. It would not be very difficult to sow the seeds of discontent in him. You had better weigh it well before you wreck so many lives. Yours would be total wreck, I assure you. I would see to that."

The cold virulence with which he spoke did not turn her from her purpose. More than ever she felt that it would be impossible to give Audrey Hayes to this man. Going back in one swift retrospect to her own girlhood, she remembered the slow shattering of her own ideals, and how this man in front of her had taken away the final tottering steps from under her feet.

"I must pay the price," she said faintly, but with an equal determination.

At the moment something started in her eyes, a sheer terror which caused Hunt's eyes to follow immediately in the direction of hers.

Secretan, wheeling what appeared to be a disabled bicycle, came slowly towards them through the trees.

(Continued in next issue).

The Ideal in Every-Day Life.

Let us now go for a walk, during which we will observe the people who are pursuing their callings. Let us note their mood.

We shall come upon persons whom we cannot see sweep, hammer, or dig the earth without experiencing a desire to take from them their broom or hammer or spade in order to show them how they ought to use it. This sort of worker is to be met with quite as often in the schools, in the church, in the studios of painting and sculpture, as in the fields, the mines, and the shops. Without ideals the people are the same everywhere. When they teach, they make us weary of learning; when they make music, they cause us to hate music. They have no faith in their work. All the time they have the air of saying: 'What a stupid trade I have chosen! Be sure my children shall not follow it.'

Those who put the ideal into their work produce an altogether different effect on us, whether they be manual or intellectual laborers. You see them at work, performing at times unpleasant duties, which you, perhaps, would not choose, but with so much of good will, of punctuality, and fidelity, and such an appreciation of 'the useful flight of days' that they appear great to us, and an impulse seizes us to imitate them.—Charles Wagner, in Harper's Bazar.

Don't Forget That.

If your mother had thought more of herself and less of you she might be much fairer and fresher now, for she was once as good-looking as you are. She might wear better clothes even now, so that you might be proud to have your friends meet her, but remember that she mended her old clothes that she might make new for you. The wrinkles on her face, the care lines on her cheeks, and the weary looks in her eyes—all those scars are seals of her love for you.

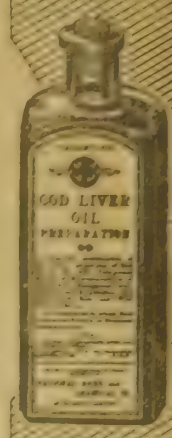
NA-DRU-CO Tasteless Cod Liver Oil Compound

THE "building up" value of Cod Liver Oil is well known, but its drawbacks have been its nasty taste and indigestibility.

Na-Dru-Co Tasteless Cod Liver Oil Compound has the nutritious qualities of the Cod Liver Oil, without the slightest disagreeable flavor. In it the Oil is skilfully combined with Extract of Malt, Extract of Wild Cherry, and Hypophosphites, making a splendid tonic as well as a valuable food.

Na-Dru-Co Tasteless Cod Liver Oil Compound is particularly good for growing children who are puny or run-down.

In 50c. and $1.00 bottles, at your druggist's. 106



100 Na-Dru-Co Specifics—one for every ill.

NATIONAL DRUG & CHEMICAL CO. OF CANADA, LIMITED.

FREE

Handsomely Decorated Dinner Set

Ladies. We will give you this beautiful full size dinner set absolutely without cost.

This is the Chance of a Lifetime. An Honest Proposition.

We will give away free 1,000 of these handsome dinner sets, beautifully decorated, each set 53 pieces, latest designs, handsome patterns, full size, for family use. A magnificent and complete set to quickly introduce and advertise Dr. Burdick's famous New Life Vegetable Pills,—the wonderful remedy for indigestion, constipation, unhealthy blood, rheumatism, to stimulate the appetite, regulate the bowels, and clear the complexion, an invigorator, tonic, and life builder. We will make you a present of this handsome set exactly as we claim. Take advantage of this if you want to get a handsome set of dishes for your home, absolutely free.

All We Ask You to Sell is Only 12 Boxes at 25c a Box

of Dr. Burdick's famous New Life Vegetable Pills. Being determined to gain a national reputation as the most progressive firm in Canada, and to gain a wider distribution of our strictly pure, high-grade remedies, we are going to assist you to sell our medicine, and to earn this beautiful set quickly by sending with each box of pills a certificate by which every purchaser can receive from us a Handsome Box of Presents consisting of 1 handsome solid gold shell ring, plain engraved, and chased or set with beautiful sparkling jewels, equalling in appearance the finest diamond rubies and sapphirs, etc., 1 sacred Resurrection Plant of Egypt—The Rose of Jericho as spoken of in the Bible; 1 pair gentlemen's imported Lever Cuff Links, Gold finished, your choice of a handsome Silver finished Sugar Shell, silver finished Butter Knife or Silver finished Pickle Fork; one cabinet photograph of our King in his royal uniform, and our Queen in full court dress. This magnificent box of presents, exactly as described, we will send fully prepaid to every one who purchases a box of our medicine from you, and will return us the certificate with only 50c. to cover cost of packing, mailing, etc., the different articles. Our object in making this wonderful offer is to induce people to try our medicine, and to receive the opinion of every purchaser, and this we will get when the certificate is signed and returned to us. This liberal offer makes it impossible for you to fail. Your friends will be delighted with this wonderful opportunity to secure a handsome box of presents.

Don't miss the opportunity of a lifetime. Write us to-day and agree to sell only 12 boxes, and return the money, only $3.00 to us. We trust you with our medicine till sold. As soon as your remittance and the certificates have been returned to us, we will promptly ship the dinner set to you. We arrange to stand payment of all freight charges to your nearest station. We are bound to introduce Dr. Burdick's famous medicine no matter what it costs us and when we say we will give away these handsome sets of dishes, we will do it. **Our methods are honest. Don't miss this great opportunity.** Write to us at once. Address

THE DR. BURDICK MEDICINE CO., Dept. 109 Toronto, Ont.

Nonsense.

There is a great deal of nonsense palmed off on the community about the reaction of the child from over-strictness in parental training. When I hear a man says 'My parents brought me up so rigidly that a reaction took place in my mind, and I have turned away from religion.' I have sometimes asked, 'Did they teach you to be honest?' 'Yes.' 'To tell the truth?' 'Yes.: 'Were they strict about it)' 'Yes.' 'Has any reaction taken place on these points?' No man of us learns the multiplication-table from the sheer love of it; but I never knew any one to say that his mind was in reaction against the multiplication-table.—John Hall, D.D.

When we are alone we have our thoughts to watch; in our family, our tempers; and in society, our tongues.—Hannah Moore.

The Art of Visiting the Sick.

'From the tender mercies of our friends, good Lord deliver us!' sighed the invalid.

The nurse smiled as she deftly rearranged the pillows.

'Didn't you enjoy your caller?' she asked.

'Do you know,' observed the patient, with apparent irrelevance, 'that visiting the sick is an art which very few possess? I've noticed it especially since I've been convalescing. Now, Mrs. Carmichael, who just called is one of the best women who ever bored her friends and acquaintances, and I wouldn't for the world hurt her feelings by declining to see her. But do you know what her conversation was about to-day? She regaled me with a detailed account of her own typhoid experience; how she had a perforation, and dear knows what all. She had typhoid so much worse, according to her statement, and suffered so much more than I, that I really felt ashamed of myself for pretending to have it at all.

'There's Edith Sayres, who dropped in yesterday. Maybe you heard her greeting: "Well, aren't you having a fine time tucked up here with a nurse to wait on you while the rest of us poor mortals are bothering with dressmakers and milliners. You look so well that I believe you've been pretending to be sick to get a little rest."

'Of course it was foolish of me, but I could have cried I felt so hurt, although I knew at the time it was just her idea of being cheerful. She wasn't as bad as Aunt Agnes, who told me I looked dreadful, simply dreadful. Her husband's sister had typhoid and when she thought she was nearly well she died, leaving five little children. She was glad I had gotten through so far, but I must remember I wasn't out of the woods yet. Then it was a pity I had been sick, for it had been such an expense to father, having the nurse and the doctor's bills. It was kind of them to keep my place at school for me, but they were likely to give it to someone else any time, for there were such lots of teachers wanting positions. I had a good cry after she left I felt so depressed.

'Cousin Margaret thinks that any old thing in the way of clothes is good enough to visit the sick in, and though she has some real pretty dresses, she'll come flying in here looking so mussy that it makes me nervous.'

'Well,' commented the nurse, with a smile, 'isn't there anyone of your friends who has the art of visiting the sick?'

'Is there,' repeated the invalid, haven't you noticed for yourself how much good Dorothea Kent's calls do me? They are better than a tonic. She's always dressed so carefully that it's a pleasure to look at her. Her voice is quiet and nicely pitched. It isn't loud nor yet that horrible sick room whisper that sets your nerves on edge. She saves up every bit of news she can think of to tell me, and at the same time doesn't make me feel that I am missing a lot of good times. I always hear through her who has inquired after me, and it is pleasant to know you're remembered when you're out of the world. She doesn't hurry off after a short visit, and she doesn't stay long enough to tire me. I suppose the whole secret is tact, and that she does possess more than her share of it.

'Probably the doctor knows what he is about when he sometimes shuts out all visitors, but there are all varieties of callers, and some are as undoubtedly tonics as others are depressants.—Presbyterian Banner.

A Cheerful Home.

A single bitter word may disquiet an entire family for a whole day. One surly glance casts gloom over the household, while a smile, like a gleam of sunshine, may light up the darkest and weariest hours. Like unexpected flowers; which spring up along our path, full of freshness, fragrance and beauty, do kind words and gentle acts and sweet dispositions make glad the home where peace and blessing dwell. No matter how humble the abode, if it be thus garnished with grace and sweetened with kindness and smiles, the heart will turn lovingly toward it from all the tumult of the world, and it will be the dearest spot beneath the circuit of the sun.

And the influences of home perpetuate themselves. The gentle grace of the mother lives in the daughter long after the head is pillowed in the dust of death; and the fatherly kindness finds its echo in the nobility and courtesy of sons who come to wear his mantle and fill his place; while on the other hand; from an unhappy, misgoverned, and disordered home, go forth persons who shall make other homes miserable, and perpetuate the sourness and sadness, the contentions and strifes and railings which have made their own lives so wretched and distorted.

Toward the cheerful home the children gather 'as clouds and as doves to their windows,' while from the home which is the abode of discontent and strife and trouble they fly forth as vultures to rend their prey.

The class of men who disturb and distress the world are not those born and nurtured amid the hallowed influences of Christian homes; but rather those whose early life has been a scene of trouble and vexation—who have started wrong in the pilgrimage, and whose course is one of disaster to themselves, and trouble to those around them.—Friends Intelligencer.

A Mother's Rules.

Things which I must teach my little girl:

That if you must choose, it is better to be a beautiful home-maker than a fine housekeeper. Then, for instance, ruffled pillow-cases cost too much if they mean ruffled tempers.

That the one indispensable quality in a home is happiness; every home, no matter how beautiful, which misses that, is a failure; but no home, whatever its faults, can be wholly a failure if it is happy.

That happiness is a matter of spirit, not 'things.'

That it is possible only when every member of the household is considered, and all work and plan together, and God is its constant Guest.

That, to be in her own place where ever that may be, a beautiful home-maker is the loveliest ambition a woman can have.

These are things that I want to help my little girl to understand.—Christian Globe.

Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diphtheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all Dealers.

WATCHES GIVEN AWAY

EVERY BOY AND GIRL NEEDS A WATCH
BOTH HANDSOME PRESENTS FREE

BOYS This watch is a dandy. Regulation man's size and weight. Your father would be proud to carry it. Stem wind and set. Arabic dial. A good Timekeeper. Guaranteed.

GIRLS You won't envy any lady in your neighborhood if you have one of our lady's watches—small, neat shape, new model, stem wind and set; highly finished, milled edge. arabic dial, thoroughly charming timepiece. Guaranteed good Timekeeper.

Now it's very easy to get one of these beautiful timepieces. Just write us to send you $4.00 worth of our quick selling Easter and Assorted Post Cards and sell them to your friends at 6 for 10c. Your friends all buy Post Cards somewhere, why not ask them to buy from you.

Then when you have sold them—send us the money and we will promptly send you one of the watches. It's very easy, just try it once.

L.C. writes "I have found them very easy to sell," R.J.G. writes "I have sold all the cards you sent me, so I think I will try another lot." J.B. writes "I sold them all in a few days." So you see others can easily do it—why not you?

We are sending presents to Boys and Girls all over Canada every week. Be sure to write to-day. Don't forget you have nothing to pay. Watches delivered free to destination.

OVERLAND MERCHANDISE CO., Dept. 31 TORONTO

RU-BER-OID Roofing
TRADE MARK REGISTERED.

Gives Most Protection Per Dollar of Cost

RU-BER-OID'S cost per roll is moderate. The cost of laying is very small, as skilled labor is not required. The only upkeep cost is a coat of RUBERINE Cement every three or four years.

RU-BER-OID is weather-proof, not affected by acids, fumes, gases or extremes of heat or cold, and strongly fire-resisting.

This complete protection has lasted, in the case of the first RU-BER-OID Roofs laid in 1891, for 21 years—and these roofs look good for many more years of service.

Our Booklet, "RU-BER-OID—Why?" explains why RU-BER-OID costs least per year of service. If you are interested in roofing, write for it, and for samples of RU-BER-OID, made under Canadian Patents 93,027 and 93,160, in Colors—Red, Brown, Green—and in natural Slate.

THE STANDARD PAINT CO. OF CANADA, LIMITED.
MONTREAL. WINNIPEG. VANCOUVER. 89

HARROWS We talk big on our Lever Harrow because we know its value. Got the conclusive evidence from the right sources—our own experience and the men who use them.

Material—We couldn't buy better if we paid double the price.

Teeth—High Grade Steel, tempered in oil by experts and thoroughly tested.

Adjustment—Just a movement of the levers in the field and the teeth are set in an instant to any depth as the work requires it.

Work—The Bailey-Underwood Lever Harrow will do more effective work than any other Spring Tooth Harrow on the market and do it in less time.

Made in sizes 9 and 11 Tooth, Single Section. 15 and 17 Tooth, Double Section.

BAILEY-UNDERWOOD CO., Limited New Glasgow, N. S.

NO STEEL BOUNTIES

The Sarnia Fence Company's Petitions are Effective with the Government.

Sarnia, March, 15th—No doubt it will be gratifying to every farmer who signed the Sarnia Fence Company's petitions against the renewal of the steel bounties, to learn that they have been effective with the government. It goes to prove what a power the farmers are if they will only unite and stick together. The Sarnia Fence Co. sent out 25,000 of these petitions, and the great majority of them reached Ottawa; five hundred thousand farmers told the government that they would not submit to be taxed in favor of a few capitalists. The government realize that the farmers are united in this matter, and the result is that you are relieved of this unjust tax for the present. You must bear in mind, however, that government aid, is too rich a plum for the steel interests to let slip without a fight, and they are now making statements to the effect that the opposition to the steel bounties is the work of some New York Steel Corporation, who do not want to loose their Canadian market. This is absolutely untrue; the Sarnia Fence Company is a strictly Canadian Company operated on Canadian soil by Canadians with Canadian capital. This statement is made by the steel interests with the desire to, if possible, counteract the effect of the petitions sent to your member. Without question the steel interest will make strenuous efforts to induce the new tariff commission (which the government propose to appoint) to give them increased protection in the form of additional duty on all iron and steel products, especially fence wire and wire rods. The Sarnia Fence Co., propose to present to the tariff commission the farmers' side of the situation, and if possible persuade them to give the steel interests no further protection at the expense of the farmer. This is a matter in which you are vitally interested, whatever amount of duty or protection which is put on wire must be paid by the farmer as the price of fence must be increased whatever the duty amounts to. Now the Sarnia Fence Company cannot accomplish this without the support of the farmer, and we want you to keep the matter before you and at every opportunity state your views to your member, give him to understand that if he does not oppose the giving of a bounty on all steel and iron products or the placing of a duty on fence wire or wire rods, that you will resent it and if he will oppose this in the interests of the farmer he will have your support. Don't let party politics influence you in this matter, by uniting and standing together against this injustice you will receive proportionate consideration at the hands of the government.

We have decided to continue our special cut prices on Royal Fence for the balance of this season or up to July 1st 1912.

Yours very truly,

The Sarnia Fence Co., Limited,
SARNIA, ONTARIO.

Many sufferers from rheumatism have been surprised and delighted with the prompt relief afforded by applying Chamberlain's Liniment. Not one case of rheumatism in ten requires any internal treatment whatever. This liniment is for sale by all Dealers.

Some Valuable Bulls and a Valuable Advertising Medium.

Editor Maritime Farmer:—

Enclosed you will find change of copy for our advertisement. We have just returned from Ontario with a few head of Holsteins. Among the lot are a few bulls, fit for service, which we are offering for sale. One is a son of Vida Princess 4th, record of 18,482.75 pounds milk, 753.3 pounds butter in 1 year in the Record of Performance and sired by a son of Netherland Aaggie DeKol, R. of P. test 21,666 pounds milk and 881 pounds butter in 1 year, making his two nearest dams average 20,074 pounds milk and 817 pounds butter in 1 year. This fellow is mostly white and a fine individual.

Another dandy is a son of Aaggie Schuiling DeKol, R. of P. test at two years old, 13,283.5 pounds milk, 512.67 pounds butter, whose sister Netherland Aaggie DeKol, has a record of 21,666 pounds milk and 881 pounds butter. This bull is sired by Woodland Sarcastic Lad, whose dam has a record of 18.47 pounds butter in 7 days.

We also have a son of Calamity Teake DeKol, R. of M. test, three months after calving 17.33 pounds butter from 373.39 pounds milk and R. of P. test of 12,715.75 pounds milk in 10 months and 10 days at 2 years and 2 months old. Her fat has not yet been figured by the Department, but her test is around 3.7 per cent. The sire of this bull is Lady Schuiling 3rd's Posch,

With the breeding back of these bulls we see no reason why they should be long on the market.

To head our own herd we got Royalton Canary Major, a son of Royalton DeKol Fern, official record at 5 years old of 34.60 pounds butter and 111 pounds milk in 1 day. Royalton DeKol Fern's dam has a record of over 20,500 pounds milk and over 880 pounds butter in one year.

Royalton DeKol Fern and three of her sisters average over 112 pounds milk in 1 day. They are all running in the yearly test and it is expected that they will make some records.

Royalton Canary Major is as well bred on his sire's side as he is on his dam's. We are looking for something good from him, when bred to daughters of Helbon DeKol's Prince, whose dam has a record of 31.54 pounds butter in 7 days and 30 day record of 128.67 pounds butter.

Our stock is looking fine now. The cows have milked well all winter, averaged over 40 pounds a day for everything that is in milk. Sales have been very good, a few of them are: 1 yearling bull. to Nathan Smith, Hillsboro, N. B.. This bull is a full brother to the three year old that won the cup at Amherst in the dairy test; One heifer to Stewart Etter, Shubenacadie, 1st prize winner in the test at Amherst; a fine bull to Duncan Chisholm, Glassburn, N. S.; the cow Lilac and calf to R. R. Wannamaker of Nauwegewauk, N. B.; a two year old bull to D. R. Nicholson, Coxheath, C. B.; a fine yearling bull to D. A. Higgins, Fort Lawrence, N. S.; a very fine three year old heifer to Frank S. Whitman, New Albany, N. S., this is a sister of the cow that won the milk test at Guelph this year. Also a nice cow to Judson Archibald, Alma, N. S. and a very fine bull to R. H. Putnam & Son, Lower Onslow, N. S. This is one of the finest bulls that we ever handled. He has three dams in his pedigree that average over 23,000 pounds milk in 1 year and is the making of a crack show bull.

We get a lot of inquiries stating that they saw our Advertisement in the Maritime Farmer. It seems to be the place to get in touch with the buyer.—Samuel Dickie, Central Onslow, N. S.

Try the flour that holds the confidence of thousands of home-cooks

THE present huge demand for PURITY FLOUR shows the confidence in which it is held by thousands of home-cooks.

Those who have used PURITY FLOUR have come to believe in it. They look on PURITY as a friend. They feel they can trust it implicitly, because each and every lot of PURITY FLOUR has always been uniform—always up to the high standard of quality that has made it famous.

Wouldn't you, too, like to use a flour you could always rely on? Wouldn't you like to feel certain that your bread, cakes, and pies were going to turn out exactly right? That's just how you'll feel when you become a user of PURITY FLOUR — the confidence-creating flour.

PURITY FLOUR gives high-class results, because it *consists exclusively* of the *high-grade portions* of the best Western hard wheat.

On account of the *extra* strength of PURITY FLOUR please remember, when making pastry, to add *more* shortening than an ordinary flour requires.

PURITY FLOUR

"More bread and better bread"

And when making bread add *more* water, and PURITY FLOUR will expand into more loaves than the same weight of ordinary flour can produce, thus making "*more bread and better bread.*"

Make your next flour order spell P-U-R-I-T-Y F-L-O-U-R.
It costs slightly more, but it's worth the difference.
Add PURITY FLOUR to grocery list right now.

104

The Relative Durability of Post Timbers.

The Ohio Agricultural Experiment Station has issued a bulletin the result of extended investigations regarding the relative durability of the kinds of timber most commonly used for posts. The following are some of the facts brought out by the investgations:—

1. That a large post usually lasts longer than a small one of the same wood.

2. That there is no difference which end is put in the ground, except that the sounder or larger end should have the preference.

3. In stiff clay soil, the posts rot principally just beneath the top of the ground, and in porous sandy or gravelly soil, they usually rot from the top of the soil all the way down; the effect is the same in both cases.

4. In soil that is full of water all the time posts will last longer It is the alternating between wet and dry that causes decay.

5 From data collected so far, seasoning does not seem to have any marked effect on durability. The best catalpa fence examined was set green. In the best oak fence examined, the posts were cut and put in the ground the same day. Likewise some of the best fences are those in which the posts were well seasoned.

6 Timber that grows rapidly and in the open is not as good as the same variety that grows in the woods. This has been observed especially in the red cedar, the catalpa, and the locust.

7 There is some evidence that it is not a good time to cut posts just as the tree begins to grow in early spring.

8 The wood at the center of the tree is not as good as that just inside the sap wood. This characteristic is very common with nearly all the varieties of timber examined, especially so with the locust, the white cedar, the hardy catalpa, and the oaks.

9. The quality of the wood or the condition of the wood fiber of a post is a very important item in its ability to endure in the soil.

The Sanitary Privy.

The following extracts will suffice to show the importance of the Sanitary Privy, particularly in the case of country houses and farms.

Flies can carry various disease germs to man. By so doing they kill thousands of people, especially babies, every year; therefore kill the flies and save the babies.

If flies have access to human excrement, they not only feed upon it, but they lay their eggs in it. After a few hours the egg hatches out a maggot; this feeds in the filth for about five days and then forms a pupa; after about five days the adult fly comes out of the pupal case, feeds on the filth, and carries disease germs from the filth to the house, depositing these germs on the foods. Thus flies carry disease to people. A fly drops its excrement about once every 4½ minutes, and may spread germs not only in this way, but also with its feet, wings, and mouth parts.

Even if excrement containing fly maggots is buried under as much as 6 feet of sand, the maggots can crawl to the surface, bringing disease germs with them.

Thus it is clear that if flies are kept away from human excrement, not only will they decrease in numbers, but they will be prevented from spreading certain diseases, such as typhoid fever. This can be done by the use of sanitary privies, the construction of which is carefully and fully described in a recent bulletin.

Lack of sanitary privies on neighbouring farms may be responsible for cases of typhoid fever, hookworm disease, and other infections on farms which are provided with sanitary privies, because disease germs may be carried for considerable distances by flies, by animals, by feet of persons, by wagon wheels, or by drainage from one farm to another.

In view of these well-established facts it is evident that one of the highest duties that rest upon a farmer, as a father and citizen, is not only to have a sanitary privy on his farm, but to insist that the pollution of soil with human excreta be prevented throughout the entire neighbourhood by the use of sanitary privies.

In the United States about 400,000 persons suffer from, and about 35,000 die from typhoid each year; over 2,000,000 persons have hookworm disease. Thousands of these deaths and many thousands of these cases of disease might be prevented by the simple use of sanitary privies. A compulsory sanitary privy law or ordinance should therefore be enacted, and be strictly enforced, in every locality not provided with a properly maintained sewer system.—C. W. Stiles, U. S. Dept. of Agriculture.

Principles and Practice of Poultry Culture.

We have just received a copy of Robinson's "Principles and Practice of Poultry Culture," a book of over 600 pages, containing over 600 illustrations. The publishers, Ginn & Co., Boston, Mass., have an enviable reputation as publishers of Country Life Education Series. They aim to make each volume in the Series a little better than the others. We have reviewed this their latest production and find it replete with information, couched in such simple terms that the student has no difficulty in grasping the subject. The author, Mr. Robertson, is one of the best informed men in the country in regard to general poultry husbandry. He has put the results of his long experience in print for the benefit of the public at large and any poultryman will profit by reading what he has to say.

How long do you expect unpainted wood and metal to resist the wear and tear of weather and hard usage?

Here are the facts—the unpainted house or barn will probably be beyond repair in less than 25 years, while the properly painted building, will be practically as good as new. Leave a new buggy, wagon, or piece of farm machinery without repainting, and in less than seven years it will be beyond repair from the checking, splitting and rusting of unprotected surfaces. Paint your implements regularly and you will still be using them at the end of ten or fifteen years.

For a reliable first quality finish, ready for the brush, to meet any paint or varnish need around the farm or farmhouse go to your local merchant who sells

SHERWIN-WILLIAMS PAINTS & VARNISHES

SWP—Sherwin-Williams Paint—is the paint that will make the house look best and protect it the longest. SWP is a pure lead, zinc and linseed oil paint, ground and mixed by powerful machinery. It is as good as 40 years of paint-making experience can make it.

For the Barn and other outbuildings use Sherwin-Williams Commonwealth Barn Red. Spreads easily and covers economically. Put up in full Imperial Measure Cans.

Sherwin-Williams Wagon and Implement Paint is the paint to use to protect your wagons, tools, implements, etc. from rust and decay. Made for that particular purpose, stands severe exposure and hard usage.

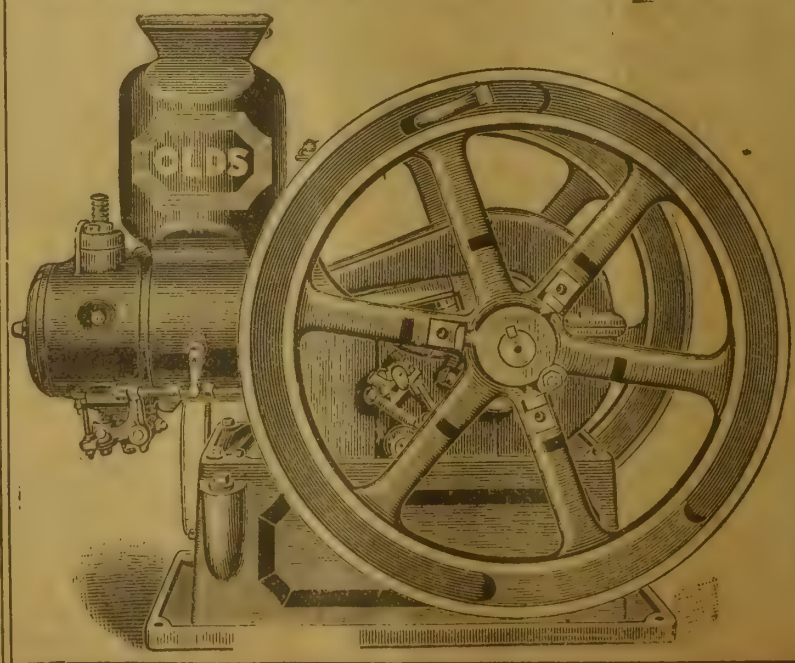
Around the Farm and Farmhouse use

S-W Buggy Paint—for buggies, porch furniture, boats and other surfaces exposed to water and hard usage.
S-W Aluminum Paint—for metal surfaces and machinery,
S-W Floorlac—an easy-to-apply combined varnish and stain for woodwork, furniture and floors.
S-W Family Paint—for cupboards, furniture, woodwork, etc. Stands repeated washing.
S-W Inside Floor Paint—a hard wearing paint for floors and stairs. Eight attractive shades.
S-W Brighten-Up Finishes—a different paint, varnish, stain or enamel for every household use.
S-W Roof and Bridge Paint—for windmills, metal roofs, etc. Prevents rust and decay.
S-W Creosote Paint—a preservative paint for barns, sheds, fences and all rough lumber.

Remember there's a Sherwin-Williams agent in every town.

Address all inquiries to *THE SHERWIN-WILLIAMS CO. of Canada, Limited*, Montreal, Toronto, Winnipeg, Vancouver. 81

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Canadian Seed Growers' Association.

The eighth annual convention of the Canadian Seed Growers' Association was held at Ottawa, February 8-9, under the presidency of Dr. J. W. Robertson, C.M.G. There was a good attendance of the members.

The report of the directors brought up a series of recommendations made by a committee on regulations consisting of Messrs. Eddy, Klinck and Newman. The more important of these are described in the report from the Seed Branch in the Departmental Notes.

Reports from the district representatives of the Seed Branch were presented by Mr. S. J. Moore (Maritime Provinces), Mr. J. C. Cote (Quebec), Mr. T. G. Raynor (Ontario), Mr. George Clark on behalf of Mr. F. H. Reed (Manitoba and Saskatchewan), and Mr. E. D. Eddy (Alberta). These reports gave instances of enthusiastic and successful work on the part of the members of the association, carried on in spite of the special difficulties of the season due to drouth in the east and a wet ripening period in the west.

An evening public meeting was held in the railway committee room of the House of Commons on February 8 when brief addresses were delivered by Dr. Robertson, the Hon. Martin Burrell, Canadian Minister of Agriculture, Mr. C. C. James, Deputy Minister of Agriculture for Ontario, and Mr. Rufus W. Stimson, of Boston, Mass.

The President explained that the association had been formed for the special purpose of bringing about an improvement in the crops of Canada by the general use of good seed, selected in such a way as not merely to increase the crop but also the intelligence and capability of the farmer himself. It would be difficult, he thought, to devise any scheme with larger or more important objects. Ninety per cent. of the members of the association reported that the crops grown from seed according to the rules were larger in yield and produced more vigorous plants.

The Hon. Martin Burrell, in the course of an interesting speech, expressed his cordial approval of the aims of the association and eulogised the work of the secretary (Mr. L. H. Newman), as explained in a recent address before the Standing Committee on Agriculture and Colonisatian. The work of the association, so far as he understood it, was a voluntary labour of love. The greatest work in the world was done not for money but for pure love of the work itself. It was Ruskin who called attention to the fact that your fee-first man was not the best type; it was evitable that his work should deteriorate by the quality of that thought in it. The greatest work in the world had ever been initiated and carried through by men absolutely without fee or reward of a beneficial kind, or else with a totally inadequate one when compared with its value.

Mr. C. C. James described some phases of the work of the Ontario Department of Agriculture and especially a recent development by which district representatives went personally amongst the farmers to

"My Roofs 'Make Good' for 100 Years. I Want to Tell You Why."

"My New Metal Has Made Me a Proud Man. It Permits a 100-Year Roof at Low Cost."

"Sir, I tell you, I am a proud man. I have at last got the best roof ever made at a low price. My roof will last you for a whole century. You can put it on a wood framing. You can get it at about what you pay for wood roof. You can lay it. It will keep rain, lightning, fire, ice, snow and wind from harming your building. If you want a roof, I have the right roof."

"I Think Every Man Can See How a Roof Is the Big Point in a Barn."

"I worked 50 years to make a cleanly, strong, sure roof at a low cost. I had barns mostly in mind. When I started, bush fires were common. Cedar shingles went up like tinder from a single spark. Lightning burnt barns again and again. Leaky roofs rotted hay and produce by the ton—they let water rot the barn framework. Oshawa shingles stop this.

"Thus, I became one of the first metal shingle men in the world. I aimed to make a roof that would save twenty times its cost by saving a barn frame and foundation, as well as the stuff put into the barn, which represented thousands and thousands of dollars risked over a period of years under a poor roof."

"It Took Years for Me to Get the Design of My Metal Shingle Right."

"I thought it was easy. It was hard. It was a big contract. I didn't dream of what any roof has to stand. I thought about all a roof did was to let rain run off it, and keep in place the rest of the time. I found I had about twenty-five problems to answer at once in a single design.

"My roof had to have 'give' in it, so it would stretch in the hot sun and shrink in zero weather. It had to be ice proof, or lodged thaw-water would gouge seams apart. It had to be smooth, or lodged dirt would rust it. It had to cover its own nails, or the roof would leak. My roof had to be layable by anyone.

"My work was, I had to design a shingle that couldn't be laid face-down, or sideways, or upside down, or crooked, or be marred in the laying, or be smashed on the road between my factory and the place where the roof was. I found my shingle needed ventilating places in it that would let air out but wouldn't let water in. It had to be wind proof. Yes, sir, these things were all worked out by me in 50 years.

"I started to make a spark-proof and lightning-proof roof. I ended by getting one of the best roof shingle designs ever made. My roof has more experience and skill and years behind its design than any roof you can get in metal."

"I Had to Wait Fifty Years for My Last Big Point. This Was It."

"My business was world-wide by this time. My shingles were selling in Australia, Japan, South Africa. Governments specified them for roofs.

"All this time I was getting my design right little by little. But, do what I could, I had been troubled by the metal in it. It seemed impossible to get a metal which might not rust. I had to take the best metal I could get. I needed a strong, light, absolutely non-rusting metal. At last, I found a hint in Europe.

I followed up this metal. At last I devised a non-rusting 100-year metal, which was non-corrosive. The moment I put this metal into my shingle design, I got at one step a 100-year roof. This is the roof you can get from me at a low price."

"Why Do You Pay Me a Low Price? You Have My Big Sales to Help You."

"My metal shingle is not trash. You can get trashy stuff at a cheaper price. (It will cost you thousands of dollars in produce.) Yet you can buy my shingle at a low price. Its quality is kept high and its price is kept low by big, steady sales all over the world. If you do not look into my 100-year shingle, you are not treating your building right. Get a 100-year Oshawa roof for your building. It will save your building, and save you thousands of dollars in produce you worked hard to grow and harvest."

"Get My Book about This 100-Year Roof. It Has Building Hints for You FREE."

"I have helped you and all other builders with a roof I am proud of—a roof I know is right. I want to do more. I made my book 'ROOFING RIGHT' to tell about my roof. But I made it worth while for those who do not take my roof.

"It shows the best buildings in the country—the best barn arrangements. I will send you this book for a post-card, whether you take my roof or not. I want you to take my roof, if it stands your closest examination. Send for my book to-day.

G. H. Pedlar

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The PEDLAR PEOPLE Limited, of Oshawa

Established 1861

HALIFAX 16 Prince St. | ST. JOHN 42-44 Prince William St. | QUEBEC 127 Rue du Pont | MONTREAL 321-3 Craig St. | OTTAWA 423 Sussex St. | TORONTO 111-113 Bay St.

LONDON 86 King St. | CHATHAM 200 King St. W. | PORT ARTHUR 45 Cumberland St. | WINNIPEG 76 Lombard St.

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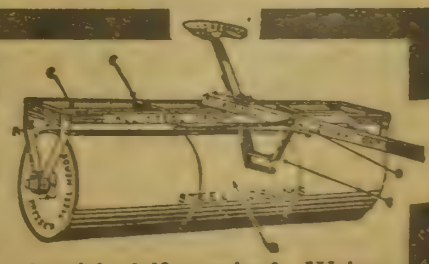
Address our nearest warehouse. | We want agents in some sections. | Write for details. | Mention this paper.

The "Bissell" is a 3-drum roller

3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off with a Roller unless the name "Bissell" is plainly stencilled thereon.



Grass Seeder Attachment furnished if required. Write Dept. M for free catalogue.

T. E. BISSELL CO., LIMITED, ELORA, ONT.

SUFFERED TERRIBLE PAINS OF INDIGESTION.

MILBURN'S LAXA-LIVER PILLS CURED HER.

Mrs. Wm. H. MacEwen, Mount Tryon, P.E.I., writes:—"For more than a year I suffered with all the terrible pains of indigestion, and my life was one of the greatest misery. It did not seem to make any difference whether I ate or not, the pains were always there, accompanied by a severe bloating and belching of wind. I did not even get relief at night, and sometimes hardly got a bit of sleep. In my misery I tried many remedies said to cure indigestion, but they did me not one particle of good, and I fully expected I would always be afflicted in this way. At this time my brother came home on a visit and urged me to try Milburn's Laxa-Liver Pills, and got me a few vials. By the time I had taken one vial I began to improve, and could eat with some relish. I was greatly cheered, and continued taking the pills until all traces of the trouble had disappeared, and I could once more eat all kinds of food without the slightest inconvenience. I am so fully convinced of their virtue as a family medicine, I have no hesitation in recommending them."

Price, 25 cents per vial or 5 vials for $1.00 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Special Excursion Fares to the Pacific Coast.

The Intercolonial Railway is offering special excursion fares (second class) to Pacific coast points, good going during March and up to April 15th. These are good to points in British Columbia, Oregon, Washington, California, Arizona, Nevada, Texas and Mexico. Particulars regarding these fares to various destinations may be learned from the nearest ticket agent. Those wishing to profit by the extremely low fares will do well to remember that the Maritime Express carries an up-to-date colonist car through to Montreal on which the traveller will find every comfort and convenience.

A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser." also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Advice to Ladies.

I was sick with Heart trouble and constant headache due to change of life. I called a doctor but failed to improve. I was told to use

GATES' LIFE OF MAN BITTERS AND SYRUP

and they are wonderful with me. It was after the use of the first few bottles my final recovery began, I thank you for the remedies, a few dozen bottles is small in cost compared with physicians bills.

Gratefully yours,
MRS. JOHN FOLEY,
Cornhill, N. B.

Read the Advertisements in the Maritime Farmer.

show them how to do things. As indicating how successfully this plan was working, Mr. James stated that whereas at first they went to ask the Government for money the Government now came to the Department to ascertain how many good, first class men they could furnish. Farmers were beginning to assume a new attitude towards their work. Formerly the agricultural appropriations took the form of assistance to the farmer; now it was seen that what was needed was help for the development of the greatest of the resources which the country possessed and that they were trying to help oot merely one class but the people as a whole.

On Friday, February 9, Mr. Rufus W. Stimson, of Boston, special agent for agricultural education, Massachusetts, U. S. A., read a paper on "Vocational agricultural education for boys and girls." Vocational education, in the usage of Massachusetts, included, he said, all forms of specialised education the controlling purposes of which were to fit for useful occupations. The aims of vacational education were therefore to draw out and develop the vocational capabilities of the individual. In Massachusetts it met the requirements of boys and girls 14 years of age or older. It was definitely and frankly vocational and undertook to train a boy or girl for farming, for the household arts or for some trade and industrial pursuit. He quoted the report of various authorities, notably that of the Industrial Commission presided over by the late Carroll D. Wright, to the effect that from 25,000 to 40,000 boys and girls left school at 14 and between that age and 16 did not engage in any settled occupation. There was now a general movement throughout the United States for agricultural education of secondary grade, and probably there were not fewer than 500 secondary schools in which agriculture was now seriously taught. The training varied from the study of an agricultural text-book in the hands of the general teacher to the out-and-out vocational school where the teachers were specialists in agriculture. After describing the plans for agricultural education in various States of the American Union, Mr. Stimson explained that of Massachusetts, a fundamental feature of which was known as "part-time work in agriculture." This meant that the student must spend part of the time required for his education in productive farm work preferably at home and part of his time at school, the farm work and school study being closely correlated.

The following verbatim extract from Mr. Stimson's paper will best explain how in this system practical work subserves an educational purpose:

A farming project is a thing to be done on a farm which, in the preparation for doing it and in the carrying of it out to a successful result, involves a thorough-going educational process. The improvement project of constructing a concrete walk to the front door might involve a study of the nature of cement: its action on sand, gravel and broken stone; its resistant qualities to the weather; the seasons in which it may be used; its cost as compared with other materials, such as board, plank, tar, brick, flagging and asphalt; the mathematical determination of proportions of sand, cement and stone to be used; the geometrical determination of the sections into which it should be divided, and whether it should be crowned or flat; the geographical sources of the raw material and the commercial conditions for purchasing the cement. The experimental project of planting an untried variety of fruit might involve a study of the probable adaptability of the variety selected to the soil on the farm, the climate of the locality and the market demands within reach of

Amatite ROOFING

Mineral Surfaced— Needs No Painting

EVERYTHING about Amatite appeals to the man with common sense. He can see its superiority at once—the real mineral surface *which never needs painting;* the two layers of Pitch which is the greatest waterproofing material known; the two layers of heavy Tarred Felt—all these contribute to the popularity of Amatite.

We can make Amatite better and cheaper than anyone else on account of our greater facilities, and consequently we sell it at a surprisingly low figure.

Simply the fact that it needs no painting is enough to make a man sit up and take notice—especially the man who has spent time and money in painting and repainting smooth surfaced roofings.

Write to-day for further information.

THE CARRITTE-PATERSON MFG. CO., Limited

ST. JOHNS, N. B.
HALIFAX, N. S.

SPRAYING TREES

with the H. P. SPRAMOTOR means that the trees will be adequately protected. The Horse does everything but direct the nozzle and that you will prefer to do yourself. The Spramotor can be operated by hand where preferred. Has 8 nozzles with 175 pounds pressure. The number of nozzles can be arranged to suit size of trees. No tree too large. The Spramotor is equally efficient for vineyards, row crops or grain, and the nozzles will not clog.

Get our free treatise on crop diseases.

AGENTS WANTED.

W. C. HEARD, 1377 KING STREET, LONDON, CANADA

The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.

One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

the farm. The productive project of growing a crop of clover might involve a study of the various varieties of clover; the comparative adaptability of those varieties to the given field on which the crop must be grown, and to the climate of the locality; the most reliable places for the purchase of seed; the best time for seeding; the best time for cutting; the best methods of curing and storing; the mathematical culculation as to the saving in cost of feeding stuffs which the crop would afford; the chemical elements it would furnish in the ration and the beneficial chemical biological and mechanical effects on the soil in which it would be grown.

The paper concluded as follows: "Good results have already been achieved. It is believed that the Massachusetts plan of vocational agricultural training will justify itself from every reasonable point of view, and will prove to possess undeniable merit as a method of training both for farming as a definite calling and for intelligent and vigorous participation in the community life of any Commonwealth."

On the motion of the president a cordial vote of thanks was given to Mr. Stimson for his exceedingly valuable and suggestive paper, and a wish was expressed that it might be printed separately in pamphlet form for general distribution.

Other papers were read by Professor L. S. Klinck on the improvement of cereal grain at Macdonald College, by Mr. G. H. Clark on the inspection of seed crops, by Mr. J. H. Grisdale on cultural conditions for seed growing, in which he showed that cultural conditions constituted an important factor in the production of high class seed apart from the pedigree of the stock itself, and by Dr. Charles Saunders on the distribution of seed produred at the Experimental Farms. Asked in the course of a discussion as to the origin of the Marquis wheat with which Mr. Seager Wheeler, a member of the association, had gained the prize of $1,000 at New York, Dr. Saunders replied that there was no record as to who had made the cross; but he believed that it was made by his brother, Dr. A. P. Saunders, at Brandon, in 1892. The wheat was one of the varieties selected by him (Dr. Charles Saunders) from mixed progeny of the cross at Ottawa in 1903 when taking up his present duties as Cerealist.

The report of the secretary (Mr. L. H. Newman) showed that the total number of members of the association in full standing was 164, which with 232 applicants on the list made the total number affiliated to the association to be 396.

The Formation and Cultivation of Soil.

(Continued from page 417).

the mower and the seeder. I am of the opinion that even here where the land is irregular, you can gradually change from the small field to the large field, and make it possible to use large instruments. Double cutaway discs are made in Canada and should be introduced on all farms. Not only in soil preparation operations we should steadily improve our methods but of economy in labor, and best of all in the harvesting and cultivation of root crops. Four years ago, I had a two-row cultivator and found we could do with one man and two horses, just twice as much work, and the work is certainly as effective as that done by a single row cultivator. There is now a machine of this description made in Canada by the Massey-Harris people; you can get them for $50 or $55. It is a right good cultivator, does two rows at a time and if you grow a few acres of roots, you will save the cost of it in a year, over and above what it would cost you.

When you have got your crop growing, get the largest instrument in operation. Where you have small fields, it is more difficult, but where ever you can, use the large implement. It will materially lower the cost of production. The man who is able to increase the fertility of the soil, and get a lower cost of production is the man who will be the successful farmer. We can every one do it if we will give the matter a little more consideration. These things cannot be done without thinking about them, and of course, don't merely think about it, DO IT.

An address by Prof. J. H. Grisdale at the recent Nova Scotia Farmers' Association, Yarmouth, N. S.

The Third Annual Maritime Horse Show.

The third Annual Horse Show of the Maritime Stock Breeders' Association will be held in the Winter Fair Building, Amherst, N. S., on the third, 4th and 5th of April, 1912. The prize list is now in the hands of the public. If you have not received a copy send your name and address to F. L. Fuller, Truro, N. S. If you have a good horse enter him at the Show. The prizes offered are worth going after.

The I. C. R. will issue return tickets for one way first class fare on April 3rd, 4th and 5th return limit. Agents east of New Glasgow will issue tickets on the Standard Certificate plan. Other railways are granting the same rates.

The first and second Shows were more successful than the most sanguine horsemen anticipated. Help to outclass the former shows by your attendance at and support of the third annual Show. Admission to Show, 25cents; children under 12, 15 cents; season tickets, $1.25; reserved seats, 25 cents. Don't forget the dates.

Actions Speak Louder Than Words

Everywhere all the world over you will find the successful men and women are those who have "done things" and are doing things—you feel you can bank on them every time.

That's one reason why I always use The Metallic Roofing Co's. materials on my various contracts and work—they don't have to tell you what they will or might do but show you what they "have done" and "are doing".

One great advantage of the Metallic Roofing Co's. goods over any others, is that when your job is finished, whether Roofing, Sidings, Walls, Ceilings or any old thing—you know it will never need any more attention—in your life time anyway. Now take

Honest Tales by the Philosopher of Metallic Town

EASTLAKE STEEL SHINGLES

Fire, Lightning, Rust and Stormproof Have already stood the test for 26 years.

They outwear any metal shingle on the market. They are of better steel than any other. The design and construction of the "EASTLAKE" Steel Shingle is a guarantee in itself---because unless the steel is of the highest quality it will not make an "EASTLAKE" Shingle, as inferior Steel will not stand the stamping and forming.

There are no other metal shingles on the market that can stand the "EASTLAKE" process.

"EASTLAKE" Steel Shingles were the first **lightning proof** shingles in Canada---and are just as far ahead of others to-day---in fact with an "EASTLAKE" Roof you need no lightning rods.

There are many other exclusive advantages I have experienced in using "EASTLAKE" Steel Shingles that I have no room to mention here, but if you are interested in building or roofing write to-day for free booklet and full information.

THE METALLIC ROOFING CO., LIMITED

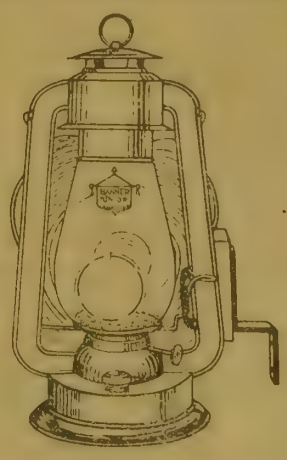
1187 King Street West TORONTO

BRANCH FACTORY: WINNIPEG AGENTS IN PRINCIPAL CITIES

MODERN SANITATION POSSIBLE ON THE FARM OR IN THE VILLAGE

The Good Health Sanitary Chemical Closet is a modern Sanitary Convenience constructed particularly for families who live in a district where it is impossible to have waterworks or sewerage; a sanitary closet that can be placed in your home, store, school, hotel or public buildings; a closet that is made right by overcoming each and every objectional feature found in other so-called "Sanitary Closets." There is no burning to do. The "Good Health" Closet is 17 inches high; 17 inches wide; 24 inches long. It is manufactured from best English Sheet Steel, polished brass and nickle plated fittings; all wooden parts being hard birch highly polished with mahogany finish. Costs from $1.00 to $2.00 per year for maintenance and from 50c to $1.00 to install according to range of pipe. Write for "Good Health" Book and further particulars.

The National M'f'g. Co. Ltd., Moncton, N. B.



BANNER "BUGGY" LANTERN

Is on the side of the vehicle and lights the road.

WHITE AHEAD.
RED BEHIND.
Drive in Safety!

ONTARIO LANTERN & LAMP CO.,
Limited, Hamilton, Ontario.

Minard's Liniment Co., Limited.

Gentlemen,—Theodore Dorais, a customer of mine, was completely cured of rheumatism after five years of suffering, by the judicious use af MINARD'S LINIMENT.

The above facts can be verified by writing to him, to the Parish Priest or any of his neighbors.

A. Cote, Merchant.
St. Isidore, Que., 12 May, '98.

Read the Advertisements in the Maritime Farmer.

The P. E. I. Provincial Seed Fair.

Another milestone in the history of the good Seeds and Household Science Movement in Prince Edward Island was reached on March 5th to 8th when the Provincial Seed Fair was held at Summerside, in the Andrews Warehouse and in St. Paul's Hall.

The entries numbered upwards of 1,800, the weather man smiled and throngs of Island farmers assembled to view the splendid exhibits and to listen to and take part in instructive addresses on Fruit Growing, Poultry Raising, Household Science and various other subjects relative to their profession, by experts in their respective departments.

Rev. Dr. Gauthier, president, and Mr Robert Agnew, secretary of the Seed Fair Association, were untiring in their efforts to make every department of the fair a success. The management of the fair is aiming at bringing the Quality of Island Seeds up to a high standard and do not in any way encourage any lax methods that might prove detrimental to the title "Prince Edward Island Grown."

THE JUDGING.

S. J. Moore, Maritime Seed Inspector, said that the samples of Timothy were excellent.

Out of the ten prizes, practically all would grade No. 1 and three would grade Extra No. 1 under the Seed Control Act. There were only a few exhibits of Mammoth, Common Red and Alsike Clover. There was one good sample of Alsike and one good Red Clover but the other Red Clover samples would not grade and could not be sold under the Act. They contained a large quantity of such weed seeds as Sorrel and Cinquefoil. He was delighted with the exhibit of turnip seed.

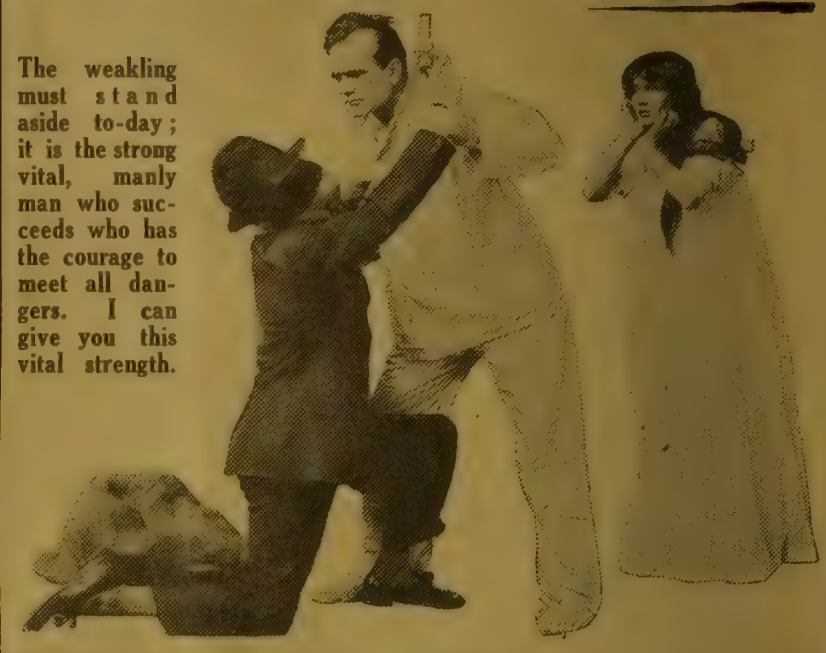
Robert Robertson, superintendent of the Dominion Experimental Farm at Nappan, Nova Scotia, judged the potatoes. He laid emphasis on trueness to type, freedom from scab and other defects and on quality as indicated by cutting the potato. Of the McIntyres or Blues many were thrown out because of their deep eyes and big rough appearance. Exhibitors in some cases should choose smaller, smoother and more uniform potatoes. There were six entrfies for the Grady cup and five of these found a place in the ten prizes given in McIntyres. In the class any other variety (named), some exhibits were thrown out because they were not named while some other were wrongly named.

John Andrew, of Belmont Mills, and G. LeLacheur, of Murray Harbor, judged the wheat. In the White Fife class the best sample was put low in the prize money because it contained barley, oats and stinking smut or bunt. Other samples in all classes were cut severely because of being too poorly graded and consequently lacking in uniformity. Others were not true to the variety or the type of the variety. One sample was very badly sprouted. Some contained weed seeds, in some cases noxious ones. Intending exhibitors should rogue out such impurities as barley, oats and weeds while the grain is standing. It should be thoroughly ripened, cleaned anh properly graded if prizes are expected in a Seed Fair of such a class as the Prince Edward csland Provincial. Altogether there were many excellent exhibits in wheat but the samples were on the whole not as plump and well filled as usual.

The judging of the oats was done by Richard Creed, of Albion, and John Andrews, of Belmont Mills, assisted by G. LeLacheur, of Murray Harbor and Professor Ross. As a whole the exhibit was excellent. Even the worst samples would have been regarded as excellent in any ordinary seed show. Great stress was laid on

Peerless Poultry Fence Protects
We build Peerless Poultry Fence strong enough to keep marauding animals out and sufficiently close to keep small fowl in.
A Real Fence That Gives Real Service
Built same as farm fence of good galvanized wire, protecting it against rust. Top and bottom No. 9 heavy, hard, steel wire—intermediate horizontal wires No. 12—stays No. 13, 32 to the rod. This makes an excellent, all around, general purpose fence suitable for turning all classes of stock.
Agencies nearly everywhere. Live agents wanted in unassigned territory.
The Banwell Hoxie Wire Fence Co., Ltd., Winnipeg, Manitoba, Hamilton, Ont.

Restores Men To Vital Vigor



The weakling must stand aside to-day; it is the strong vital, manly man who succeeds who has the courage to meet all dangers. I can give you this vital strength.

Vitality is the thing which makes success; it gives men that compelling power which sends them forth eager and equipped to meet and overcome all obstacles; it is the thing which gives our young men courage to face death; it is the thing which inspires and holds a woman's love and faith. No matter what your age, I can give you this same vitality. I can restore the vigor you lost, no matter what early or later indiscretion may have sapped your streagth. I can make you "young" and keep you "young." From an intimate and studious observation of possibly 100,000 weakened men I say to you that vitality or the lack of it means all the difference between a manly man and a half man. The man who bubbles with vital power will exert a pleasing influence upon all with whom he comes in contact; women are naturally attracted to him, as are men. Lack of vitality is a negative condition, and it even repels. You wear my Health Belt and suspensory attachment all night; it sends a great, glowing, health-giving current of electro-vimut into your nerves, blood and organs; it takes all the "kink" out of your back and all the coward out of your makeup; it puts you right up in the "feeling fine" class and keeps you there. No stimulation, no false results; just a sure return to manhood and courage. Recommended also for rheumatism, pain in the back, kidney, liver, stomach and bladder disorders. It makes you feel young and keeps you feeling young forever.

Let Me Send You THIS BOOK Free

Here is my latest illustrated book, "Health In Nature, containing a fund of privrte information relating to weaknesses of men. All men, young or old, can read every word of this little publication with great profit. Sent to you in plain, sealed envelope by mail. The book is not written with the idea of compelling you to use my Health Belt; it is meant merely as a guide for men, and while my Belt is fully described, there is absolutely uo obligation on your part to purchase. I simply want you to read this book that you may know certain truths about all weaknesses, which have never been printed before. Vitality is the greatest thing in the world, and I can supply you with it. Please fill in the coupon for the free book.

DR. M. F. SANDEN, CO., 140 Yonge St., TORONTO, ONT.

Dear Sirs:—Please forward me your Book, as advertised, free.

NAME.....

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purity, that is freedom from other varieties and other kinds of grain and from weed seeds. Wild buckwheat and wild peas were found in a few samples. Some of the oats, however, was cut on the green side and consequently not as plump as it should have been, injuring to a considerable extent its value as seed. Some oats again was not true to type or variety and was thrown out on that account. A few excellent samples of Banner oats contained too much pin oats. This could be easily separated by using coarser screens in the fanning mill. These pin or secondary oats are only fit for feed and are not good for seed. The decision of the judges was determined very largely by purity, plumpness and colour. In some close cases the thinness of the hull decided the award.

In the competitions for the Heartz cup the scores of the fields of standing grain last summer were also considered. In many cases the samples were so nearly of equal quality that the judges feel that if they were asked to prize the same grain again they might make the placings different and could give equally good reasons for their placings. The clipping of the grain either by machinery or by putting the grain in a barrel and chopping it with a spade had no influence whatever in making the decisions.

THE FRUIT GROWERS' MEETING.

The fruit growers held a successful meeting in Market Hall at which T. A. Peters and Prof. Ross discussed the subjects of fruit packing, injurious insects, and spraying with Lime-Sulphur and Arsenate of Lead.

A POULTRYMEN'S MEETING.

was also held during the Fair, at which Frank Glydon presided. In his opening remarks he referred to the status of the poultry and egg business in Canada, after which Rev. Dr. Gauthier, D. B. McDonald and other gentlemen contributed interesting data re their own experiences in poultry culture.

CO-OPERATIVE FARMING.

W. E. Cameron, B. Sc. of St. Dustans College, addressed a large audience on the subject of Co-operative Farming, during which he touched briefly several important phases of agriculture.

He spoke of the business state of farming, pointing out that market conditions differ to-day from those of the past. The scope was much wider and there was more chance for dishonesty. The larger market called for larger quantities of a graded product, and this the ordinary individual farmer cannot provide. By quotations he showed that the farmer only realized about 40 per cent. of the cost to the consumer.

Co-operation, Mr. Cameron described as an organization for the purpose of carrying on the business of buying and selling, its basis being equality and equity; is giving each member the same voice in the business, equity is giving each one the same justice in distribution. Co-operation differs from a joint stock company in that it has unlimited liability. Co-operation is not merely a money making society but a society for the uplift of the community.

By referring to the results of co-operation in Germany, France and other countries he showed its adaptability to every condition of farming in every country in the world, Communities form into units and units into a grand management and by paying the middleman they could place their products on the large markets graded and in good condition. Co-operation in buying fertilizers gives a profit.

The discussion which followed was opened by Rev. Dr. Gauthier, who expressed the opinion that it would be a great benefit to the country if the people who have money in the banks

Not only this → but these as well

DON'T think that concrete can be used only for building bridges, silos, walls and walks; because if you do, you will probably overlook all the places where *you* can use it *now*.

T. L. Irving, of North Georgetown, Quebec, used concrete for 81 different purposes on his farm in 1911.

There are probably at least a dozen *profitable* uses for concrete on your farm at the present moment.

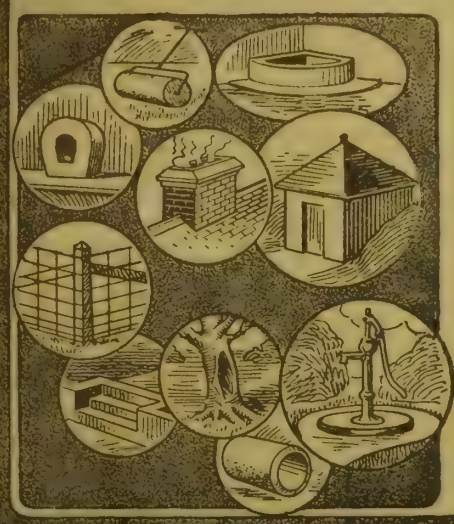
Perhaps you haven't thought of Concrete, except for a new barn, or a silo, or some other *big* improvement for which you aren't quite ready yet. That's why you should read

"What The Farmer Can Do With Concrete"

It will open your eyes to the hundreds of uses that other *farmers* have found for this material. In plain language, and with the aid of many photographs, it explains just what these uses are, and how they can be applied to your farm.

Concrete can not only be used for all the purposes to which wood has been applied, but also many others for which wood would never be suitable.

It is not only a building material; it's a "handy" material, something that you'll grow to depend upon more and more, as you learn its possibilities.



So write for this book. You'll find it isn't a catalogue, nor an argument for you to buy our cement. Every one of its 160 pages is devoted to telling you what farmers have done and can do with concrete.

IT'S FREE FOR THE ASKING.

Your name on a postal, or in a letter, will bring the book to you by return mail. Or use the coupon. Address

CANADA CEMENT CO., Ltd.
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MONTREAL

SEND ME YOUR BOOK

INVINCIBLE FENCING

Like the invincible, thoroughbred British Bulldog, never lets go. Its locks, stays and strands are of the hardest, strongest, toughest, best galvanized open hearth steel wire ever used in fencing. They embody in zinc-clad, rust-proof steel, the invincible qualities of that famous breed of dog which never relaxes its hold.

Invincible Fencing

From first to last, from ore to finished product, INVINCIBLE FENCING is Canadian made and Canadian quality, intended for Canadian trade. The Steel Company of Canada wants the patronage of Canadian fence buyers and intends to get it by supplying a product which in quality and value cannot be surpassed.

Invincible, Hot process Galvanized Gates, galvanized after made, absolutely lead the world in quality. They are the final word in the art of gate making.

Our agency is without exception the most desirable fence line for the future in all Canada. Write at once.

The Steel Company of Canada, Limited.
The Fence Department, Box 31 MONTREAL, CANADA.

would co-operate with their less fortunate neighbors and let them have their money at a lower rate of interest than is charged by the banks.

Walter Lea spoke of the benefit of co-operation in dairying and thought that the same principle could be profitable followed along other lines of the farming industry. Especially could this be done with eggs, as Mr. Cameron showed that it now costs 10c. to sell 15c. worth of this product.

Rev. J. J. Macdonald strongly urged co-operation in the marketing of eggs.

Mr. Glydon read an excellent paper prepared by Robert Robertson, of the Nappan Experimental Farm. The paper dealt at some length with the care and feeding of stock, rotation of crops and fertility of the soil.

Jas. E. Murphy, R. H. McDonald, Garnet LeLacheur, R. H. Montgomery, D. B. McDooald, D. J. Thompson, Joseph Noonan and others joined in the discussion.

DAIRYING.

was discussed by Harvey Mitchell of the Dairy Division, Ottawa and by W. M. Lea, Victoria. Their addresses were practical, instructive and an incentive for farmers to pay particular attention to the various details of the dairy industry.

GOOD SEEDS.

was the subject of an excellent address by Garnet LeLacheur and Prof. Ross came next with a strong address on "The Seed Control Act."

EDUCATION.

The P. E. I. Superintendent of Education gave an interesting talk on Education for the Farmer. He grappled with the problem in a masterful way, showing how it affects the basic industry of the Island Province.

THE LADIES' MEETINGS.

in Labor Union Hall were well attended and were presided over by Mrs. Neil McLeod.

On Wednesday afternoon Prof. Ross gave a most interesting talk on "Homemaking an Ideal of Womanhood;" Mrs. Neil McQuarrie on the "Ethics of Nursing," Miss Hunt on "Handicraft" and Mrs. Gill on "Women's Institutes." All the addresses were well given and more than usually interesting and instructive.

On Thursday, Miss Dutcher gave splendid instruction on "The Care of Milk and Cream;" Dr. McLellan a most informing address on "Household Hygiene;" Miss James a delightful talk on "Short Cuts in Housekeeping;" Dr. Gauthier an inspiring address showing the value of "Women's Institutes."

Pride in Your Garden

will be natural, and justified, if you plant Ewing's Reliable Seeds and give them proper care. The bumper crops which, for forty years or more, have been grown from

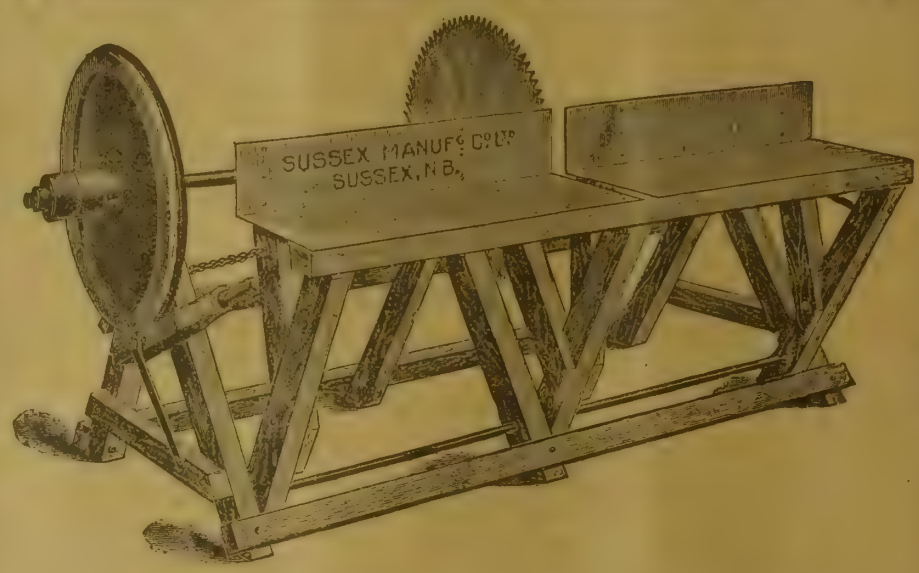
EWING'S Reliable Seeds

are explained by the care which we take to give our customers only specially selected seeds that are clean, fresh, healthy and true to type—seeds that produce grains, roots, vegetables and flowers of which the growers may well be proud. **Write for our handsome illustrated catalogue,** and if your dealer hasn't Ewing's Seeds order from us direct. 22

EWING'S RELIABLE SEEDS MONTREAL

Wm. Ewing & Co.
Seedsmen
McGill St., Montreal.

Wood Cutters Made in Three Sizes.



We make the best Wood Cutter on the market. The length of table on our Long Swing is 8 feet, 3 inches; distance between balance wheel and saw 4 feet, 3 inches. Heavy substantial frame and well braced. Steel plate table.

Length of table on Flat Rolling Machine is 8 feet, 3 inches; distance between balance wheel and saw 4 feet 3 inches. The table of this machine moves on grooved rollers and vd. track, which holds the table in position, making it move very easily to and from the saw.

Our Short Swing is built on the same principles as the Long Swing, the arbor and frame is shorter; length of frame 4 feet, 3 inches; distance between balance wheel and saw 3 feet, 6 inches.

On all our machines the arbor is the same size, made of the best turned steel and runs in bearings of the best babbitt. The balance wheel is a solid web and weighs 180 pounds.

We have a large number in stock and can ship promptly. All enquiries will have prompt attention.

The Sussex Manufacturing Company, Ltd., Sussex, N.B.

The Prize Winners.

Wheat, White Fife, (2 bus.)—1 George Wedlock, Mt. Royal; 2 James Marchbanks, New Annan; 3 A. E. McLean, Lot 16; 4 Lawrence Doyle, Roseville; 5 Cornelias McLellan, Lot 14; 6 James Sulliphant, Hamilton; 7 Frank McEwen, Summerside; 8 Horace Wright, Bedeque; 9 Earl Compton, St. Eleanors; 10 Chester Bowness, Bedeque.

Wheat, White Chaff—1 Joseph McDonald, Murray River; 2 Wood & Son, Hazelbrook; 3 Horace Wright; 4 Frank Montgomery, Travellers Rest; 5 James Simpson, Bayview; 6 A. B. Dixon, New Glasgow; 7 Walter Green, Summerside; 8 A. E. McLellan; 9 Richard Kickham, Souris.

Wheat, White Russian, (2 bus.)—1 Horace Wright; 2 George McFarlane, Fernwood; 3 William Mullally, Souris; 4 A. B. McFarlane; 5 Celestine Perry, Deblois; 6 A. E. McLean; 7 H. S. Arsenault, Urbanville; 8 Cornelias McLellan; J. E. Murphy, Cape Traverse; 10 Clemang Perry, Miscouche.

Wheat, any other variety named—1 James F. Henderson, Bedeque; 2 Herbert Platts, Kildare; 3 Sydney Richardson, St. Eleanors; 4 H. F. Arsenault; 5 Norbert Poirier, St. Louis; 6 James Howlett & Son, Gowan Brae; 7 Daniel McLeod, Mt. Royal; 8 R. H. Raynor, Cascumpec; 9 M. D. McLeod, Mt. Royal; 10 George D. Brown, St. Eleanors.

OATS.

Oats, White Banner or Danish—1 A. E. McLean; 2 Horace Wright; 3 James A. Harding, Norboro; 4 William Clark, Wilmot; 5 James Marchbanks; 6 W. H. McGregor, Lot 16; 7 George McFarlane; 8 James E. Murphy; 9 Horace McFarlane, Fernwood; 10 J. J. McDonald, Kinkora.

White Ligowo—1 A. E. McLean; 2 William Clark; 3 M. D. McLeod; 4 B. A. Mallett, Little York; 5 Horace Wright; 6 J. J. Hall, Travellers Rest; 7 H. S. Arsenault; 8 Alfred Philips, Arlington; 9 James A. Harding; 10 A. B. Dickerson, New Glasgow.

Oats, White Sensation or $1000—1 Harry Schurman, New Annan; 2 Alex. McKinnon, New Annan; 3 W. H. McGregor; 4 J. J. Hall.

Oats, any other variety named—1 M. D. McLeod; 2 H. S. Arsenault; 3 Fred Inman, Lot 16; 4 B. A. Mallett; 5 J. H. Brown, Kensington; 6 Joseph McDonald, Vernon River; 7 Sydney Richardson; 8 John F. Arsenault, Urbanville.

Oats, Black Beauty or Old Island—1 Cornellis McLellan; 2 Robert Poirier, St. Louis; 3 James E. McDonald, North Bedeque; 4 Celestis Perry; 5 James F. Henderson; 6 Peter Kaneen, Georgetown; 7 Herbert Platts, Kildare Cape; 8 B. A. Mallett; 9 James A. E. McDonald, Little Pond; 10 Sylvang Bernard, Deblois.

Any other variety named—1 M. D. McLeod; 2 A. J. McDonald, Lot 16; 3 James Simpson; 4 E. J. Vessey, Little York.

BARLEY.

Barley, 2 rowed—1 A. R. Vessey, Little York; 2 C.A. Mallett, Little York; 3 L. A. Arsenault; 2 Wood & Son; 5 Geo. McFarlane; 6 Judson Simpson, Belmont, Lot 16; 7 Alex. B. McFarlane; 8 Fred Bulman, Rusticо; 9 Horace Wright; 10 H. S. Arsenault.

Barley, 6 rowed—1 H. S. Arsenault; 2 A. E. McLean; 3 B. A. Mallett; 4 M. D. McLeod; 5 James F. Henderson; 6 Judson Simpson; 7 Horace Wright; 8 Cornelius McLellan; 9 W. H. McGregor; 10 A. F. Peters, Rollo Bay.

BUCKWHEAT.

Buckwheat, Silverhull, (1 bus.)—1 Horace Wright; 2 B. A. Mallett; 3 Wood & Son; 4 James Henderson; 5 R. C. Bagnall, Central Bedeque; 6 J. H. Waugh, Wilmot; 7 L. A. Arsenault; 8 James Murphy; 9 A. J. McNeill, Greenmount; 10 X. O. Gallant, St. Chrysostome.

PEAS.

Peas, Field, (2 bus.)—1 Robert Baker, Bedeque; 2 Colin Craig, Bedeque; 3 Eli Arsenault, Urbanville; 4 Allan McLeod, Lot 16; 5 Turner Glydon, Kensington.

Beans, White, (1 bus.)—1 Thomas Stavert, Wilmot; 2 Joseph Leclair, Mt. Carmel; 3 Robert Stavert, Wilmot.

Beans, any other variety named, (1

bus.)—1 Jas. E. Murphy; 2 R. E. Bagnall, Central Bedeque.

Beans, Colored, (1 bus.)—1 H. F. Arsenault; 2 Joseph Leclair, Urbanville; 3 Thos. Moyse, Bedeque; 4 Basil Desroches, Miscouche; 6 Lewis Perry, McLean Mill; 7 Arsene Gallant, Miscouche; 8 John Dickieson, Summerside; 9 Clemang Perry.

Flax, (½ bus.)—1 Judson Simpson; 2 J. Perry Marchbanks; 3 Fred Inman, Rosehill; 4 B. A. Mallett; 5 L. A. Arsenault; 6 A. E. McLean; 7 Celestine Perry; 8 Arsene Gallant; 9 W. H. McGregor; 10 Mrs. Allan McLeod, Lot 16.

Timothy, (1 bus.)—1 Chas. M. Arsenault, Abram's Village; 2 J. E. Murphy; 3 Jas. Howlett & Sons; 4 B. A. Mallett; 5 Basil DeRoches; 6 G. McFarlane; 7 Donald McCallum, North St. Eleanors; 8 A. R. Vessey; 9 A. B. McFarlane; 10 Everett McLeod, Summerside.

Corn, Fodder, (12 ears)—1 Turner Glydon; 2 X. O. Gallant; 3 H. S. Arsenault; 4 Jesse Gaudet, Miscouche; 5 Eli E. Arsenault; 6 Colin Strong, Summerside.

Corn, Garden, (12 ears)—1 Thane Campbell, Summerside; 2 O. W. Muttart, Summerside; 3 Colin Strong; 4 S. A. Arsenault; 5 Joseph Leclair; 6 Cyrus Arsenault, Urbanville; 7 Basil Desroche; 8 James Dunn, St. Eleanors; 9 Alride Arsenault, Urbanville.

Clover, Mammoth, (½ bus.)—1 Jas. Howlett & Son; 2 Robert Baker.

Clover, Red Common, (½ bus.)—1 R. H. Raynor; 2 L. A. Arsenault.

Clover, Alsike, (½ bus.)—1 Geo. Wedlock; 2 Rev. J. J. McDonald, Kinkora; 3 James Murphy.

POTATOES.

Potatoes, McIntyre, (½ bus.)—1 A. R. Vessey; 2 B. A. Mallett; 3 Michael McKenna; 4 Talmage Montgomery; 5 James McLellan; 6 James A. Harding; 7 D. Montgomery; 8 William Clark; 9 Alfred A Schurman; 10 Alex. B. McFarlane.

Potatoes, White Long, (½ bus.)—1 Chas. Harding; 2 James A. Harding; 3 B. A. Mallett; 4 Richard Clark; 5 H. S. Arsenault; 6 L. A. Arsenault; 7 A. B. McFarlane; 8 Colin Craig; 9 Fred Inman, Rosehill; 10 Sydney Richardson.

Dakota Red, (½ bus.)—1 E. J. Vessey; 2 B. A. Mallett; 3 H. F. Arsenault; 4 Colin Craig; 5 A. B. Vessey; 6 Mrs. Elvina Murray, St. Eleanors; 7 Wood & Sons; 8 David McLeod, Mt. Royal; 9 Talmage Montgomery; 10 J. J. Hall.

Potatoes, Rose Type, (½ bus.)—1 B. A. Mallett; 2 Cyrus Arsenault; 3 Arsene Gallant; 4 Joseph McLellan; 5 L. A. Arsenault; 6 Talmage Montgomery; 7 Sydney Richardson; 8 A. R. Vessey; 9 D. Montgomery; 10 Thomas Stavert.

Green Mountain, (½ bus.)—1 Chas. Craig; 2 Reginald Compton, St. Eleanors; 3 J. J. Hall; 4 Eli Arsenault; 5 Howard McFarlane; 6 Hector McQuarrie; 7 L. A. Arsenault; 8 Joseph McLellan; 9 Thomas Stavert; 10 Calvin Craig.

Potatoes, White Round, (½ bus.)—White Rose—1 Geo. McFarlane; 2 Alex. McFarlane; 3 A. R. Vessey; 4 Thomas Stavert; 5 Richard Clark; 6 Robert Stavert; 7 E. J. Vessey; 8 L. A. Arsenault; 9 Eli Arsenault; 10 C. A. Mallett.

Any other variety named, (½ bus.)—1 E. J. Perry; 2 Thomas Stavert; 3 Richard Clark; 4 A. R. Vessey; 5 B. A. Mallett; 6 R. A. Stavert; 7 Talmage Montgomery; 8 A. J. McNeill, Grangemont; 9 L.A. Arsenault; 10 Wm. Clark.

Eschallots, (1 peck)—1 Leslie Woodside, Clinton; 2 Arsene Gallant; 3 Robert Gaudet; 4 Sydney Richardson; 5 John Dickieson; 6 James E. McDonald; 7 James Dunn; 8 H. S. Arsenault; 9 J. W. Waugh; 10 J. H. Waugh.

TURNIP SEED.

Swede, 2 lbs.—1 Richard Creed, Albion; 2 A. P. Marchbanks, New An-

Wake Up, Weak Men

Get Some Life Into You

What's the use of dragging your legs about like a wooden person? Feel like a person of spirit. Away with the pains and aches, off with this wretched feeling as if you were eighty years old and one foot in the grave. Come and let me put new life into your nerves; let me give you a new supply of youthful energy. Let me make you feel like throwing your chest out and your head up, and saying to yourself: "I AM STRONG AND HEALTHY!" Let me give you back that old feeling of youthful fire, vim and courage. I can do it, so that in two months you will wonder that you ever felt so slow and pokey as you do now.

It is for men who open their eyes in the morning upon a world that looks blue and discouraging; for men who feel tired, despondent and out of luck; who have lost the fighting spirit—those fellows who have almost concluded that nothing is worth fighting for—who have pains in the back, and who don't get rest from their sleep, and who wish that they were as strong as they used to be. It is all a matter of nervous energy—that is what ambition comes from—and that is what you can get from Dr. McLaughlin's Electric Belt. It is an invigorator of men.

It will make you strong. It will send the life blood dancing through your veins, you will feel the exhilarating spark warm your frame, the bright flash will come to your eye, and a firm grip to your hand, and you will be able to meet your fellow man and feel that what others are capable of doing is not impossible for you. This grand appliance has brought strength, ambition and happiness to thousands in the past year.

Dr. McLaughlin's Electric Belt makes you noble; it causes the nerves to tingle with the joyous exhilaration of youth; it fills the heart with a feeling of gladness makes everything look right, and makes the nerves like bars of steel. It has cured Nervous Debility, Weakness of every kind, whether in Nerves, Stomach, Heart, Liver or Kidneys, Rheumatism, Pains in Back and Side, Lumbago, Indigestion, Neuralgia, Constipation, Dyspepsia, and all troubles where new life can be given. All this while you sleep, by pouring electricity, which is Nature's energy, into your nerves and blood to the vital parts; when they are weak it will make them strong.

I have cured thousands of men who have squandered the savings of years in useless doctoring.

Read What the Cured Say

Read the Proof---Nothing Short of Miracles are Being Performed Every Day

Needs No Doctor Now.

Huntsville, Ont., Dec. 12, 1911.

M. F. McLaughlin:—

Dear Sir, —I am sorry I have not written before. Your Belt certainly has done me a world of good, for I feel a different woman altogether, although I have not worn it regularly. I am satisfied with what it has done for me, as I have never had a doctor for myself since I got your Belt, which is something new for me for it seemed I was always doctoring. I gained 13 pounds in four months, and with lots of work to do too. Wishing you great success, I remain,

Yours truly, Mrs. Cornish.

Weak Back Cured.

No. 1 Inkerman St., London, Ont., Jan. 7, 1912.

M. F. McLaughlin:—

Dear Sir, —Just a few lines to let you know of the splendid results I have had from your wonderful Belt. My back is well; its chilly feeling has left me, and I feel like a new man altogether. I have spent many dollars to get a cure, but all to no purpose. I am sure I now have a remedy that has no equal. Some of my friends tell me sometimes how sick they feel and I tell them to do the same as I did, wear one of Dr. McLaughlin's Electric Belts, and they will feel the same as I do. I shall keep on telling them the same, for I know your services are worth all you ask for your Belts ten times over. Wishing you every success in this New Year, I remain,

Yours truly, F. Doney.

Weak Kidneys and Back — Rheumatism.

Cochrane, Ont., Dec. 30, 1911.

M. F. McLaughlin:—

Dear Sir, —I just feel proud of the results I have obtained from the McLaughlin Electric Belt as I was a terrible sufferer for eight months and tried everything that could be tried to relieve me from pain, but without any relief, but I used your Belt for three months and I am now perfectly cured and never felt better in my life. I am 74 years old, and, on account of my age, no one thought there would be any hope for me. I will recommend your Belt to any sufferer needing aid. With best wishes, I remain, your truly,

S. M. Barnes.

My Belt is easy to use; put it on when you go to bed, you feel the glowing heat from it (no sting or burn, as in the old style belts), and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old

Wherever you are, I think I can give you the name of a man in your own town that I have cured. Just send me your address, and let me try This is my twenty-fourth year in the business of pumping vim into wornout humanity and I've got cures in nearly every town on the map.

If you come and see me, I'll explain it to you. If you can't call, let me me send you my book, full of the things a man finds inspiring to strength and courage. Free, if you send this ad.

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday, to 8.30 p.m.

M. K McLaughlin

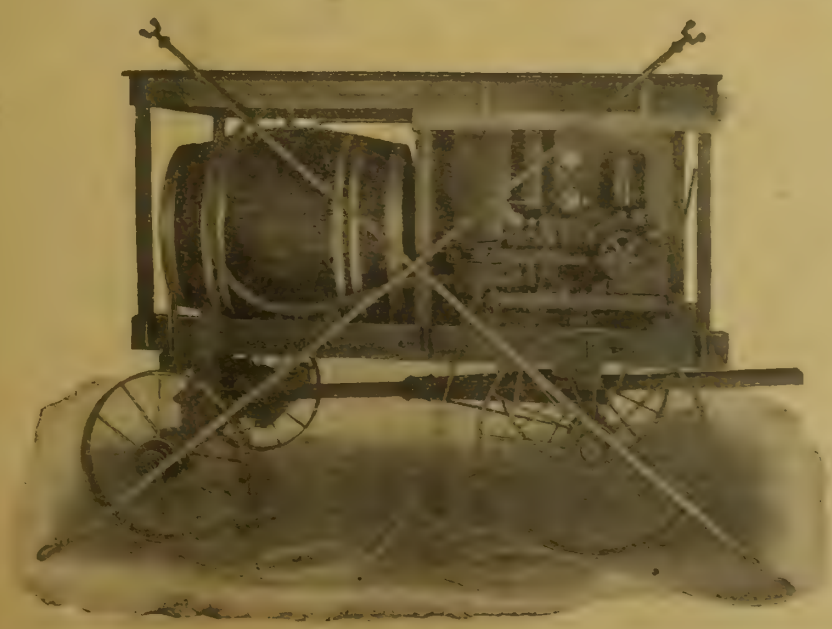
214 St. James St., Montreal.

Please send me your book free.

Name ... ...

Address ... ...

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,

Limited

Port Williams, N. S.

Catalogue Sent on Application.

T-A Wheels Defy Bad Roads

These Wide-Tire Steel Wheels are built especially to overcome the troubles of travelling over rocky, sandy or muddy roads. They carry 25 to 50 per cent. heavier loads without causing any heavier draft on the horses.

Built low for ease of

LOADING and UNLOADING

Get a T-K Handy Farm Wagon—It's just the kind you need on your farm. This sturdy little wagon will get over the ground quicker and with less strain on your horses than any other wagon that's made.

Tudhope-Anderson Co., Ltd. Orillia. Ont.

Drop us a card and get our catalogue telling all about

T-A Wide-Tire Steel Wheels and Handy Farm Wagons

nan; 3 James Dunn; 4 X. O. Gallant; 5 Robert Stavert; 6 Thomas Stavert.

Carter & Co's. prize, $10 in gold for sample 2 bush. wheat from fields that competed in the standing fields of grain competition, 1911—James E. Murphy, Cape Traverse.

The Dr. Gauthier prize, $5 in gold for old Island black oats—Cornelius McLellan, Lot 14.

The Grady cup for McIntyre potatoes and one other late variety and one early variety—B. A. Mallett, Little York.

The Richards cup—Horace Wright, Lower Bedeque.

The Dalton Cup for the largest and most creditable number of bushels in sections 1 to 25 seed division—D. A. Mallett, Little York.

Steam Navigation Prizes for largest and most creditable number of exhibits in wheat, oats, buckwheat and bgrley—1st, Horace Wright, Bedeque, $5; 2nd, B. A. Mallett, York, $3; 3rd, A. E. McLean, Lot 16, $2.

Heartz cup, for best sample two bushel oats from fields that competed in standing fields of grain competition, 1911—F. H. Bullman, Rusticoville.

N. B. Farmers and Dairymen in Annual Convention.

(Continued from page 415).

Halls as it should be appears quite general,

Therefore resolved, that in the opinion of this Association, it is both possible and expedient that at least one agriculturist be placed on the ticket of each political party in every constituency in the approaching Provincial Election.

* * *

Moved by S. L. Peters; seconded by J. S. Hayward:—

Resolved that in the opinion of this Association the conditions of Agricultural pursuits in the Province require the urgent attention of our Provincial and Federal Governments, and as a necessary means of regenerating our rural life and settling people upon the land, we heartily endorse a courageous policy of state advances or agricultural loans to farmers and the other persons engaged in such pursuits.

We further request the Provincial Government to take immediate steps to raise the necessary funds with the Dominion Government for the use of the Savings Bank deposits or in such other manner as may be expedient.

RAMSAY'S PAINTS

GOING TO PAINT!

(1) Do it in the best way
(2) Do it in the most economical way
(3) Do it thoroughly
(4) Do it with paints guaranteed to look well and wear well
(5) In fact do your painting

With Ramsay's READY MIXED PAINTS.

RAMSAY'S PAINTS give a quiet attractiveness to your house, which stamps it with an air of distinction. Ask you dealer in your town.

A. RAMSAY & SON COMPANY, MONTREAL.

A Woman's Sympathy

Are you discouraged? Is your doctor's bill a heavy financial load? Is your pain a heavy physical burden? I know what these mean to delicate women—I have been discouraged, too; but learned how to cure myself. I want to relieve your burdens. Why not end the pain and stop the doctor's bill? I can do this for you and will if you will assist me.

All you need do is to write for a free box of the remedy which has been placed in my hands to be given away. Perhaps this one box will cure you—it has done so for others. If so, I shall be happy and you will be cured for 2c (the cost of a postage stamp). Your letters held confidentially. Write to-day for my free treatment. MRS. F. E CURRAH, Windsor, Ont.

W. H. Scroggie, Limited, Montreal
New Catalogue Now Ready for Mailing

DO NOT PLACE YOUR ORDER until you ha ve seen this WONDERFUL VALUE GIVING CATALOGUE. We have planned this issue to be the BEST we have ever published. Offering a larger and BETTER SELECTED range of MERCHANDISE than we have hitherto placed before Canadian Mail Order Shoppers.

Buying from this Catalogue means a positive saving and a fair deal every time.

ALL WOOL NOVELTY TWEED SUITS

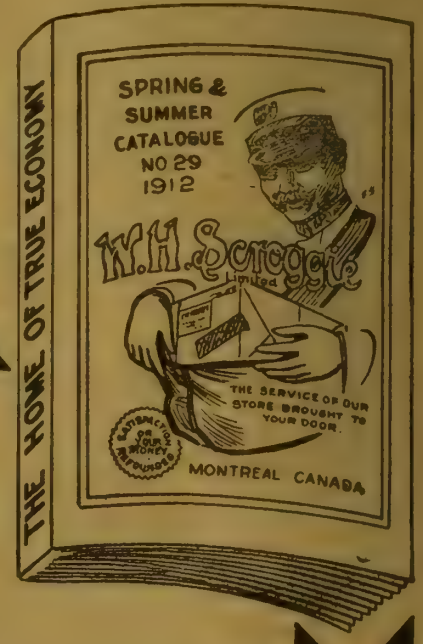
WOMEN'S SUITS of good quality, all wool tweed, new whip cord effect; a very striking and stylish model coat, silk serge, lined collar and cuffs, trimmed with satin and pearl buttons. Skirt side trimmed effect with braid and buttons; colors, Black and White, Green and White, Brown and White. Also comes in Brown and Navy Serge. Bust 32 to 42 Wonderful value **$11.98**

WOMEN'S FINE LAWN WAIST. Price 69c

WOMEN'S WAISTS OF FINEST QUALITY PERSIAN LAWN, made in a very attractive style, embroidered front, ¾ sleeve, high collar, both edged with lace, tucked over shoulder and down back, open back, buttons covered with box pleat; sizes 32 to 44. Our Special. Price **69c**

R 500. SCROGGIE'S FAMOUS AMERICAN BEAUTY SILK ROSE,

comes in all the new Spring shades Pink, Cardinal, Tea, Coral, Old Rose and Mauve. Large size Rose, mounted on first-class foliage. A regular $1.00 value for ... **49c**


THE HOME OF TRUE ECONOMY
SPRING & SUMMER CATALOGUE NO 29 1912
W.H. Scroggie Limited
THE SERVICE OF OUR STORE BROUGHT TO YOUR DOOR
MONTREAL CANADA

All delivery charges free

Write for your copy to-day.

This Washer Must Pay For Itself.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse. But I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse wasn't "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse although I wanted it badly. Now this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me.

So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

You see I sell my Washing Machines by mail. I have sold over half a million that way.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges nor break buttons the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first and I'll make good the offer every time.

Let me send you a "1900 Gravity Washer on a Month's free trial. I will pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months, in wear and tear on the clothes alone. And then it will save 50 cents to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

Address me personally—A. S. Bach, Manager, 1900 Washer Co., 357 1-2 Yonge St., Toronto.

Have City Conveniences

REPLACE the pestilent, dranghty, dangerous and offensive out-of-doors closet with an indoors closet which requires no sewer, no plumbing, and no finshing system. Have city conveniences in your home. Safeguard family healih by installing a

"Tweed" Closet

Sanitary and Odorless

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list.

THE STEEL TROUGH & MACHINE CO., LIMITED,

DEPT. 103 TWEED, Ont.

Advertise in the Maritime Farmer.

As a preliminary method of carrying out this project we recommend the creation of a Land Settlement Commission to manage the business side of the operations, to acquire inform and sell vacated farms to natives or immigrants and otherwise assist the better settlement of people upon the land, until such times as a charter for an Agricultural bank is obtained.

Moved by T. W. Butler; seconded by Geo. Creighton:—

Whereas James Robinson, T. W. Butler, E. A. McCurdy, Donald Morrison, Wm. L. Allain, W. A. Park and Hon. Allan Ritchie are applying for incorporation to build a line of railway along the Miramichi Valley from Newcastle to Tracadie for the further development of the Province, as well as the accomodation of the people living along the said district has long been recognized, and Dominion and Provincial aid has, from time to time, been authorized, for the purpose of inducing capitalists to construct and operate said line of railway, such inducements have not proved sufficient to secure the building of the said line, and,

Whereas, the said district is thickly populated and settled throughout its whole extent and that in winter the inhabitants have no means of communicating with other points or among themselves, except by highway, and are practically cut off from all communication with all other points; and,

Whereas, large industries are carried on within the confines of the said district at a great difficulty, due to the want of adequate transformation facilities and,

Whereas, the inhabitants of this section largely engage in winter fishing, and by reason of the expense of exporting the catch to the market, are forced to accept a smaller price than is offered and paid at points within reach of railway facilities;

Whereas, the lands along the said railway, from an agricultural standpoint have proven to be of first-class quality, and if greater facilities were afforded for transporting agricultural products to market, the development of the agricultural districts would be enormous.

Therefore resolved that this Association recommend that Government aid, such as has been accorded the St. John River Valley Railway, be provided for the said line.

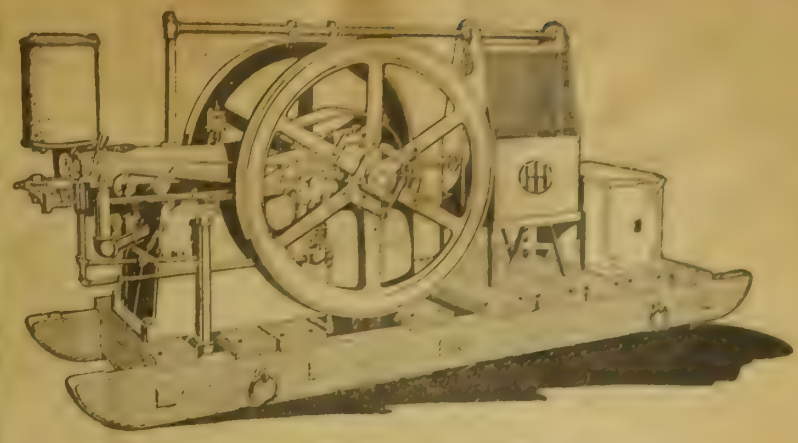
OFFICERS FOR 1912-13.

Following are the officers elected for the ensuing year:—

President—L. H. Smith, Albert; Vice-President—C. Ashley George, Upper Sackville; Recording Secretary—A. G. Dickson, Chatham; Corresponding Secretary—Morris Scovil, Meadowlands; Treasurer—H. H. Smith, Hoyt; County Vice-Presidents—Albert—R. A. Smith, Elgin; Carleton—W. A. Taylor, Florenceville; Charlotte—Tilley Reid, Lever; Gloucester—B. J. Power, North Tetagouche; Kent—Fidele Daigle, Dundas; Kings—Edgar Shamper, Kingston; Madawaska—J. A. Bernier, Edmundston; Northunberland—Clifford Galloway, Napan; Queens—John McDonald, Hibernia; Restigouche—John McKinnon, Dundee; St. John—R. G. Murray, St. John; Sunbury—Milton A. Smith, Hoyt; Victoria—J. W. Stevenson, Arthurette; Westmorland—William Murray, Murray Road; York—W. H. Moore, Scotch Lake.

PARLIAMENTARY COMMITTEE.

S. L. Peters, T. C. Strong, J. T. Prescott, R. G. Murray, T. W. Butler, Morris Scovil, P. G. Mahoney, W. B. Dickson, Lewis Smith and J. A. Bernier were appointed as a committee to bring the resolutions passed by the Association before the Government for action.



Your Best Helper

YOU work too hard on your farm if you haven't an engine. You can make more money, with much less labor, by using an I H C gasoline engine. Why not profit by the experience of other farmers? Think what it means to you and your family to have the cream separator, churn, pump, feed grinder, fanning mill, thresher, woodsaw, grindstone, washing machine, and many other machines, run by an

I H C Gasoline Engine

Think of the profit you will make by the saving of work and time. Think how much more pleasant, how much more attractive your farm and home will become when the I H C engine does so much of the hard work.

I H C gasoline engines are reliable and durable. They run smoothly, year in and year out. Whatever style and size engine you want is in the I H C line, which includes: Vertical type—2, 3, 25, and 35-horse power; horizontal—1 to 50-horse power; mounted on skids—1 to 8-horse power; portable—1 to 25-horse power; traction—12 to 45-horse power; sawing, pumping, spraying, hoisting, and grinding outfits, etc. Built to operate on gas, gasoline, kerosene, distillate, or alcohol—air-cooled or water-cooled. See the I H C local agent, or, write nearest branch house for our new catalogue.

CANADIAN BRANCHES:

International Harvester Company of America

(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

DISPERSION SALE!!

Having Disposed of our farm at Crouchville, we are going to sell all of our

HIGH CLASS AYRSHIRE CATTLE

At Hill Grove Farm, East St. John, N. B., on

MAY 1st, 1912

Watch Next Issue of This Paper for Further Particulars.

JAMES BARRETT & SONS, Props.

1,000 Toilet Sets FREE

A toilet set is a very necessary article on every dressing table and the one we offer as a premium will commend itself to the most refined and artistic taste. The case is Beautifully Lithographed in fancy patterns and large floral sprays. It is Sateen Puff Lined and fitted with a handsomely Embossed Back Bevel Mirror and Brush with Comb to match. We give you this lovely toilet set FREE for selling $2.00 worth of pretty Lithographed and Embossed Picture Post Cards at 5 for 10c. These cards are the latest designs in Views, Floral, Birthday Comics, also St. Patrick and Easter in season. Write to-day and we will send you a selection of cards which you can sell in every house. We also give an extra present for prompt-ness, so write to-day. COBALT GOLD PEN CO., Dept. 618 Toronto, Ont.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forwafd replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

WANTED—A married man for farm work, kind with animals. Apply at once. T. D. BLAIKIE, Great Village, Col. Co., N. S.

HOLSTEIN BULL three years old for sale, best of breeding, fine animal. JAMES R. TAYLOR, Upper Dorchester, N. B.

FOR SALE—One Ayrshire Bull, fifteen (15) months old. Apply to C. R. DELONG, New Germany. Lun. Co., N. S.

FOR SALE.—Pure bred Holstein bull calf, four months old, price $30.00. S. J. DARCUS, Fredericton, N. B.

YORKSHIRE PIGS—Registered—Five (5) dollers, five weeks old—Prize winning stock. R. J. MESSENGER, Bridgetown, N. S.

WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

BUYERS of Fresh Eggs, Dressed Pork, etc., Reference Bank of New Brunswick. JOHN HOPKINS, St. John, N. B.

FOR SALE:—Coolie Pups, born heelers, both parents splended workers, LESLIE WALKER, Lower Millstream, Kings Co., N. B.

FOR SALE:—Two (2) Yearling Guernsey Bull. Also one unregistered Jersey. Apply to T. D, BLAIKIE, Great Village, N. S.

FARMER WANTED:—Good practical worker, married, to take charge of farm. Address DAVISON LUMBER CO., LTD., Bridgewater, N. S.

GOLDEN WYANDOTTES, the busy open laced kind, Prize winners. Eggs, $2.00 for 15, $3.00 for 30. PETER WILSON, Cobden, Ont.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

FOR SALE—Choice, large English Berkshire pigs from importod stock. Farrowed March 3rd, 1912. Correspondence solicited. Price reasonable. S. L. T. McMACKIN, Havelock, N. B.

Registered Ohio Improved Chester White Pigs. Five dollars at five weeks. Pairs furnished, not akin. Dam sired by Toronto and London first-prize boar. WALTER S. COGSWELL, Centreville, N. B.

FOR SALE—Four Ayrshire Bulls fit for service from eleven to twenty months old. Spring calves Two Holstein bulls eleven months. Yorkshire pigs farrowed Feburary 26th. JOHN A. HUGHES Petitcodiac, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

BERRY BOXES.—$4.50 per 1000 in the flat. In lots of 8000 or more $4.00 per 1000. Tacks free, Forms for making berry boxes on 75c each. Crates and crate shooks supplied. Apply to O. PERCY ARNOLD, Sussex, N. B.

Eggs For Hatching.

Three pens mated up for spring trade. Columbian Wyandottes; S. C. Rhode Island Reds; Barred P. Rocks, Mammoth Pekin Ducks. Write for prices.

Stock for sale after June 1st.

BROOKSIDE POULTRY YARDS,
Westfield Centre, Kings Co., N. B.

Incubator Bargain.

One 200 Peerless Incubator, used one hatch, will sell at a bargain, Also 7 hens, 2 pullets, 1 cockerel, S. C White Leghorns, fine stock and great layers. The lot for $12.00. Cockerel won 1st at Amherst Winter Fair. Would consider exchange for Barred Rocks, laying strain.

ORCHARD HILL FARM,
Brown's Flats, N. B.

B. P. Rocks & S. C. B. Orpingtons

Eggs for hatching (choice foundatian stock). I have a limited quantity of these eggs for hatching. Price $1.00 for 15. Orders filled in rotation. Book early and secure choice stock.

W. KENNETH McLEOD, Port Elgin, N.B.

The All Canadian Route to Montreal.

Via the Intercolonial Railway Maritime Express is the only All Canadian Route to Quebec and Montreal from the Maritime Provinces. The Maritime Express is generally admitted by experienced travellers to be the most comfortable train in America. This is especially true in regard to the dining and sleeping car service. The diners of the I. C. R. are roomy and well ventilated and furnished in the best of taste. The excellent meals are served Table d'hote at a price away below the a la carte rates prevailing on the company owned lines. The sleeping coaches are up to date in every particular, and the smoothness of the road bed makes the long journey easy and pleasant. Being popular with a class of travellers who are generally found to be the acme of good company the through journey is never found dull, and even during the winter months there is much of scenic interest in the day's ride through the Province of Quebec. Montreal is reached at the convenient hour of 6.30 p.m. and connections are made at Bonaventure Union Station with the through trains of the Grand Trunk Railway for Toronto, Buffalo, Detroit, Chicago, and other points in Western Canada and the United States.

Rocks! Rocks! Rocks!

Eggs for hatching from splendid purebred utility stock. Barred, Buff and White Rocks. I am not in the show business, but in the business for utility, that's what you need. $2.00 for 15 eggs.

J. B. DAGGETT,
Centerville, N. B.

KINNEAR POULTRY CO. LTD.,

Sussex N. B.

We are now prepared to supply eggs for hatching from our Utility Pens of B. P. Rocks & R. I. Reds (bred for egg production and market qualities) at $4.00 per 100 in lots of 50 eggs or more. Order ahead of time to ensure delivery when wanted.

S. C. Rhode Island Reds Exclusively.

I have made a specialty of this one breed, and keep nothing else. After trying many varieties, we have decided this is the best all round purpose fowl for this climate. For beauty and utility we believe it has no equal.

2 pens bred to lay, and we can guarantee these birds will lay you lots of eggs in the coldest weather. $1.50 setting 15.

1 pen extra fine birds headed by a cock from Lester Tompkins. direct, $3.00 for 15 eggs.

Try the Red-bird for happiness.

SARAH E. MOSES SMITH,
Woodward's Cove, Grand Manan, N. B.

Cattle and Sheep Labels.

Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

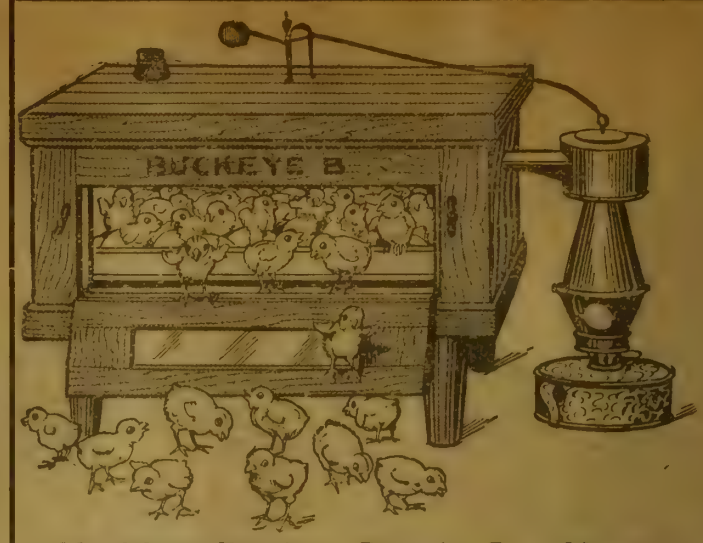
No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

STRAWBERRY PLANTS

All the latest, best producing varieties including: Senator Dunlap, Williams, William Belt, Brandywine and numerous others. Send for Catalogue,

JOHN H. CHUTE,
Berwick, N. S.



You will Need an Incubator This Season. Send for our Catalogue.

Maritime Poultry Supply Co., Moncton, N. B.

"WILLOW FARM" FOR SALE.

"Willow Farm" is situated two miles from the centre of the town of Amherst, which is a growing manufacturing town of over nine thousand population, and one of the best markets in Canada. There is a good public school within forty rods of the house.

The farm consists of one hundred and twenty three acres, forty three acres of marsh and eighty of upland, sixty five of which are under circulation.

The upland is in a high state of cultivation as a large stock of cattle have always been kept on the place and for several years a short rotation has been followed. The soil varies some but is mostly a good loam quite free from stone and easily worked. The pastures are well watered by springs and brooks.

The house is 28x38 feet, two stories with ell 16x20 with good cellar, heated by furnace. Barn 50x80 feet with basement stable which will accomodate forty cattle and six horses, also root cellar holding two thousand bushels. Carriage and impliment shed 26x36 feet and other out buildings all in first-class repair.

The fencing is nearly all of woven wire and in good order,

A wood lot of 70 acres, three miles from the farm will be included in the sale.

A retail milk trade of about one hnndred and twenty quarts a day will be sold with the farm if desired.

This is one of the finest live stock and dairy farms in Cumberland County; a beautiful home and a splendid opportunity for the right man. Apply to

C. HOWARD BLACK, Owner,
Amherst, Nova Scotia.

CALVES WITHOUT MILK

Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

Blatchford's Calf Meal—The Perfect Milk Substitute

No calves can be raised on it at the cost of one where milk is fed.
The only calf meal manufactured in an exclusive Calf Meal Factory Established at Leicester, England, in 1800.

A. A. ARCHIBALD, - TRURO, N. S.

Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. LEA & CLARK, Victoria, P. E. I

SUNNY SIDE STOCK FARM.

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age. One Guernsey bull calf.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

Dates to be Remembered

Chatham Seed Fair, Chatham, N. B. March 28th

Sussex Dairy School Creamery and Farm Dairy Course, March 19—29, 1912.

Sussex Dairy School Cheese Makers Course, April 2—12, 1912.

St. John Exhibition, September 2—7, 1912.

P. E. I. Provincial Seed Fair, Summerside, March 5, 6, 7 and 8, 1912,

Halifax Exhibition, September 11—19, 1912.

N. B. Provincial Seed Fair, Fredericton, March 21 and 22, 1912.

Maritime Horse Show, Amherst, N. S., April 3, 4 and 5, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son, Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside, Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen, Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West, N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS.
Sussex, N. B.

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls, colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best herds in the country. Inspection and enquiry dairy solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

PLANTS THAT GROW.

Strawberries in leading varieties, at 75 cts. per 100. $5.00 per 1000. Raspberry and Blackberries 50 cts. per dozen, $1.50 per 100. Apple, Pear, Plum, and Cherry trees, and all small fruit plants at LOWEST PRICES. For Large Crops and Quick Returns plant our NORTHERN GROWN STOCK.

Bees and Bee-Keeper's Supplies.

Write for Price List and Free Delivery Offer. Discount for early orders.

E. L. COLPITTS - PETITCODIAC.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 25 to 40 tons of hay; lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2, Amherst. P. O., N. S.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

SEA VIEW STOCK FARM
Buctouche, N. S

Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 14 months old.
2 Holstein bulls 5 months old.
1 Holstein Heifer 5 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 1 Cockerel and 2 Pullets. $4.00 per Trio.

S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 K. C. R. I. Red Cockerels. $2.00 each. These must be sold to make room for Breeding Pens.

W. H. HENRY,
Shubenacadie, N. S.

For Sale
Peerless Incubators

1—120 Egg Machine.
1—200 " "

Purchased from the makers last Spring 1911—used last season only—good as new, will sell at a greatly reduced price.

My reason for selling is I have gone into retail milk business and require additional room by converting poultry house into cow shed.

WM, COWLING,
Moncton, N. B.

Eggs For Hatching.

More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in comptition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

Craig Bros., Amherst, N S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

FOR SALE.

My Barred P. Rocks won first prize for mating pen at Charlotte Co. Exhibition last fall. Eggs for hatching from these fine birds and a good hatch guaranteed if properly cared for. Price of eggs on application.

Young Birkshire pigs for delivery after April 12th, both sexes from large mature sows. All registered stock. Correspondence solicited.

W. S. POOLE,
Box 414 St. Stephen, N. B.

An Advertisement in the Maritime Farmer will sell your surplus stock.

4½% For Your Money

Why leave money on deposit in the bank at 4 p.c. when you get half as much more by buying municipal bonds with it? We can sell you town bonds of New Glasgow, Dartmouth or any one of a dozen towns in the Maritime Provinces, to yield 4 1-2 p.c. or better. Send for particulars as to how to make your savings earn more.

Atlantic Bond Company, Limited,

HOWARD P. ROBINSON, President.

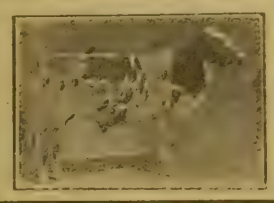
Herald Building, HALIFAX, N. S.
Bank of Montreal Building, ST. JOHN, N. B.

MAPLE FOREST YORKSHIRES

Litters Dating from February 15th and After.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.



Wish-Ton-Wish Stock Farm.

Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

HARDING BROS., Props.,
Welsford, Queens Co., N.B.

GLEN VIEW

Barred Plymouth Rocks
White Wyandottes
S. C. Rhode Island Reds
S. C. Brown Leghorns.

Eggs for hatching from carefully mated pens of healthy, vigorous birds that are always first, quality in the show room. None but the best specimens are retained for breeding. This seasons matings are the best yet, almost exclusively made up of prize winners in the hottest competition. We have a few very fine male birds for sale yet. Eggs $2.00 per 15 straight.

WALTER McMONAGLE & SON, - Sussex, N. B.

COBEQUID FARM HOLSTEINS

We offer for quick sale, several bulls fit for service from cows with Record of performance tests of 12,715,75 lbs. of milk testing about 3.7 p.c. at 2 years 2 months, another with 13,283.5 lbs. milk and 512.67 lbs. butter when 2 years old and another with 18,482.75 lbs. milk and 753.3 lbs. butter in 1 year at maturity. These bulls are in good condition, well grown and straight. For particulars write.

SAMUEL DICKIE, - Central Onslow, Col. Co., N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, - TRURO, N. S

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from [illegible] six months bred from some of the very best dams obtain. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. E. FOSTER, Prop.
Shubenacadie, N. S.

Feed The Land—
AND
It Will Feed You

Many farmers would get higher interest on their money if deposited IN THE SHAPE OF FERTILIZERS IN THE SOIL, than if they placed the money in bank—the interest being paid in increased crops.

When the Canadian farmer becomes sufficiently interested in fertilizers to make his own mixtures at home, it will be a good thing for the farmer and for the country at large.

Fertilize scientifically—study the "VANCO" Book—and reap the benefits in bigger crops.

Make your own Fertilizers, to suit each soil and crop — buy **"Vanco"** guaranteed chemicals, prepared right here in Toronto, and thus save the heavy duty which must be paid on ready-mixed fertilizers

MURIATE OF POTASH
—guaranteed 50% actual Potash.

SULPHATE OF POTASH
—guaranteed 48% actual Potash.

NITRATE OF SODA
guaranteed 15% Nitrogen, equal to 18.84% Ammonia.

ACID PHOSPHATE
guaranteed 14% to 16% available Phosphoric Acid.

Write for our prices—and also copy of the "Vanco" Book—you'll find it a big help in mixing Fertilizers. 45

CHEMICAL LABORATORIES,
148-158 Van Horne Street, • TORONTO.

Valuable Book on Barn Building FREE

Write at once for this valuable book. It contains information that every farmer should have regarding the sanitary housing of dairy cows. It explains every fundamental of correct construction and gives proper dimensions and arrangements. It describes lighting, ventilation, stable floors, and their construction, and contains suggestions about silos, site, exposures, appearance, design, drainage and inside equipment. Besides, you will find in this book a number of practical barn plans and other information that may point the way to your saving many a dollar. We have designed many of the finest and most modern dairy barns in this country and this book is based on our long experience and expert knowledge in dairy barn construction. The book contains in concise, clear and condensed form, information necessary to any farmer who is planning to build or remodel. Understand, we send you this book absolutely free without any obligation on your part—just for answering these few questions: Do you intend to build or remodel? How soon? How many cows have you? Will you want a litter carrier? Will you want a hay fork outfit? Send to-day.

BEATTY BROS. BOX H FERGUS, ONTARIO

MARKETS.

St. John.

GRAIN—Buckwheat, $2.50 to $3.00.
LIVE STOCK—Milch Cows, $50.00 to $60.00.
DRESSED MEATS—Beef, (carcass), 7c. to 10½c.; Beef, (retail), 9c. to 20c.; Mutton, 6c. to 9c.; Veal, 9c. to 11c.; Pork, 9c. to 9½c.
DAIRY PRODUCTS—Creamery Butter, 34c. to 37c.; Dairy Butter, 33c. to 35c.; Cheese, 14c.
POULTRY AND POULTRY PRODUCTS—Eggs, 22c. to 25c.; Fowl, $1 to $1.75; Chickens, $1.00 to $1.75; Ducks, $1.50 to $2.00; Turkeys, 28c. to 30c.
FRUIT—Apples, $1.50 to $2.50; Honey, 80c. to $1.00 gal.; Maple Products 12c. to 16c. per lb.
MISCELLANEOUS—Hay, $12.00 to $16.00 ton; Wool, 14c. to 21c.; Beef Hides, 11½c.; Calf Hides, 17c.; Sheep Skins, 60c. to $1.00; Lamb Skins, 60c. to $1.00.
VEGETABLES—Carrots, $1.75 bbl.; Potatoes, $2.00 to $2.15 bbl.; Turnips, $1.00 bbl.; Beets, $1.50 to $1.75 bbl.

The market was poorly supplied this week on account of bad roads, although there was a good supply of beef. Eggs have taken a big drop in price. Fowl was scarce. There was a good demand for butter and the market was firm at 35c. Maple products are on the market, last year's stock boiled over and doctored up. Veal is coming in quite plentifully. Prospects are bright for active Easter marketing.

Halifax.

GRAIN—Oats, 56c. to 58c. bus.; Peas, $5.75 to $6.00 bbl.; Barley, $1.50 to $1.80 per 100 lbs.
FEEDSTUFFS—Bran, $27.50 to $28.00 ton; Shorts, $28.50 to $29.50 ton; Middlings, $30.00 to $30.50; Oil-cake, $2.40 bag; Corn Meal, $1.77½ to $1.80 bag; in bbls. 20c. more.
GRASS SEEDS—Timothy, 19c. to 19½c. lb.; Com. Red Clover, 23c. to 24c. lb.; Mam. Red Claver, 23c. to 24c. lb.; Alsike, 21c. to 22c.
LIVE STOCK—Butcher's Cattle—5½c. to 6c. live weight; Stockers, 4½c. to 5c. live weight; Milch Cows, $30.00 to $40.00; Sheep, 9c.; Lambs, 40c. to 80c.; Hogs, 7c. to 8c.
DRESSED MEATS—Beef, (carcass), 10c. to 11c.; Beef, (retail), 14c. to 22c. lb.; Mutton, 9c. to 9½c.; Veal, 7c. to 8c.; Pork, 12c. to 16c. lb.
HORSES—Drafters, $200.00 to $300; Roadsters, $200.00 to $250.00; Carriage, $150.00 to $250.00.
DAIRY PRODUCTS—Creamery Butter, 34c. to 36c. lb.; Dairy Butter, 32c. to 33c. lb.; Cheese, 16c. to 16½c.
POULTRY AND POULTRY PRODUCTS—Eggs, 30c. to 35c. doz.; Fowl, 16c. to 20c.; Chickens, 18c.; Turkeys, 24c. to 25c. lb.
FRUIT—Apples, $3.00 to $4.00 bbl.
MISCELLANEOUS—Hay, $13.50 to $14.50 ton; Straw, $8.50 to $9.00 ton.
VEGETABLES—Carrots, very scarce $1.00 per bus.; Potatoes, 80c. to 85c. per bus.; Turnips, 40c. to 45c. bus.; Beets, $1.50 per bbl., 50c. bus.

Charlottetown.

GRAIN—Oats, white, 48c. to 50c.; black, 50c. to 55c.
FEEDSTUFFS—Bran (retail), $1.50 to $1.60; Shorts (retail), $1.50 to $1.60; Middlings, $1.50 to $1.60; Oil-Cake, $2.50 to $2.75; Cottonseed Meal, $1.90 to $2.25; Corn Meal, $2.00.
GRASS SEEDS—Timothy, 17c. to 20c.; Com. Red Clover, 25c. to 30c.; Mam. Red Clover, 25c. to 30c.; Alsike, 25c. to 30c.
LIVE STOCK—Butcher's Cattle—5½c. to 6½c.; Stockers, $18 to $35.00; Milch Cows, $25 to $50; Sheep, 3½c. per lb.
DRESSED MEATS—Beef (carcass), 7½c. to 10c.; Beef (retail), 8c. to 16c.; Mutton (carcass), 8c. to 10c.; Pork, (carcass), light, 7½c. to 8c.; select, 8c. to 8½c.; heavy, 6½c. to 7c.
HORSES—Drafters, $150 to $225; Roadsters, $150 to $225; Carriage, $150 to $225.
DAIRY PRODUCTS—Creamery Butter, solids, 32c.; prints, 33c.; Dairy Butter, tubs, 25c. to 27c.; prints, 25c. to 30c.; Cheese, 15½c. to 16c.
POULTRY AND POULTRY PRODUCTS—Eggs, 20c. to 21c.; Fowl, 8c. to 12c.
FRUIT—Apples, $2.50 to $4.00 per bbl.
MISCELLANEOUS—Hay, loose, 75c. per 100; pressed, $12.00 to $15.00; Straw, $6.00 per ton; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 45c. to 75c.; Lamb Skins, 45c. to 75c.
VEGETABLES—Potatoes, 50c. per bus.; Turnips, 16c. per bus.

Roads have become very bad and what produce offers comes mostly from close into the city, but notwithstanding the condition of the roads, considerable produce has been brought in within the last two weeks. Hay has been offered quite freely but prices have held firm. Vegetables are beginning to move again and quite a lot of turnips are offering and few are readily sold at 16c. Potatoes are also beginning to come out and are being sold at 50c. Beets, Carrots and Parsnips are very scarce and we do not know of any being offered. Dressed Meats are also offered in smaller quantity except dressed hogs which have been fairly plentiful, but prices have held firm. Oats are very scarce and there is a wide range in prices as farmers are looking for seed, and oats of suitable quality bring prices even higher than those quoted. Eggs are beginning to offer freely and we look for further decline in price very shortly. Butter is scarce and prices firm. Cheese is about out of the market except in a small jobbing and retail way.

Trying to Get Something For Nothing Never Pays

IF you buy a separator at a very low price you get a separator built to meet that price. Efficiency and durability in a cream separator cannot be replaced by anything "just as good" at a low price. It takes brains, good material, and a well-equipped factory to make good separators. These things cost about the same price everywhere, and one company cannot secure them any cheaper than another. The difference in the price generally represents a corresponding difference in the value of the machines.

I H C Cream Separators Dairymaid and Bluebell

are as good separators as can be built. If you buy an I H C you will get more years' work out of it than you could out of any other separator, consequently it is the cheapest separator you can buy.

Extra long shafts and spiral cut gears insure durability. Phosphor bronze bushings protect the moving parts. Grit and milk cannot get into the gears, yet the gears are easily accessible. These separators are easy to turn because the working parts are accurately made and perfect oiling facilities are provided.

The bowl has the most effective skimming device ever designed, and a dirt arrester chamber which removes the impurities before the milk is separated. This insures a high grade of cream and makes the bowl easy to clean. The neck bearing is simple and trouble-proof. Made in two styles, each in four sizes.

The nearest I H C local agent will be glad to have you examine one of these separators, or, write the nearest branch house for catalogue.

CANADIAN BRANCH HOUSES:
International Harvester Company of America
(Incorporated)
At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

Protect the Bees.

The little busy bee is one of the fruit grower's best friends. In his search for the hidden sweets in the open blossoms, the bee comes in contact with the pollen from the anthers of the flower. This pollen is the fine sulphury like dust that you sometimes see scattered all around in the little streams and ponds in early summer when the trees of the forest are in blassom. Some of the apple blossom pollen adheres to the bee and in his rambling lrom flower to flower some of this fine dust falls from his body on the stigma where it works its way through the style to the ovule at the bottom of the flower. The ovule is fertilized by the pollen and it immediately begins to grow. It is a well known fact that when bright sunny weather occurs during the time the pollen is being emitted from the anthers of the flower the prospects are that a large percentage of the blossoms will set and form fruit. On the other hand when wet stormy weather occurs during this period the setting percentage is usually very low. In bright sunny weather the bee is always busy. He visits thousands of blossoms every day and in this way a great many blossoms that would otherwise remain unfertile become fertilized.

Of course the main medium for carrying the pollen from anther to stigma are the light breezes that blow through the trees but the bees play a very important part in assisting this work. It is therefore the bounded duty of each and every fruit grower to protect bees from poisoning by avoiding the use of poisonous sprays during tbe time the bees are working on the apple blossoms.

I leave it to the fruit growers' best judgment in behalf of his own best interests to protect the bees.—Fruit Grower, Sunbury Co., N. B.

Sickness is usually caused by the accumulation of waste matter and impurities within the body.

Dr. Morse's Indian Root Pills,

enable the bowels, the kidneys, the lungs and the pores of the skin to throw off these impurities. Thus they prevent or cure disease. 12

25c. a box.

MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.
Personal attention given to sales of utter, Eggs, Hogs, Beef, Poultry, Fruit. Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 906.

How the Plant Feeds.

When the plant is growing the tiny roots permeate the surface 6 to 8 inches of the soil, in the case of small grains—in corn and clover they reach from 2 to 4 or 5 feet deep, and in the fruit trees to many more feet. These tiny rootlets lie close to the soil particles, around which particles there is a thin film of water. This water contains the essential salts mentioned above, in solution. Now, the plant takes this solution up through its roots and sends it up to its leaves, where carbon dioxide, or the gas which we breathe out, is taken in by the mouths of the leaf. Under the action of the sunlight, the tiny factories of the leaf are set in motion, and the carbon of the air is combined with the hydrogen and oxygen in the water, to form the sugars and starches of the plant. The other elements are combined to form the remainder of the plant.—H. C. Bell.

Two Deputies For Ontario.

Following the appointment of C. C. James, C. M. G. as Special Commissioner to inquire into Agricultural conditions in Canada, Mr. W. B. Roadhouse has been appointed Deputy Minister of Agriculture for Ontario and Mr. C. F. Bailey, a Pictou, N. S. boy, has been appointed Assistant Deputy Minister. Mr. Bailey judged Beef Cattle at the Halifax Exhibition last Fall. He is a graduate of the Ontario Agricultural College and is, well informed in regard to the work he will be called upon to do.

Big Ben

**To sleep late's pleasant, now and then,
Make it Sunday morn—says Big Ben**

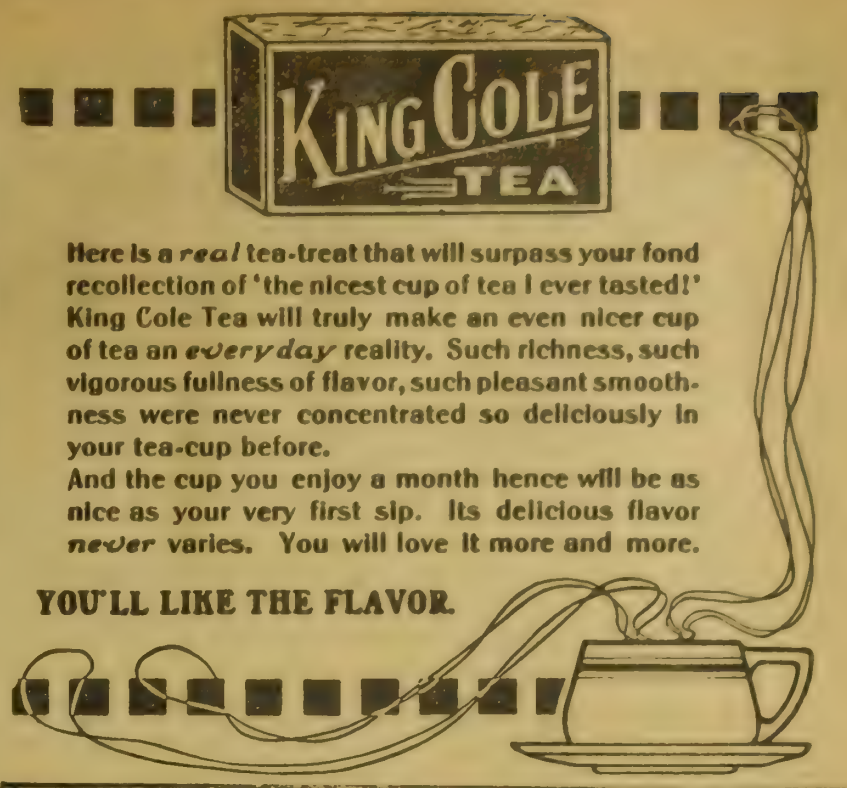
Big Ben is an alarm clock that's on the job every minute of the day. He *rings* on time, he *runs* on time, he *stays* on time.

He *weighs* three times as much as the average alarm clock, he *rings* three times as loud, he *lasts* three times as long.

He has a great big dial you can easily read in the *dim morning light*—a cheerful, deep toned voice that will wake you on your *sleepiest mornings* — large, strong winding keys that are a *pleasure to wind*—selective alarm calls that ring *just when you want* and either way you want, steadily for *five* minutes or intermittently for *ten*.

He's punctual, lasting, handsome and the best *insurance* against oversleep that's ever been heard of. His work doesn't end with the morning call, he's a good reliable time keeper for *all day* use and he's good looking enough for any surroundings.

5,000 Canadian dealers have already adopted him. His price is $3.00 anywhere.—A community of clockmakers stands back of him, *Westclox, La Salle, Illinois.*—If you cannot find him at your dealer's, a money order sent to them will bring him to you duty charges prepaid.



Here is a *real* tea-treat that will surpass your fond recollection of 'the nicest cup of tea I ever tasted!' King Cole Tea will truly make an even nicer cup of tea an *everyday* reality. Such richness, such vigorous fullness of flavor, such pleasant smoothness were never concentrated so deliciously in your tea-cup before.

And the cup you enjoy a month hence will be as nice as your very first sip. Its delicious flavor *never* varies. You will love it more and more.

YOU'LL LIKE THE FLAVOR.

CONCORD VALLEY

SPRING IS HERE
IN THE SUNNY DRY BELT

While most of you who are reading this magazine, have still two or three months of the worst part of the winter to put in

We had a wonderful winter—Beautiful—But it is the sunshine of the delightful—Bright—Warm—Dry Belt Summers—That we look forward to—there is something in it that calls for Woods, Meadows, Cool Waters, and broad porches on comfortable Bungalow's

It makes us glad—and it will make you glad—to know that wife and babies are away from the glare, the blare, and the dust, getting strong and rosy.

Y-o-u can Live, Prosper and Enjoy Life in the Dry Belt—for this is No Millionair's Dream—Because the Dry Belt has proven to be beyond doubt the greatest Fruit and Vegetable producing district in the world having won numberless prizes in competition with the whole world.

An average of 310 sunny days in the Dry Belt.

The famous Ashcroft prize potatoes are grown in the Dry Belt

The Orchard known as (Widow Smith's) produced $22,400 worth of apples from 28 acres—Last season.

Another good feature is the Absence of pests in the Dry Belt—And no less from frost.

The property we want you to invest in is—Concord Valley—25 miles from Kamloops—on the sparkling North Thomson river—each ranch within 10 to 20 minutes of C. N. R. Depot—and also a daily boat service.

If you are interested in Real Fruit land in a Real Fruit Belt you are very welcome to our Booklet APPLE GROWING Past Present and Future—Drop us a card—R-I-G-H-T N-O-W.

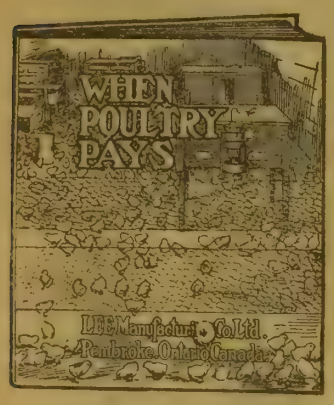
ORCHARD HOME DEVELOPMENT Co. Ltd.
KAMLOOPS, BRITISH COLUMBIA.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

MAKE THE PEERLESS WAY WORK FOR YOU AND INCREASE YOUR PROFITS FROM POULTRY

YOU don't need to be told that the biggest fortunes are made by those who put to work for themselves, the knowledge of other people. You can put our knowledge to work for you and have The Peerless Way help you to increase your poultry-profits. Don't waste time in poultrying by trying to learn alone; begin where we have left off. Take the experience that we have acquired in operating the largest and most successful poultry farm in the Dominion—the Poultry Yards of Canada, Limited—and apply it to your own use. Over 20,846 Canadian poultrymen are now following our methods and, through The Peerless Way, with its co-operative marketing plans are selling direct to the highest-cash-price-market and making more money than they could ever have made the old way selling to the middleman or the cold storage dealer. With the supply of Canadian poultry products equal to only one-third of the demand, we have realized the need for showing farmers the big profits that lie in this field of golden opportunity. But even the 20,846 we have started right, have not made a dent in the market, so rapidly is the country growing and the demand increasing. YOU can make money in poultrying—right now; and you can make greater profits every year. The Peerless Way will teach you how you can duplicate our big success, how you can increase your output at higher prices and how you can double or treble your profits.

"WHEN POULTRY PAYS" is a book that tells how you can put The Peerless Way to work for yourself. Please observe that this book is not The Peerless Way itself; it is the history of The Peerless Way, rather. It does tell, however, of the success of hundreds who have adopted our methods and of how we, ourselves, have made our own poultry farm grow to the biggest in Canada; and it tells how your own success can be made to equal ours.



Send The Coupon For This FREE Book

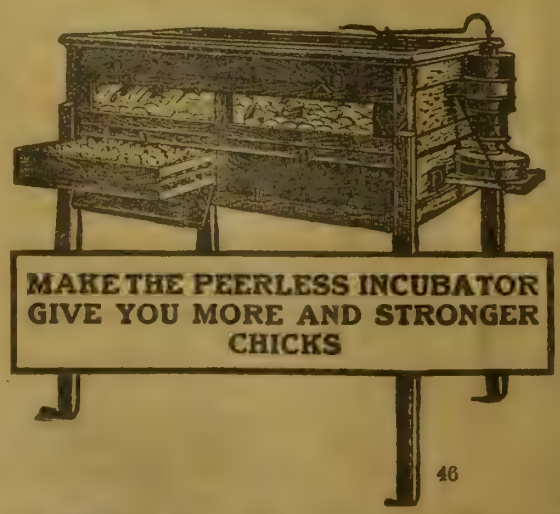
"When Poultry Pays" tells you all about the Peerless Incubator and Brooder which have made The Peerless Way possible; it tells you why you cannot make a success of Canadian poultrying with incubators and brooders designed for warmer climates where there are no long, cold winters, and just how and why the Peerless is adapted to this climate. Remember, this book is a practical, common-sense treatise throughout and to the man who has a little money, average common-sense and a willingness to look after his business, it is a genuine guide to an unworked field of profit right at his own door.

LEE
Manufacturing Company, Ltd.
118 Pembroke Road
Pembroke, Ont.

Gentlemen:—
You may send me your book "When Poultry Pays," and the proof of how The Peerless Way has successfully co-operated with others. 46

Send Us The Coupon

Name.....
Address.....
Town.....
Province.....



46

Our Co-operative Marketing Plan Will Get You Higher Prices

THE extra few cents' profit that you might have had—but which go to the cold-storage buyer and middleman—represent but a small per cent. of your total selling price. But they represent a very, very big percentage of your profits—and it is profits you are after. Through our Co-Operative Marketing Plan, we can put you in touch with buyers who will take your whole output—great or small—at highest, spot-cash, market prices and charge you no commission. This is merely one detail of the service of The Peerless Way.

Profit Lies In Knowledge—Let Us Show You

IF you are keeping poultry now, you may not be able to see how you could double or treble your profits. If you knew how, you would do it—naturally. But you don't *know*. The Peerless Way will teach you the organized, highly systematized methods that govern the largest and most successful poultry farm in the Dominion—the Poultry Yards of Canada, Limited. It will not only show you how to raise more poultry and increase your egg production, but it will also show you a market twice as big again as your present market—and will show you how to take advantage of it.

20,846 Poultrymen Follow The Peerless Way

IN every part of Canada are followers of this new method of more intensive poultrying. They have succeeded. You can, too. All you have to do is to follow the instruction given free by our Poultry Advisory Board and you can't fail. Or, if you prefer, you can come to Pembroke and, for a moderate tuition fee, take a special course at our poultry farm. But don't get the idea that you must do this; you can learn just as much from a careful study of The Peerless Way right at home—use the coupon.

LEE Manufacturing Co. Ltd.
118 Pembroke Rd.
PEMBROKE ONTARIO CANADA

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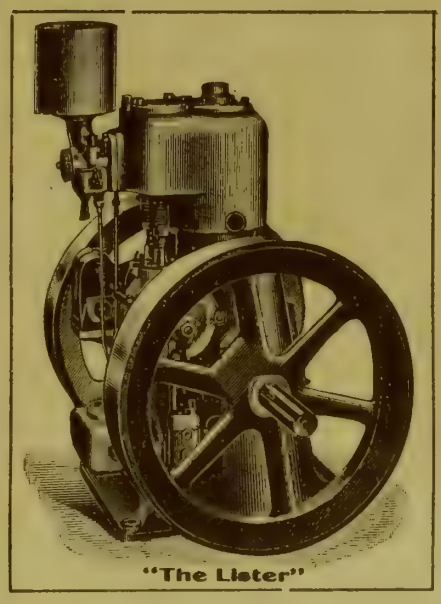
THE Maritime Farmer

AND CO-OPERATIVE DAIRYMAN

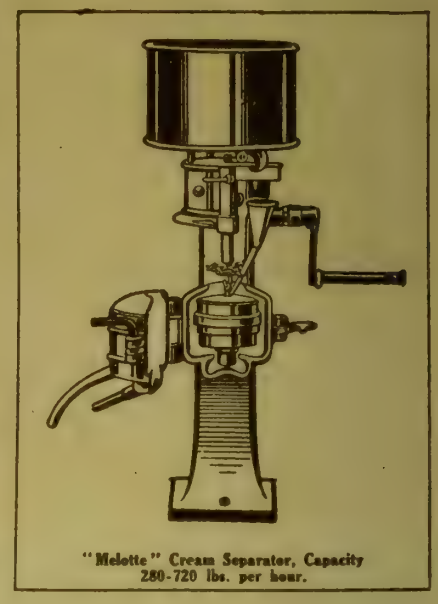
St. John, N. B.,
April 16th, 1912.

The Engine You Have Been Waiting For



"The Lister"

The "Lister" Vertical Gasoline Engine



"Melotte" Cream Separator, Capacity 280-720 lbs. per hour.

The "Lister" Engine is designed especially to provide the agriculturist and small power users with an efficient, simple, safe and durable engine capable of being operated by the average farm hand.

The CYLINDER, PISTON, VALVES, GOVERNOR, CARBURETTER, etc., have special features making for efficiency under all conditions as well as for durability.

IGNITION

The "Lister" Engine is fitted with the famous High Tension Bosch Magneto Ignition which eliminates the frequent delays, expense and annoyance of inferior system of ignitions.

LUBRICATION

A small pump distributes the oil automatically and continuously just where needed.

SPECIAL ADVANTAGES

SIMPLICITY, ACCESSIBILITY, QUALITY, ECONOMY, INTERCHANGEABILITY of all parts.

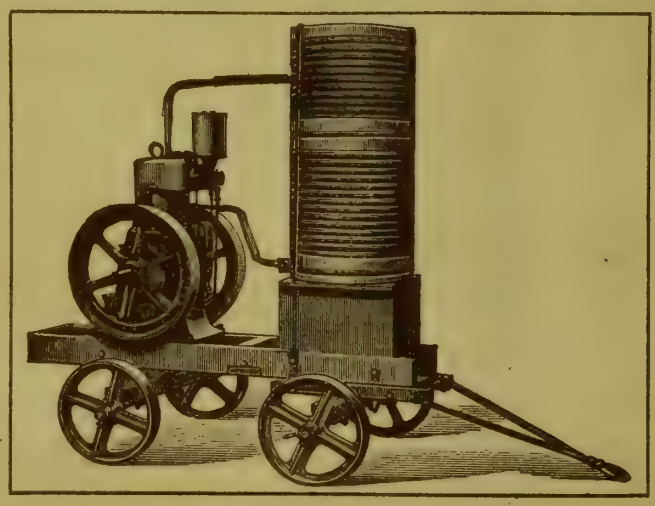
These features make the "Lister" Engine pre-eminently suited for grinding, pumping, sawing, threshing, elevating, sheep shearing, etc., etc., for contractors, for work shops, for electric lighting, in fact for any power service.

The "Lister" Gasoline Engine

is another production from the works of R. A. Lister & Co., Limited, Dursley, England, made famous originally by the Alexandra Cream Separator and in later years by the

MELOTTE

now known as the King of Cream Separators.



OUR MOTTO

"Satisfaction to the Purchaser"

Write for Catalogue Giving Full Particulars

Address

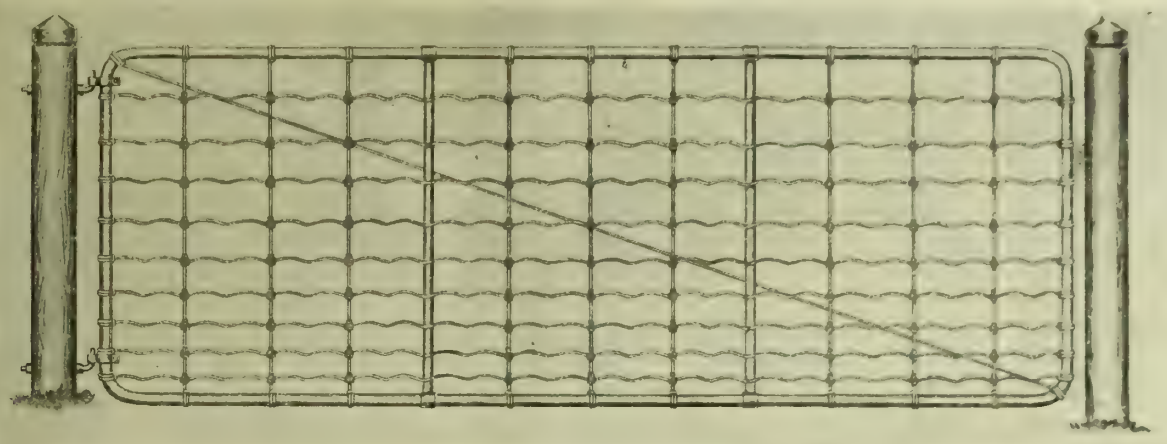
R. A. LISTER & CO., LIMITED

82 Water Street, St. John, N. B. 58-60 Stewart Street, Toronto. 197 Princess St., Winnipeg, Man.

Good Wire Makes Good Fences

What have you been buying in the way of wire fencing? Have you been getting your fences from outside manufacturers or have you been patronizing a local industry, which some years ago demonstrated that it builds the best fence on the market.

Our wire is especially bought for the climate conditions of the Eastern Provinces, and we have taken into consideration the quality of the wire as well as its construction when endeavoring to put out a fence that will last.



The Straight Stay Fence

This is without exception, the best stiff upright fence on the market. We use the same high grade quality of wire and for those preferring a fence of this pattern we recommend the "Straight Stay."

This is also a woven wire, Factory Made Fence

It is a WIRE LOCK and a GOOD ONE

Lawn Panel Fencing **Steel Frame Gates** **Steel Fence Posts**

Coil Spring Fencing Wire **Fence Staples**

We make the Best Fences for Lawns, Private Grounds, Cemeteries, etc.

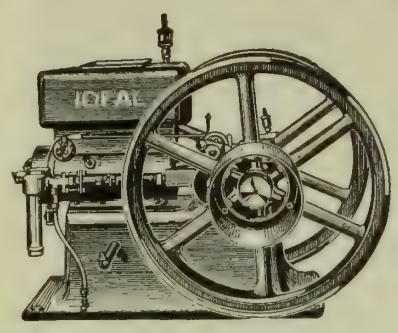
Drop us a card for particulars and price.

New Brunswick Wire Fence Company, Limited

MONCTON, - - New Brunswick.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

As You Must

wear shoes. You may as well get good value for your money.

"Taylor's Shoes"

GIVE SATISFACTION

No matter what use you put them to They stand the Test. Write us.

The Robert Taylor Co., Limited
HALIFAX, N. S.

YOU WANT TO

Make Money

Dividend of 10% assured the first year

Five going concerns have decided to amalgamate for the purpose of not only making more money but so that they may expand and thus be in a better position to handle their increasing business in all Canada.

Each of these concerns are making good on the capital invested and it is estimated that under the proposed amalgamation that money will be saved both through the buying and selling ends and also that expenses will be cut in two, that it will be possible to earn dividends of 20 per cent in a short time.

During the next few years there will be millions of dollars spent in Canada and it is the object of these concerns to put themselves in a position to get a large share of this money. This could not be so easily accomplished if each were to operate separately.

Each of the five concerns are engaged in separate pursuits consequently no market condition can effect more than one at a time. Each are handling lines that are in daily use. The object is to have the stock of the company as widely distributed as possible. It can only be purchased in not less than $100.00 shares and not more than $1000 to one person.

We are not selling stock as a favor to the buyer, but because with additional capital the company can make money very fast.

The control of the company will be in the hands of incoming investors and the new capital is to provide for expansion.

Every Investor has an opportunity to assist in developing business and when 400 new families become customers there will be a further earning of 20 per cent. to investors.

We have no time to waste and our object of advertising in this way is to secure the names of parties that are desirious of a safe investment.

The company will be under the management of a man and a directorate that will bear the closest scrutiny. Everything will be made clear when we answer your communication.

If you have money that is not earning what it should please fill in the enclosed coupon and mail it today.

I have Money that I want to invest in a safe way and would be pleased to have you send further information.

This Does Not Bind Me in Anyway.

Name .....

Address.....

MARITIME INVESTORS COMPANY

CANADA LIFE BUILDING

St. John, N. B.

TREES Grow Better Yield Bumper Crops Without Fertilizer

WHEN

the land has been prepared by Stumping Powder

A tree hole can be excavated in an instant with Stumping Powder. It would take a man several minutes to dig it. And then the spaded hole would be hard all the way down, making it difficult for transplanted roots to take hold. This is one of the chief reasons why transplanted trees so often die.

The accompanying illustrations show the wonderful difference in growth in "blown" and hand-dug holes.

No. 3— Bing Cherry Tree Set in Dynamited Hole

C. X. L. Stumping Powder

renders the fertility in the land available. It makes the sub-soil porous allowing root growth. Makes it absorb plenty of water in rainy weather, conserves the water in periods of drought, and this water is the source of the vehicle which carries the plant food. This water in the open, blasted soil is carried to the top by the roots of the plants or trees as needed for their growth.

No need of expensive fertilizers when you use Stumping Powder.

A whole row of tree holes can be excavated in an instant when charged with Stumping Powder electrically exploded.

Our Illustrated Free 120 Page Book

Tells you how to clear land of Stumps and Boulders. How to break up Hardpan, Shale, or Clay Subsoils; and **SAVE TIME and MONEY** by using Stumping Powder in digging Cellars, Wells, Drains, Ditches and Reservoirs. Regenerates old worn out farms and makes the fertility in subsoil available to plants.

No. 4—Bing Cherry Tree Set in Spaded Hole

QUITE SAFE TO USE

Our handsome, illustrated Book tells all about it. Send a post card for it today.

It is free. It shows you many photographs of just how things are done.

CANADIAN EXPLOSIVES, Limited

Head Office MONTREAL, P. Q.

TRADE in your old separator on account of a new

DE LAVAL
CREAM SEPARATOR

38,796 Users did so Last Year, 26,569 in the U. S. Alone

It's come to be an accepted fact that DE LAVAL cream separators are as much superior to other separators as other separators are to gravity setting systems, and that an up-to-date DE LAVAL machine will on an average save its cost every year over any other separator.

Aside from the actual saving in more and better cream and butter and in time of separation and cleaning, easier running, greater durability and less repairs, there's the pride, comfort and satisfaction which none but the owner and user of a DE LAVAL machine can feel in his separator.

In consequence thousands of users of inferior and worn-out separators of various makes take advantage every year of the educational allowances which the DE LAVAL Company continues to make and trade in their old separators.

APPLIES TO OLD DE LAVAL USERS ALSO

While all this applies particularly to the users of inferior separators it applies likewise to the many thousands of DE LAVAL machines 10 to 25 years old. They are not worn out and are still superior to other new machines of today, but there are so many improvements embodied in the modern DE LAVAL machines that these old DE LAVAL users can well afford to make an exchange and soon save the cost of doing so.

SEE THE NEAREST DE LAVAL AGENT

He will tell you how much he can allow on your old machine, whether a DE LAVAL or some other make, toward the purchase of a new DE LAVAL. If you don't know a DE LAVAL agent, write to the nearest DE LAVAL office giving make, number and size of your present machine, and full information will be sent you.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.

The Steady Growth of the Mutual Life of Canada

Is convincing proof of the confidence in which it is held by the public. The Mutual Life of Canada is an exceptionally good company in which to insure, judging from the annual report which shows among other things :

That the expense rate is remarkably low, the economy of management adding in no small degree to the surplus earnings which means larger dividends for the policy holders.

That the average rate of interest on investments is high, and has again increased, adding still further to the profits earned by the policies.

The following tables are also worth careful study and consideration, if you are about to take out life insurance :

Phenomenal Growth of Business

	1886	1911	INCREASED
Income - -	$ 272,000	$ 2,450,000	Nearly 10-fold
Interest - -	43,000	875,000	Over 20-fold
Assets - -	905,000	18,131,000	Over 20-fold
Insurance in force	9,774,000	71,000,000	Over 7-fold
Surplus - -	61,500	3,312,000	Over 50-fold

Safe Character of Investments

	1909	1910	1911
	P.C.	P.C.	P.C.
Mortgages - - -	47.4	51.	53.5
Debentures and Bonds - -	33.5	30.7	27.4
Loans on Policies - -	12.8	12.5	12.6
Real Estate - - -	.3	.5	.1
Cash - - - -	1.6	.8	.1
Interest Due and Accrued and Deferred Premiums - -	4.4	4.5	4.5
	100.	100.	100.

The MUTUAL LIFE OF CANADA

Agents Everywhere in Canada -- HEAD OFFICE, Waterloo, Ont.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. ST. JOHN, NEW BRUNSWICK, APRIL 16, 1912. Number 13.

How I Grow Potatoes on a Business Basis.

By C. Fred Fawcett, Upper Sackville, N. B.

Awarded First Prize in The Maritime Farmer's Potato Growing Contest.

IN TRYING to tell MARITIME FARMER readers how to grow potatoes on a successful commercial basis I feel that youth should give place to old age—however I will set down a few things as to my system as I have had to keep my creditors satisfied from the results of my labors.

Suitable land for potatoes is below its value in this section. The initial cost of a thirty acre field I have was about $12.00 per acre. This, we feel, is away below the actual value—however, some other fields that I have known of can be purchased around this figure in this section. In selecting our potato soil we look for a sandy loam well drained, by natural means, if possible. This soil seems particularly adapted to grow nice clean, white, smooth stock. Potatoes do well on a variety of soils but the above is my preference. If a field is known to be wet and likely to be kept so by a rainy summer, I would not plant potatoes there. A field that has a clay subsoil is also not very suitable as the water cannot get down and often is more like soup than a potato field, in a wet fall. We always try to provide a clover sod for our potatoes but of course, if this is not available any old sod field will do that is not too tough altogether. I well remember one of the first fields I ploughed up for potatoes. It had not been ploughed for upwards of forty years and one neighbor told me that he would be able to put all the potatoes I could grow in that field that year in his hat. I don't think he ever tried to do this, however, as the field turned out about one hundred barrels to the acre. Sod is the place for a potato crop every time but be sure and leave the sod under where it was put and not go bobbing up and down with a plough trying to make furrows for potatoe rows. With a clover sod to a person not used to it, there will come visions of stored up available plant food and big crops. Just try it and then write me if you find what I tell you is untrue.

From close observation I am almost led to believe that on my particular farm spring ploughing gives me the best results. I would not lay this down as an absolute guide for others because I believe every soil has differences. Heavy soils would probably be, and are benefited by fall ploughing—but as I said before, when there is a good growth of grasses started and this is turned under fairly deep, say four or five inches, and the pototoes immediately gotten into the ground, we have fulfilled part of the conditions at least, favorable for a profitable crop. Early fall ploughing has its advocates and good results are obtained but in either case the land should be harrowed thoroughly immediately after in order to do the most effective work with the least possible outlay of expense. In harrowing our soil we are very particular to have it thoroughly done. We use the disc, spring tooth, drag harrow and leveller in the order named. We harrow both crosswise and lengthwise and sometimes diagonally. We are never satisfied in caliing a sward field done until we can go along and find no ridges with the heel of our boot when we draw it crosswise of furrows. Some fields require more strokes than others to bring it into this condition but we find from six to eight strokes generally sufficient.

Machine for Distributing Fertilizers.

Last year in our large field we used four horses on the ordinary two horse disc harrow and with disks set at full angles and a two hundred pound man on seat we were able to accomplish very effective work and in a minimum of time. I find a four horse team for many other various farming operations a money saving contrivance. We haul to the car with this team and thus save a man's wages. After the last stroke of the smoothing harrow which leaves the field as near level as possible, this ground is ready for planting. This will be from the middle to the last of May in an average year. We have planted in April but for general farm work about the 16th of May is time enough.

Up to this time I have said nothing about fertilization. This is a question upon which there is a great difference of opinion. Many old farmers prefer barnyard manure. With me, it is impossible for my acerage and I depend entirely for fertilizing my potato crop on clover and commercial fertilizers. However, I know manure that is well rotted, or which is applied in the winter, will add greatly to the crop. Heavy applications of green manure spread broadcast and also in some seasons when the manure has been put in the furrows and the sets dropped on that, has been very disastrous to the crop. Green manure seems to tend toward making the potato watery or we might say waxy. Good commercial fertilizer adds greatly to the quality of the potato and so we apply our manure to other crops. However, this winter I was fortunate enough to get a large pile of manure from some lumber camps near by and we are certainly going to make the most of the opportunity. I believe that if a person were so situated that black muck could be procured that this would make a valuable adjunct to the humus content of the soil where this work can be done conveniently and cheaply in the winter season. We have done some work along this line and so far as we can tell, with splendid results.

The choice seed patato has two, three or four sets with about two ounces of meat on each set. We like our sets large, junky, cut the same day as planted and coated with land plaster. I have increased my yield wonderfully with selected seed, gotten by careful breeding year by year. The sets and fertilizer are now made ready and taken to the field. We would not suggest any one planting several acres of potatoes to follow the hand dropping system and therefore in this we will only consider the modern potato planter. This machine furrows out the row, drops the set, and fertilizer and covers in one operation. You start at one side of the field and go backwards and forwards until the field is done. We use from one half to three quarters of a ton to the acre of the best grade of potato fertilizer and have found a second application to make very decided improvements after the vines are up. A fertilizer containing four per cent. ammonia, seven to eight per cent. phosphoric acid and ten per cent. potash (K_2O) has the necessary amounts of suitable plant food, when applied at the above rate per acre, to supply a little more than the necessary amounts required for one csop. The sets are dropped for big crop production at about fourteen inches to fifteen inches apart in the rows about thirty-four to thirty-six

inches apart. The machine then with a driver and man behind to guarantee one set in a place and one set in each place, proceeds to go over our field at the rate of about four acres in ten hours. To a person wishing to follow somewhat in this system and not having a planter, we would suggest using a marker made from a deal with pegs through at right distances for your rows and shafts and handles attached and mark out his field with this. Then drop the sets and fertilizer in these marks, cover them with a horse hoe. While this is slower and a little more tedious, yet the result will be practically the same as those derived from the use of a machine. The potato hoe is an absolute necessity later in the cultivation and thus this machine can be made to serve two purposes. We think a good practice in dropping fertilizer and sets by hand is not to allow the sets to come in direct contact with the fertilizer. We have noticed bad results from this and as a remedy would suggest that a spruce bough or chain or broom be dragged after the fertilizer and before the sets are dropped. If planting with a plough, a chain may be arranged by having a stick tied crosswise the beam and chain hung from end of same. We notice when potatoes are planted with a machine and by the old system of the plough that there is about a week's difference in the vines appearing above ground. We attribute this to the more heat the machine planted potatoes get on account of being nearer the surface. Even the harrowing down of the plough planted potatoes does not seem to have the same effect as being planted nearer the surface as with the machine. From the time the set is dropped we want no delays to take place in its growth as in ninety days the crop must be matured and a few days' loss in backward growth means a serious loss in the potato bin in the fall.

In cultivating we find the one and if possible a two row cultivator and a potato hoe practically the only tools necessary. The potato hoe follows the cultivator and about five to seven times of each machine going over will generally keep the weeds down and insure freeness from crust after rains. We never hand hoe our potatoes but sometimes have pulled out some big weeds by hand. This can be done very quickly and prevents them from going to seed. Last season we top-dressed our field with fertilizer and with the potato planter after the vines were about four inches high. The disks covering the tops completely. New roots formed at the top of the former row and the vines made a splendid growth afterwards. I shall follow this system this year.

To spray a large field cheaply, effectively and quickly a power machine is almost a necessity. With this machine an acre can be sprayed in about twenty minutes and a horse furnishes all the power. A few hours delay when the bugs are bad will mean dollars of a difference in the crop. Last season we used arsenate of lead and I believe in this substance the potato grower has something that can be used very effectively on the young vines so that it will be there ready when Mr. Bug appears. I was well satisfied with the work of the lead last season and am going to use more of it this year. We, of course, spray for rust. By watching this very carefully we think that two applications and sometimes even one, has been very effective in stopping its ravages. We use the bordeau mixture for rust and with the addition of the lead or paris green, the potato pests can be kept in check. I find some farmers in preparing bordeau mixture think they know more about it than those who prepared the formulas. I always follow them very carefully and have no trouble later. Following the above outlined plan I have no trouble in growing one hundred and twenty-five barrels and upwards to the acre.

Harvesting the crop, of course, is the potato grower's delight and in the long rows the modern elevator potato digger can roll the crop out in great shape. Five or six pickers with a machine and horses can handle this end of the work in fine style. The potatoes are not sorted in the field but are picked in barrels and with a low waggon they are easily handled and hauled to the storage room. We want our pickers to average thirty-five barrels per day and like to keep as close to the machine as possible so as to avoid the greatest amount of sun. We like to dig and store our potatoes for about five to six cents per barrel but everything has to work pretty smoothly for this to be done. The sorting and grading is done at the storage room. Even for this a machine has been invented that beats tired fingers and sleepy eyes all to pieces. With a man to shovel, one turning the crank, one looking after the nubby, frozen or rotten tubers and one rolling barrels or taking bags away, the sorting and grading can be accomplished at about forty or fifty barrels an hour. Of course if the stock is to be shipped in bags, these will have to be sewed. The potatoes are now ready for market. A car is ordered, teams are on hand and away goes the potatoes at the rate of a carload a day. This makes work for everybody and also makes everybody work to do his part and I find it is the most satisfactory way to haul and load potatoes. We pay so much per barrel for hauling and the work is all done cheaply and efficiently on account of system and good planning. Grabs and blocks for hoisting the barrels into the car are a great labour saver where there is no loading platform. Of course what potatoes are stored for seed or held for seed purposes are taken direct to cellar or potato house from the pickers. Then the sorting can be done in the winter time or stormy days. A frost-proof storage house beside the track is about the only satisfactory solution of keeping stock over the winter. In any storage place, however, the floor should be plank or cement so a large potato fork can be used to shovel up the potatoes as this is one implement absolutely necessary to raise potatoes commercially successful. In my regular farming operations my potato crop appears on the same land every third year, clover and grain are the alternatives. From careful accounts kept I find that I have produced and loaded on the car my potato crop for forty-five cents per barrel, figuring everything as fine as I could.

Now a word as to varieties and I will stop. Ontario is our strongest competitor and the main thing that the shippers there complain of is so many varieties. It is very difficult to load a car at any one station of the same variety and uniformity counts for a lot in getting the best market prices. We are a young potato producing people here in New Brunswick and have only gone in for a few good selling varieties. This is the secret of the great popularity of the New Brunswick "Delaware" or "Green Mountain" in the big markets of Canada. Stick to a few varieties of which the "Delaware," "Green Mountain" and "Irish Cobbler" are good types and if you follow the general plan above outlined, I know that when the market is soaring around the dollar mark you will have some to sell.—C. Fred Fawcett.

What New Brunswick Has to Offer the Immigrant.

An Address by S. L. Peters, Queenstown, N. B., at the Recent Immigration Congress.

No greater tribute could be paid to New Brunswick, than the addresses of the Gentlemen who have preceeded me. It has been a great delight, to hear from every speaker: that in his judgment, his home section of the Province is the very best. It certainly goes a long way to prove that the general conditions are all exceedingly good, and that in our Home Land we enjoy so much of the good things of this life, that we are not only contented and happy, but wish to spread the good news, that others may share in our blessings.

To the Members of the St. John and Fredericton Boards of Trade, who have taken the initiative in getting this very large and representative Immigration Congress together, I wish to extend my heartiest congratulations.

Permit me now to refer to some of the things which New Brunswick has to offer the intending Immigrant.

An invitation to the intending immigrant to locate and make his home in New Brunswick is very naturally met with the question, "Well, what have you to offer me as an inducement to do so?"

The enquiry is a natural one and should be met by a frank and truthful statement of the facts as they exist. No over-drawn picture or statement is allowable, for, if made, is sure to act as a boomerang and strike back with damaging effect.

Happily for New Brunswick, we only require to make a plain and truthful statement of our conditions as to the general good health of her citizens, so largely entranced by an abundant supply of pure water, and a fine climate, which insure a vigorous manhood. "To the fruitfulness of our soil and its productive qualities." "To the wide opening we have in our home markets, and the nearness to the world's best market, England, for our surplus products of the farm and the forest." The almost inexhaustible supply of our Iron Ore in Gloucester and Carleton Counties, and the Coal Deposits in Queens and Sunbury, the large area of limestone around the Harbour of St. John, the inexhaustible supply of Gray Granite on the St. John River in the Counties of Kings and Queens, and the Red Granite at St. George in the County of Charlotte; to the enormous supply of Natural Gas and Oil Shales in Albert County which is destined to revolutionize the cost of power to manufacturers within a radius of from 75 to 100 miles and furnish light to the cities, towns and homesteads in its vicinity. To the value of our deep sea and inland fisheries; to the wealth of New Brunswick soil on which apples and other fruits can be grown with the greatest success,—a success which is assured first because of soil conditions, second, because of the bright sunshine with which New Brunswick is so largely blest, giving a crispness and flavour, and with all that beautiful colour which will be forever an outstanding feature of New Brunswick fruit, and will prove an important factor in forcing its way on every market on which it may be placed.

A Street in Gagetown, Queens Co., N. B.

Soon to be changed to a bustling centre A large canning factory is proposed for Gagetown, which is one of the best fruit growing centres in New Brunswick.

So bright is our sunshine; and so full are its health giving properties to all animal life that we should be the most happy and contented people in the world, in

"SUNNY NEW BRUNSWICK, THE LAND OF COMFORTABLE HOMES."

These are some of the things we have to offer intending settlers, but not all. Here we enjoy the inestimable privilege, and blessing as well, of the best system of Government in the world,—citizens of the British Empire having a residence in the Dominion of Canada and in one of the best of its sub-divisions, the Province of New Brunswick; absolute protection to life and property in so far as wise laws and their wholesome administration can give effect; a splendid educational system as worked out in our District Schools, the Superior and Consolidated Schools, the Normal School and our University, to which we hope to add in a not very distant day an Agricultural College and an Experimental Farm. We shall then be fully equipped for good work. It would be unpardonable for us to omit to refer to the great privileges we enjoy and have to offer intending settlers in the blessings and influence of the Christian Church, which is so

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A Land Settlement Policy For New Brunswick.

An Address Delivered by

Charles H. McIntyre, of Boston.

Before a Convention of the Boards of Trade, Agricultural Societies, etc., at Fredericton, N. B. March 8th, 1912.

Mr. C. H. McIntyre.

THIS Convention is indeed a unique event in the life of New Brunswick. For many years I have been looking forward to this day, when the men of the Province, representing her predominant interests, would meet together for a serious consideration of her problems and their solution. Sometimes I have been almost dis couraged as I have watched the conditions growing from bad to worse, with no prospect for their amelioration, and an apathy indifferent to all ideas of reform. But when I received your kind invitation to attend this Convention, I made up my mind that I would throw all pessimism to the winds, and put my shoulders to the wheel for the advancement of my native Province. I rejoice, therefore, to be in your midst to-day, and as I look upon this audience which represents so much of the intelligence, the industry, and the ambition of our people, I take new courage and hope. The hour of destiny has arrived.

As I have been out of the Province for many y?ars I cannot pretend to be as fami,iar with all local conditions as you are. But a frequent bisitor I have been,and probably always will be, and while travelling over the Province I try to keep my eyes open, to note any changes, and to rejoice with you in any genuine progress. I come, therefare, not to lecture you or to ,ament over the Past. I come rather to take counsel with you and to see if from our mutual deliberations, there may not spring some proposals which if put into action will change the face of this Province and the spirit of her citizens, so that the observer of to-day would ina few years hence hardly know that it was inhabited by the same people.

THE PROBLEM STATED.

I need not tell you that we have been well born. I venture to assert that there does not exist in the world to-day a country, state or province that was founded by a finer class of people than those men and women who settled in this Province. For intelligence, industry and capacity they could not be surpassed. To the racial strains of English, Scotch anh Irish Stocks there was happily blended the blood of the Puritan and the Cavalier. As pioneers they were signally well-fitted to become the responsible founders of States. But somehow since the middle of the last century, the growth of population in the Maritime Provinces has not been satisfactory. I do not mean to say that increase of population is necessarily the greatest boon to a nation. I have no sympathy with this madness for bigness which is so prevalent to-day. But a sound and healthy growth is undoubtedly requisite for the efficiency and influence of any community. Judged by all reasonable standards, I think we must admit that our Province,—and indeed the Maritime Provinces as a whole—have not grown in population as they aught to have done. Let us look at the facts of the case.

In 1870 New Brunswick had 285,000 people; to-day she has only 351,000i Between 1881 and 1891 her population absolutely stood still, and during the last decade she has added but 20,000. The same condition of affairs has prevai,ed in Nova Scotia, and at this moment there are less people in Prince Edward Island than there were forty years ago. The total population of the Maritime Provinces was 772,000 in 1871 and but 937,000 in 1911, or an increase of about 22 per cent. in forty years.

Compare that, if you will, with the growth of New Zealand,—that wonderful little Dominion, far off in the Pacific Seas. In 1870 New Zealand had a population of but 248,000, or about one third the number of inhabitants then possessed by the Maritime Provinces. To-day her fair islands are filled with one million happy and progressive people—representing an increase of 40 per rent. in forty years. Nor is this the only unfortunate feature of our growth. It is still worse to report that only the cities and towns have advanced and many of the finest agricultural counties,—like King's, Albert, and York,—have absolutely declined in population during the past few years. The movement from country to city has taken possession of our people as it has in all nations, and we find the number of people who cultivate the soil constantly diminishing instead of increasing. The number of vacant and abandoned farms has increased rapidly so that there are estimated to be to-day some 3000, with an aggregate of 400,000 acres. Annexed to my address in Tables "A" and "B" you will find the story of this decline. Rural life and country pursuits, with that superficialty which is so common, have been flouted and spat upon. The farmer has been looked upon as a sort of clod-hopper instead of a prince among men. Education has been given a twist, which inevitably drives the people from the land. The sickening view of life has been preached everywhere, that if you want your boy to be a gentleman, give him an education so he will never soil his hands. We have encouraged him to seek the gilded heights of college halls and city life where many of them have become little more than genteel "paupers" who neither toi, nor spin. We have, in short, preached a lalse view of life. We have put the emphasis on the wrong place. We have forgotten the primal fact that from the earth and her products man draws his sustenance, and upon them as time goes on he will ever more depend. After more than twenty years' residence in the most intellectual city on this continent, I beg to affirm that the big city as a breeding place for men is played out, and I heartily endorse the truth that Rider Haggard uttered in Ottawa a few years ago—"that truth, that essence, that fibre, that marrow, is that you must get your people on the land out of the cities, and keep them on the land there to multiply as God commanded them of old."

Last year Canada received about 350,000 immigrants, of whom 142,000 came from Great Britain. Through the port of St. John alone some 40,-000 newcomers passed, and out of all this swarm of people but a few hundred settled in New Brunswick. With a well-watered country, a temperate climate, and many thousand acres of suitable land, we let all this host sweep by us. The Maritime Provinces are nearest to the mother country; and though intensely united to her by ties of blood and kinship, they have not secured anything like their proper share of British immigrants. This is not a satisfactory result.

Turn to the question of high cost of living. What is at the bottom of the present agitation and unrest? Why are we denizens of the city haunted with bills and expense, from the time we rise in the morning until we go to beh at night? Why are so many men in the prime of life out of employment or filling our charitable institutions? Why are there so many applicants for every vacant job in a great city? If you advertised, even for a stenographer, the chances are that you would need the police next day to clear the corridors from the mob of necessitous but worthy young women. What is it that creates our charitable work and throws such a mass of incompetent and shiftless humanity upon our shoulders? I answer that food products are primarily high because there is not enough produced. There are too many parasites in the cities and too few producers on the land. There are too many people haddled into small areas of our towns, living on an uncertain wage, when they should be cultivating the soil and adding to the world's wealth and happiness. As the population increases living expenses in large centres, are bound to increase, and unless we wake up and arrest this evil our national troubles will increase rather than diminish. In the last analysis our population is improperly distributed, and our civilization is wrong end-to.

THE REMEDY PROPOSED.

Many remedies for the existing state of affairs have been proposed. Some of them are excellent and some are impracticable. I will not stop to discuss them here. But the question arises, what is the supreme remehy for this critical situation in country life and agricultural affairs? What is the most effective means of settling people on the land, regenerating our rural life and promoting the welfare of the Province? After careful consideration of this problem, I have come to the conclusion that the most effective agency of revival would be cheap capital on long terms of credit. There are many other necessary things, but without the living water of capital you cannot achieve any substantial results. Farming today has become a business which requires not only knowledge, but money. The turnover of the cultivator, in these Provinces at least, is not rapid. He cannot be cramped with short terms of credit and high rates of interest, which sooner or later lead him to the poorhouse. Speaking generally the average young man without funds cannot purchase a farm and from its proceeds redeem himself from debt before he is worn out. This is a wrong state of affairs, and it is the business of the state to correct it as speedily as possible.

The present banking system of the country is not adapted to the necessities of farmers. It does not encourage people to settle on the land and it does not provide the capital or credit they require. The private wealth of the country is not available in sufficient amounts at cheap rates and for long terms. Business men in other callings can secure a rapid return of their loans, and naturally they will not wait upon the farmer for years. Another thing the farmer requires is moderate payments at fixed periods. If these are within his ability he can ascend the ladder of achievement and rest secure. Here then is where the Province must step in with the united credit of all the people, and furnish what private individuals cannot.

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The Outlook for Horse Breeding in New Brunswick.

With Particular Attention to the Draught Type.

By Morris Scovil, Meadowlands, N. B.

At the Recent N. B. F. & D. A., Fredericton, N. B.

THE subject I have been asked to speak to you on is one that has been dealt with so often at the various meetings where farmers congregate from time to time, and by such able men, that I fear I have a task before me to make this effort of mine practical. I wish to confine my remarks chiefly to the subject of the draught horse in New Brunswick, its present state and what the outlook is for the future.

I think the average farmer is more interested in the horse than anyone else to-day both from a practical and financial point of view. Practical for the fact that if it were not for the horse, I would venture to say there would not be many farmers; financial by reason that there is probably no class of farm stock that pays like the production of good horses. After all it is the individual farmers that the supply of horses must come from, that is farmers carrying on a general farm practice at the same time raising what colts they are in a position to, every year. Some men are situateh both financially and otherwise to go into the horse breeding business as a specialty just the same as poultry men go into poultry exclusively. No doubt this is a highly profitable business, but how many farmers situated as we are here, are in a position to go into this line of horse raising, without a large capital and expensive plant. So it does not seem to me that it is to these large breeders that the world must look for its general supply of horses, but rather to the individual farmer, therefore if he is to take advantage of this condition it is up to him to raise the horse that the market demands and the horse there is the most profit in for himself.

It is right here that we will ask ourselves what are the most profitable horses to raise. We have to study our own interests as well as the market demand. I am not going to advocate for everyone to breed draught horses. Nor light horses either, but we must look how we are situated and then look at tne demand on the market for the different classes of horses to-day, and see what kind we can raise to give the most satisfaction all around.

Horses may be divided by the farmers into three classes. The heavy horse or agricultural horse, medium or general purpose, and light which comprises the drivers, racing and saddle horses. The latter two I think we may eliminate from the farmer's point of view in New Brunswick at least. No doubt there is some demand for this class of stock, but the average farmer has not got the parent stock to produce this class, besides the risk of raising them to maturity is much greater than the heavier animal, that it is probable that tne farmers as a rule will not go into it extensively.

As I said before I wish to consider the draught horse chiefly. Let us see what the demand is for this type. Not so many years ago when the auto came into prominence we heard on all sides that the horse would go, but we find to-day that the horse is in more demand than ever, and probably the most insistent demand is for the draughter. One can get $150 for almost any kind of a horse, while a draught animal from 1400 up will bring from $200 to $400. I know of a man in St. John recently, looking for draught horses in the province, who could not get what he wanted, going to Montreal and there paying $750 for a matched team, and this is no exception. They were big, but why cannot we raise just as big horses here, so when a person wanting one of this type can get it here, and not have to go outside the province, thus keeping the money in circulation at home.

Fall Ploughing in Carleton County, N. B.

A scene on A. A. Margeson's farm at Centerville, near the line of the proposed St. John Valley Railway.

I have before me figures from the Farmers' Advocate showing the prices ruling for draught horses in Canada to-day. I may also read the prices for other horses as well.

Surely the figures above mentioned will show anyone that the animal that fetches the biggest price is the draughter, except perhaps the choice saddle and carriage horses, but mark you it is only "choice" in every sense of the word that brings the price. There seems to be little doubt in my mind that the big horses are the ones for the farmer to raise. Another thing to be considered is that large horses are much earlier to mature than the light horse, and a three-year-old heavy horse, or mare may be able to earn part or all of its keep by doing work around the farm, as it is seldom that a commercial buyer wants a horse under 4 years. Looking at it from the farmer's point of view the great question of saving labour is of utmost importance if we are to run our farms on an economical basis. With hired help scarce and unreliable, and expensive at that, it's by heavier machinery of greater capacity that this difficulty may be partly overcome. With this heavy machinery comes the problem of horse power, and it is by keeping the heavy horse on the farm that this may be solved. If 3 big horses will do the work of four small ones, then surely it is to our advantage to have the 3 big ones. In fact look at it in what way you will you will find that on the farm the heavy horse is needed every time.

You will note that the heavier the horse is the bigger is the price. It is just as easy to keep a horse of 15 or 1600 as one of 10 or 1200. They eat very little more than the smaller horse, and in the end when we wish to dispose of them we have something for the trouble of raising them. Again there is the risk of raising any kind of a colt, they are liable to all sorts of accidents and blemishes. In the heavy horse these minor blemishes detract very little from the usefulness of the animal, where in the light horse, it may make him unfit for sale, or at least cause him to be disposed of at a loss. Then there is the breaking of colts to be considered. We all know a great many horses are spoiled at this critical time. With heavy horses, as a rule, they can be put in beside a steady horse and go off as if they had always been used to it. Whereas in the lighter breeds they are of a more nervous high-strung disposition, and frequently cause trouble.

We may wonder what the market outlook is for the draught horse, indeed for all kinds. Whether there is not the possibility of the price dropping to the level it was some years ago compared to the prices to-day. It is no wonder that horse breeding was curtailed. I don't think there is any danger of the price going down for a good many years, and this seems to be the opinion of men in a position to know. With our great Western Provinces filling up every year the farmers must have horses to work their lands. So there is a ready market for our surplus production, (if we had any). I was talking to a large dealer not long ago, and he told me that he looked for higher prices than ever this year. We have not even begun to fill our own markets with horses. Carloads are being shipped into St. John all the time, and find ready purchasers at fancy prices. These buyers would not go outside to get them if they could get them here. Even the demand right in the country amongst the farmers and lumbermen often cannot be met and horses are being imported solely for the reason that we are not raising them.

The prevailing impression in these parts, indeed all over is that New Brunswick is on the eve of great development, both industrially and agriculturally. We can see for ourselves that with this coming boom, that horses will be required more than ever. Railway construction will take a great many horses, besides the commercial developments of the province. New lands right around here are being settled and with immigrants coming into the province and new lands being opened up and farms established we may look to a great demand for horses. Farmers have to have them, and are going to get them from somewhere, and if we have not got them to sell, well then someone else is going to bring them in.

Last year we find that there were more pure-bred horses imported into Canada than ever before, of which the Clydesdales were by far the largest number. While a few were brought to the Maritime Provinces, the majority of them went to other parts of Canada, and the greater part to the West. Surely it would seem that out there they realize that it is the heavy horse the farmer needs. Farmers out there are willing to pay for the heavy horse and the importers would not bring them out if it were not for the demand. In Scotland, the home of the Clydesdale, the breeders have never had such a year owing to the demand for this horse. Recently at public auctions there was sold the pure-bred Clydesdale Stallion, Baron O'Buchlyvie lor the immense sum of $47,500, and when breeders will pay this much for a horse, it would seem to indicate that they do not anticipate a slackening in the demand for the heavy horse.

As I have said before we do not begin to fill our own markets with draught horses, and with the whole of Canada wanting horses, I do not see why New Brunswick should not be as well known as a country producing heavy horses, as other countries are. Take right at home here, there is the little Province of Prince Edward Island. There they have been noted for many years for the horses which they raise. A buyer going there would find no trouble in picking up a carload of the horses he wanted, in one district, but I will venture to say he would have quite a hunt in our Province to get a carload together. It is this demand that the farmers should get in line to supply. If a certain district would stick to the same breed for several years, keeping the best mares, gradually that section will become known as a centre where the buyer can come to, and find no trouble to get what he wants, be it an individual, or a carload. It does not take long to build up a reputation for good horses. Scotland is noted for its Clydes; Kentucky for its Thoroughbreds, and so on. P. E. I. has been the goal where horsemen would go to make their purchases. Yet I would venture to say that we have as good if not better foundation stock in the Province to-day than P. E. I. ever had. If our farmers would only breed along a definite line always breeding to the best stallion of the breed they consider is best suited, and sticking to that breed, there is no doubt that New Brunswick in the course of a very few years would produce draught horses as good as the best.

One trouble with the horse raising proposition is that the farmer when he has a good big brood mare is often induced to part with her, simply for the reason that the buyer sees in her what he wants and is willing to pay a big price for her. No doubt it is a good thing for the farmer at the time financially, that he has this type to sell. But it is just this selling of the best mares, why our stock of horses in the province is not better. As a consequence of this many of the best mares are taken very often to work in the woods, or the cities where their usefulness as breeders is at an end. Consequently the poorer mares are left on the farm, and it is these left-overs that the farmer has to use to replenish his stock. There is no doubt in my mind, that this is partly the reason of so many farmers preferring the smaller, or scrub sire, than the draught sire to mate with these mares. No doubt there is the fact to be considered that there is a certain amount of risk in breeding small mares to large horses, but if the farmers made it the practice to hang on to his larger mares very soon a larger stock of farm horses would be found through the country, and he would not have to patronize

the small grade sire, for the reasons above mentioned. Remember I am not trying to run down the lighter breeds of horses. We must have them. But so often the pure-bred stallion of the lighter breed is not to be found in the district where the farmer lives, that he is either obliged to ship his mare some distance at considerable expense, or patronize the grade sire, and where it is a colt the farmer wants, regardless of quality, it's the scrub that will be patronized every time. The farmer keeping 2 or 3 large mares, as the case may be, will find they will do his farm work besides raising a good colt. It's the large horse the farmer must have to do the heavy farm work. With regard to the lighter horse, from the figures I read you, you will see it's the big horse that the market pays best for, the heavier, the better, and it is the big horse that is best suited to farm work. Therefore if we are looking to the economical running of our farms, besides the extra price gained when we want to sell this class, we must breed the big horses, to get the top market figures. The smaller ones do not bring anything like as big a price but cost just as much to raise, therefore it is not the medium size or general purpose horse that we should raise but the draughter.

As I have mentioned before there is a great lack of good brood mares through the country. There are lots of small ones, i.e. mares from 10 to 1200. Breeding up a line of heavy horses from these mares is of course practicable, but it is here where the pure-bred comes in. During the past few years a number of good draught horses, Clydesdales in particular, have been brought into the Province. This has, no doubt, been a splendid thing for farmers who were able to avail themselves of the opportunity to get this class of stock. Indeed indirectly to the farmers as a whole, for very soon the progeny of these mares will be at a breeding age, and they will, no doubt, have a vast influence upon the character of the draught horses of the future in this Province. Pure-breds of course, imported into this Province have been brought primarily for the improvement of the breeding stock, but it won't be very long, if we keep them pure, that we will be in a position to cater to the outside demand. The man buying pure-bred stock is looking for the animal to build up the quality of the horses he is producing, and therefore, the extra price paid the breeder of pure-bred stock, is considerably more than he would get for an ordinary animal of mixed breeding, hence the advantage of having pure-bred. Pure-bred horses have the advantage over horses of mixed breeding in that they have been bred along the same lines for generations thereby fixing the type of the breed indelibly in the individual animal.

But we all have not got a pure-bred mare for foundation to start on. That may be, but there are throughout the province quite a good many good mares, and it is to these mares that we must look to build up a better class of heavy horses. In almost all sections of the province we will find the pure-bred draught sire both Clydesdale and Percheron, with the Clydesdale predominating. As a rule, these horses are good ones, and some extra good ones may be found in some sections. In Queens County last year we had three pure-bred Clydesdales, and one Percheron travelling, all good ones, showing the desirable characteristics of the breeds they represent. We have had Clydesdales travelling for several years, and when they have been judiciously mated to good mares, the results have been surprising, showing what may be done in building up the heavy horses of the province by the use of the pure-bred sire. Some men have colts from the second cross, the original mares having practically no pure blood in them, and these colts can convince the most sceptical, what a potent factor the pure-bred stallion is. Colts from a very ordinary mare weighing say 1300, and a pure-bred stallion weighing say 1600, should be larger than the dam, from the fact that the horse has size stamped on him, along with the other breed characteristics of past generations. This offspring if bred again to a pure-bred of the same breed as before, would produce colts which on maturity, with good care and attention should be as large, and have the leading characters of the breed the sire represents. After all it's sticking to one breed that counts in the long run. Keep right along on the same line and we are bound to get results. A dairyman trying to improve the milking qualities of his herd would not use a beef bull one year, and a dairy bull the next and so on. But it is just this that we are doing with our horse raising problem. One year we will breed to a Clydesdale, and perhaps breed the offspring to a scrub, or thoroughbred or standard-bred. Not that they have not got their places, but what I want to bring out, is that if we are to get larger horses, the horses that there is the most money in, we simply must follow along a definite line of breeding if we wish to get anywhere' and with the pure-bred draught sire in almost every section, why in the world don't we stick to one breed, rather than the hap hazard way we have done in the past, patronizing any kind of a stallion, regardless of breed and quality. Finally if we are going to breed horses at all, breed from strongly constituted animals of desired conformation, perfectly sound and not related, and by keeping animals in perfect condition, by good housing, feeding a balanced ration at the proper time, abundance of pure water and frequent exercise. No matter how good the parent stock is if the care in bringing up the animal is neglected, why then we need never try and raise horses.

I think probably the greatest curse to the horse raising industry, not here alone, but all over, is the scrub sire. I know down in our county you may look around almost anywhere and you can see the results of the mongrel sire. Indeed it is the same all over the province more or less. And yet some farmers will patronize the scrub sire simply for the reason that the service fee is small, but do they realize that the extra money invested for the service of a pure-bred sire would, when the time comes for him to dispose of the offspring, pay him many times over for the extra amount charged for the service fee. As I have said I have seen colts from ordinary mares and pure-bred sires turn out to be surprisingly good horses, and again colts from ordinary mares and scrub sires turn out to be anything but good. They are not draught horses in any sense of the word, they are not carriage horses, and are not general purpose horses. The sooner we can rid our country of this type of horse the sooner will the horse breeding in the province get on a better footing.

What encouragement is there for a man to invest in an expensive pure-bred sire and travel him for service through a district when he is up against the competition of a grade sire? The owner of the pure-bred, by reason of the capital involved in the purchase of the animal has to have a service fee that will pay him for his investment. Comparing the service fees here and in Scotland, they are remarkably low here. There it is a very ordinary horse that does not get $25, and some of the best bred horses go much higher, and I believe the service fee of Baron's Pride is £100 i.e. $500.

Looking Across the St. John River From Hartland, N.B.

What inducement is there for an individual or company to purchase an expensive horse, and then have him get perhaps one-half the number of mares he would get if it were not for the competition of the scrub sire? It's only the service fee that counts with some men regardless of progeny produced, so it is with these men falls the responsibility of the condition of horse raising as it is found in certain parts of the province today. The owner of the pure-bred is not in the business for his health, and in time, unless the scrub sire is curtailed, the pure-bred will be confined mostly to the man who has a large number of mares and the condition of horse raising will be worse off than ever. It is all very well for the Government to bring pure-bred mares and stallions into the province. No doubt it is a splendid thing to get the horse breeding interests on a firm footing, but I say here that the results cannot be lasting if the progeny of this pure-bred stock is to be polluted by the scrub sire.

All over the country there is the cry from progressive horse breeders to take means to get rid of the grade sire or greatly curtail his power. Legislation has been adopted in many countries, a great many states of the union and some of the Provinces of Canada. Notably Manitoba, Saskatchewan and Alberta. With Manitoba falls the honor to be the first Province to Legislate against the grade sire, the law was not very stringent only requiring that the stallion be enrolled whether scrub or pure-bred. I believe another law will come into force in 1914 which will do away with the scrub stallion altogether.

In Ontario in 1908 the Stallion Legislation Bill was brought before the Legislature. It covered the ground thoroughly, but for some reason was thrown out. So far they have no Legislation on the subject, but we find that at the annual meeting of the Clydesdale Horse Society held recently at Toronto that this matter was thoroughly discussed, and a strong resolution was passed condemning the action of the Government in not passing the bill which has the weight of all prominent horsemen in that province, and urging them to pass the bill as laid down in 1908. The Ontario Horse Breeders Association also took up the same matter at their recent meeting and will, no doubt, urge the Government to pass the bill. At the annual meeting of the Natural Live Stock Association held in Ottawa last month, this question was thoroughly discussed, and it was urged that the Provinces, not already having Laws on the subject, take means to get Legislation. Furthermore a strong resolution was drawn up to this effect. When we see an Association like the one last mentioned, comprised of experts in the live stock business all over Canada, being unanimous on this question, surely it is time that the breeders of New Brunswick got in line to ask for Legislation. I believe there was a resolution presented to the Local Legislature last session, but it was never acted on.

I think if the farmers and various Breed Associations would get together and urge on the Government the necessity of some sort of action on this matter of getting rid of the scrub stallion, that we could work to some avail, but it is not from one or two that we can expect to get results. We must pull together. I would advise our discussing the matter and get the general opinion of the breeders throughout the province, and then we will be in a position to go ahead with this important work.

No doubt you have all read Prof. Cumming's excellent article in the Maritime Farmer of recent date on the subject of Horse Legislation. I think if Nova Scotia is thinking about the matter, that it is high time for us to be up and "doing" for we don't want Nova Scotia to beat us out in this work.

Now Gentlemen, this province is awakening to its possibilities. Never before has New Brunswick been in the public eye as it is to-day, both industrially and agriculturally. Fruit growing has received a tremendous impetus during the last 2 or 3 years. Immigration is being turned this way, and everywhere the province is developing. New Railways are opening up portions of the country that have long been without proper transportation facilities. Surely then now is the time to awaken to the possibilities of horse raising in this province of ours, so that with the high tide of prosperity sweeping through the country, the horse raising industry may be at the very crest of the wane.

Home Mixing and Application of Fertilizers.

Apply the Ingredients Required by Your Soil.

By Walter Shipley, Toronto.

As farmers become more and more interested in the use of commercial fertilizers, they realise they must gain more knowledge of their soil and crop requirements and also of the composition and uses of the fertilizers they are using, in order to be able to apply them economically and judiciously. In the past they have bought various mixtures, prepared to meet the demand of different crops and have applied these with varying results. The manufacturers of these mixed fertilizers seem to have overlooked the fact that any particular crop grown under different climatic conditions, on different soils or even under various systems of cultivation, requires varying proportions of the three "plant food" ingredients in Nitrogen, Phosphoric Acids and Potash. However, it is not the intention in this article to discuss the merits or demerits of the various brands of mixed fertilizers but rather to give an outline of the method of mixing and applying fertilizers on the farm and the advantages gained by doing so. We venture the assertion that the farmer can, with an ordinary knowledge of this subject, compound mixtures at home that will give just as good results as the use of "mixed goods" at a much less cost. It has been argued in the past that farmers did not understand enough about the use of fertilizers to even attempt to make their own mixtures. Now that this argument no longer holds good, it is contended that the farmer, not having the necessary machinery, etc., is not able to mix the fertilizers thoroughly enough. As the fallacy of this argument has been repeatedly proved in various parts of the Dominion, it is unnecessary to enlarge further on it here. We have never yet known a farmer who was unable to make a satisfactory mixture, provided an ordinary amount of care was exercised

ADVANTAGES OF "HOME MIXING."

The advantages of home mixing are so ably and concisely summed up in a bulletin "Artificial Fertilizers; their nature and use" by B. Leslie Emslie, that we quote them here just as given:

"1—ECONOMY: Usually at least 25 per cent is saved in purchasing the separate ingredients. There is no useless "filler" to add to the freight charges; there is no duty on the separate ingredients, whereas the farmer must bear the cost of the duty imposed on the ready mixed goods, where these are imported from the United States.

2—ASSURANCE: The farmer who purchases the separate ingredients, especially if he insists on getting them in the original sacks, knows exactly what he is getting for his money; whereas the purchase of a ready mixed brand is more often like buying a "pig in a sack."

3—ADAPTION: With a stock of the separate ingredients on hand, a farmer is enabled to make up his mixtures according to prescriptions he has prepared to suit the varying requirements of the different crops and soils."

It might not be out of place here to point out that the analysis of a fertilizer is not the only factor to be considered either when buying ready mixed brand or when making up a mixture at home. The quality of the materials used to supply the plant food in a fertilizer will very often constitute the difference between a good and a poor fertilizer.

MATERIALS USED IN HOME MIXING.

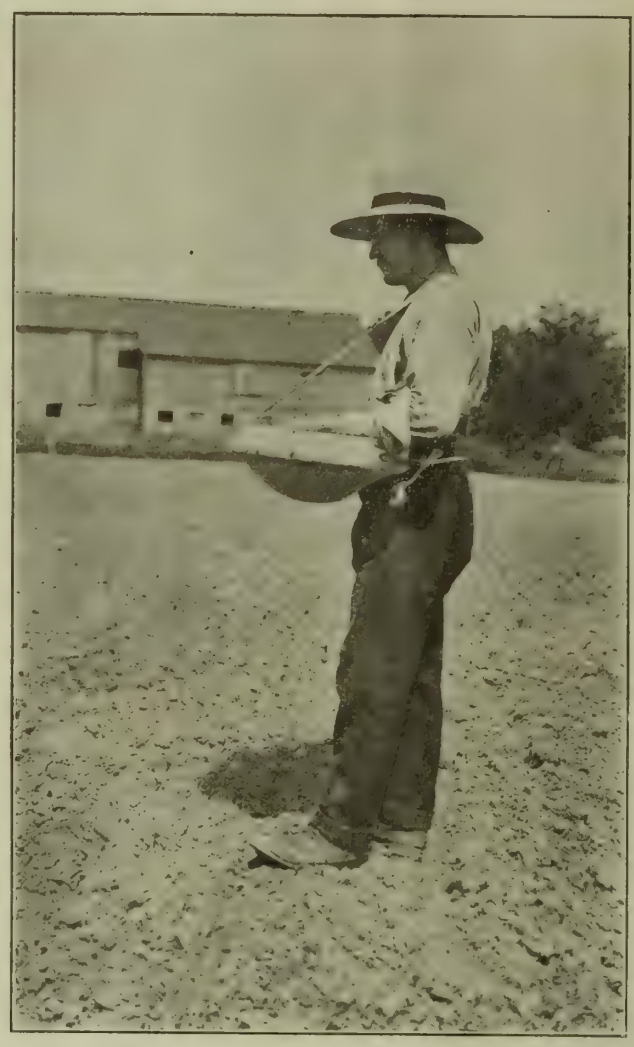
The following are the most commonly used and probably the most suitable materials for use on the farm:—

NITROGEN

Nitrate of Soda.....16 p.c. available
Sulphate of Ammonia
....20 p.c. available
Lime Nitrogen or Cyanamid
....18 p.c. available

PHOSPHORIC ACID.

Acid Phosphate.....15 p.c. available
Basic Slag..... .....18 p.c. available
Bone Meal..... .....22 p.c. available



Sowing Fertilizer by Hand.

POTASH

Muriate of Potash.....50 p.c. available
Sulphate of Potash....50 p.c. available

The choice of materials is very largely determined by their relative prices. The crop to which they are to be applied is also a determining factor. For instance, on the Potato crop the Sulphate of Potash is invariably used in preference to the Muriate as the latter is said by many authorities to have a detrimental effect on the quality of the tubers. The soil has also to be considered. On a sour or acid soil it is usual to use Basic Slag in preference to Acid Phosphate as the free lime in the former tends to counteract the acidity. Also on a dry soil Nitrate of Soda would probably give better results than Sulphate of Ammonia as the former absorbs and retains moisture, besides being more readily available.

METHOD OF MIXING.

Let us now consider the actual operation of mixing fertilizers on the farm and we will find that it is not nearly as difficult and intricate a process as many would have us believe for various reasons. The only real difficulty we have ever encountered, while superintending the mixture of fertilizers in various parts of the Dominion, was to obtain a suitable floor. Where a concrete floor is available it is, of course, preferable, otherwise it will be necessary to choose a level, firm part of the barn floor. Having overcome this difficulty the only other requisites are:—a broom, a shovel, a large hammer or post (for breaking down the lumps), a sieve and a set of weigh scales. While the scales are not absolutely necessary it is generally advisable to check the weights of the sacks. It is not satisfactory to mix too large a quantity at one time, a ton being perhaps the best quantity to handle. Having swept a suitable place quite clean, spread half of the phosphatic part of the fertilizer on the floor and on it empty half of the Potash. If Cyanamid is used to supply the necessary Nitrogen, half of this can be spread over the other two. Next put on the balance of the Phosphate, Potash and Cyanamid in the order named. Where Nitrate of Soda or Sulphate of Ammonia are used it will be necessary to spread them on the floor by themselves and pulverize the lumps with the post or hammer, before spreading on the other mixture. The whole mixture should then be turned from one side to the other three or four times, in a manner similar to mixing sand and cement. Where a sieve is procurable, we have found it of great benefit, after turning two or three times, to put the mixture through the sieve. This serves the double purpose of making the mixing more thorough and retaining any lumps, which can then be broken and added to the heap. Many farmers give the heap another turning after being put through the sieve. The mixture can then be bagged and put away in a dry place ready for use.

Each batch should be treated in this way.

A PRECAUTION.

When compounding a mixture it is necessary to remember that certain of the ingredients can not be mixed together. Sulphate of Ammonia must never be mixed with Basic Slag or Quick Lime; as free lime in these ingredients will combine with the Sulphate part of the former, setting free the valuable Ammonia. A mixture of Acid Phosphate and Nitrate of Soda, also, should not be allowed to stand for any great length of time as the bags will be rotted away.

All of the other ingredients can be mixed together with safety.

TIME TO APPLY FERTILIZERS.

Where possible it is always advisable to apply fertilizers from ten to fourteen days before putting in the crop. Particularly is this the case where the rainfall is light.

The exact time of application will, of course, be largely determined by the crop and rate of availability of the fertilizer materials used. In the case of hay and grain crops, where for any reason it is not possible to apply the fertilizers very early, they can be applied with the crop, as the growing season is fairly long. For fruit trees it is usually advantageous to apply in late fall or as early as possible in spring, as development takes place as soon as the frost leaves the ground. While we know that it is not customary to apply the fertilizers to any of the root crops previous to seeding, we are convinced that better and more certain results would be obtained were they applied, as has been already stated, about ten days before the crop is put in.

THE MATERIALS USED to supply the various ingredients above determines in some measure the time of application.

THE POTASH SALTS may be applied at any time, but as they do not leach out of the soil, they can safely be applied in the fall.

BONE MEAL AND BASIC SLAG, being rather slow in their action, usually give more certain results when applied either in fall or early spring.

ACID PHOSPHATE is more readily available but is suitable for either fall or spring application. Where late spring application is necessary this is the most suitable source of phosphoric acid to use.

TANKAGE, DRIED BLOOD AND CYANAMID, on account of their somewhat slower rate of availability, should be applied early in spring. Nitrate of Soda on the other hand, is extremely soluble and seems to give the best results when applied just before it is needed by the crop.

SULPHATE OF AMMONIA is between Nitrate of Soda and these other materials in rate of availability and is perhaps more suitable than Nitrate of Soda in moist climates.

CYANAMID is rapidly gaining favor on account of its drying properties, making a mixture very dry and friable and easily sown with any of the fertilizer sowers.

METHODS OF APPLICATION.

Fertilizer can be applied either by hand or by a fertilizer distributor. As most of the grain drills, potato planters, etc., now have fertilizer attachments, very little is sown by hand. Where it is necessary to apply by hand, the best sowing arrangement we know of is an oval shaped frame of iron loosely covered with canvas making a kind of bag and with shoulder and waist straps for supporting it. The process of sowing is in every respect similar to the sowing of grain. In order to save as much time as possible when sowing, the bags should be placed at convenient distances through the field. It also saves considerable time to have a boy to carry the fertilizer from the sacks to the sower.

Application by machine is, however, always preferable as it not only saves time but also ensures a more even distribution.

There are several fertilizer sowers on the market, varying considerably in price and effectiveness. The machine shown in the illustration on page 457 is being used with very satisfactory results by an increasing number of Canadian farmers. Very satisfactory results are obtained by

(Continued on page 530).

The Cost of Producing Grain Crops.

Factors Affecting Yield.

"As a Man Soweth So Shall He Reap."

THE average cost of producing a grain crop, as shown by statistics carefully gathered for six years on twenty-five Minnesota farms, is, including land rent, $8.10 per acre. Of this cost 93 cents was for seed and $1.36 for plowing and preparing the seed bed. These two items, seed and soil preparation, are the two operations which have most to do with the yields. Either poor seed or poor soil preparation may result in crop failure, or a very poor crop, while good seed and good soil preparation make possible the very best kind of a crop. The total cost of these two items is but little more than one-fourth of the total cost of the crop, yet in these two operations man's greatest influence, and practically his only influence, is exerted.

These two operations are charged with great potentialities in regulating the prospective crop, and on this account are worthy of the most careful study.

WHAT IS GOOD SEED? ...

The subject of this paper, "Good Seed," is one of especial timeliness between now and seeding time. The term "good seed" may convey different ideas to different people. To the practical farmer, however, good seed means clean, pure, strong seed capable of germinating and producing a maximum crop of good quality. Plant breeders and seedsmen have done much to develop strains or varieties of seeds, of good quality and large productive power; and these seeds have done much to improve the yield and quality of the common field crops.

Experiments in getting seed from one locality, to sow in another locality, have almost without exception proved unsatisfactory. They have usually resulted in lower yields or poorer quality. This seems to be due to the fact that plants, like animals, become adapted to the conditions under which they are grown and that, other things being equal, they do better after they have become acclimated than when first introduced.

The law of the "survival of the fittest" is well known to all, and it is but natural to expect that when a great many individual kernels of grain are sown in a field some of them will prove better adapted to the peculiar conditions of soil and climate than will others. This being true, the kernels adapted to the local conditions will have a more perfect growth and will mature better seed than the other kernels. It is likewise reasonable to expect that if kernels are selected and planted each year from plants that have shown their adaptability to local conditions by producing perfect plants and seeds some improvement will result.

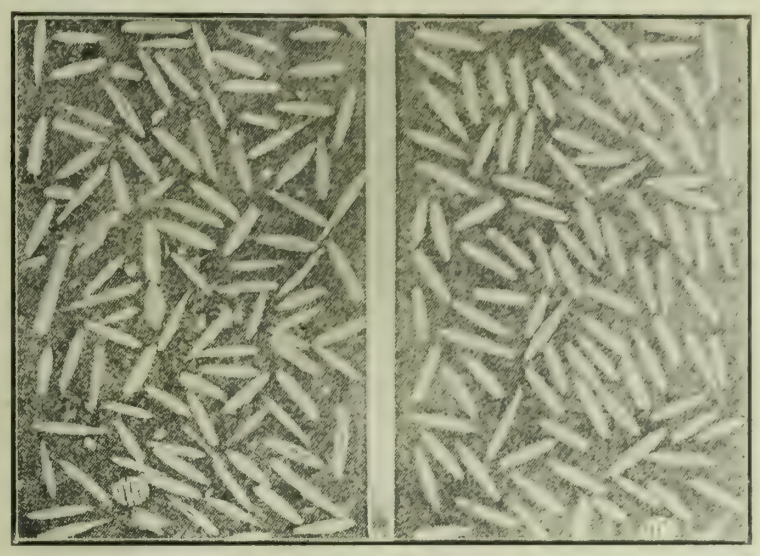
PLANT BREEDING.

The above is exactly what the plant breeder does. He plants a large number of kernels of some variety of grain that he is trying to improve, in soil as nearly uniform as he can make it, then at harvest time he selects such plants as have actually been able to produce the largest yields of the best quality, and in this way he is able to breed varieties of high yield and of good quality.

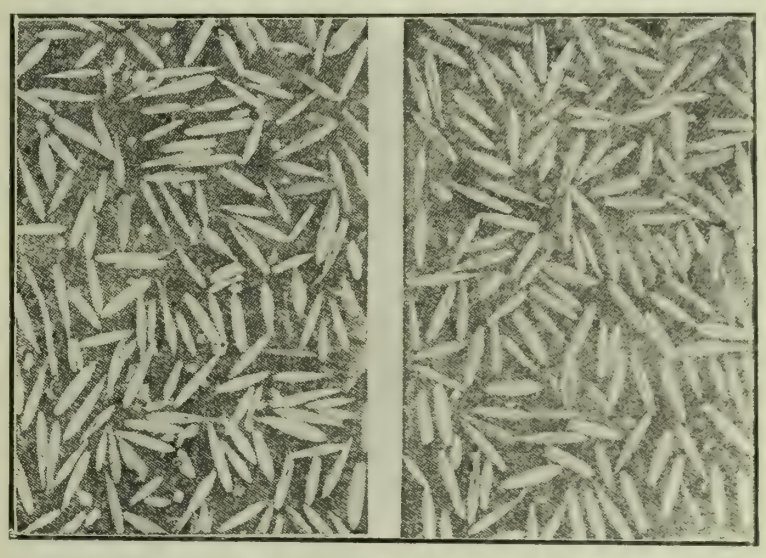
What the plant breeder does by his careful, painstaking study of individual plants the farmer may do, to a limited extent, by carefully selecting the best kernels of seed from any crop produced on his farm.

INDIVIDUALITY OF KERNELS OF GRAIN.

A few moments' study of a handful of grain, spread on a sheet of white paper, will convince the most skeptical that there is quite as much variation in the individual kernels composing the handful as in the individual animals in a bunch of cattle or hogs. We have become accustomed to selecting the best animals produced on the farm and keeping them for breeding purposes, while very little attention has been given to selecting the best kernels of grain grown for seed. This is but natural, since the animals are large and noticeable, while kernels of cereal crops are small and are seldom considered as having any individuality, but rather as the insignificant units which make up bushels or bins of grain.



On the Left, a Sample of Original Oats, Weighing Thirty Pounds Per Bushel. On the Right, a Sample of the Five and One-Half Pounds, Weighing Thirty-Eight Pounds Per Bushel, Graded from the Above Fifty Pounds of Oats Weighing Thirty Pounds Per Bushel.



On the Left, Sample of the Market Oats, Weighing Thirty-Four Pounds Per Bushel On the Right, Sample of Tail Oats, Weighing Twenty-Seven Pounds Per Bushel, That Can Be Used for Feed.

RESULTS FROM SELECTING SEED GRAIN.

Extensive experiments have been made by experiment stations to determine the relative yielding power of heavy and lightweight kernels of grain, and the universal result has been a decided increase in yield where the heavy, plump seed is sown. A cow in good condition will give birth to a stronger calf, and will give more milk to nourish it, than will a cow in a poor and weak condition. Correspondingly a plump, heavy kernel of grain will produce a stronger plant and nourish it better than will a shrunken, light kernel. The following results attest the above fact: At one of the U. S. experiment stations some winter wheat was graded and the heavy and light seed sown separately on adjoining plots. The average yield in two years were 29.4 bushels per acre from heavy seed and 24.8 bushels per acre from the light seed; a gain of 4.6 bushels in favor of the heavy seed. A similar experiment with heavy and lightweight oats of the same variety gave an increase of nine and one-half bushels per acre in favor of the heavy seed. Similar experiments conducted for a long series of years at the Ontario Experiment station at Guelph show very marked increases in yield from heavyweight seed of oats, barley and wheat.

CLEANING AND GRADING GRAIN.

It is manifestly impracticable to select, on the farm, either individual plants or individual kernels of grain, unless some rapid, easy way is provided to do it by machinery. The modern fanning mill, if properly operated at the right time, will make a very satisfactory selection of grain. The practice of waiting until near seeding time to clean and grade grain is not usually advisable, because it generally results in so reducing the stock of grain that there is but little to select from. On the other hand, if the selecting of seed grain is done earlier in the season, or while there is still plenty of grain available, a much more thorough selection is possible.

SELECT ONLY SMALL PER CENT. FOR SEED.

If a grower producing 1,000 bushels of grain needs 100 bushels for seed and can select the best 100 bushels out of the 1,000 bushels, it is evident that he will get pretty choice seed. By using a side-shake mill, 100 bushels of the heaviest and plumpest seed may be selected from either 200 bushels or 1,000 bushels and good seed secured, and secured at a cost so low as to make the use of poor seed seem ridiculous. But the advantage in quality will undoubtedly be with the lot selected from the 1,000 bushels. With a good mill two men can run through by this process at least 300 bushels of grain per day. If 10 per cent. of the best of this is graded out for seed thirty bushels of seed will be secured for the day's work. If their time is worth $1.50 per day each, the thirty bushels will cost for additional labor in cleaning and grading 10 cents per bushel. Few people familiar with crop-growing will claim that this additional charge of 10 cents per bushel, or from 12 to 20 cents per acre, for this better seed is not a very good investment.

THE PROCESS.

There are two principles by which a modern fanning mill can separate grain, namely, by size of kernel and by difference in weight. The mills best adapted to do the work of grading seed grain use both principles. The grain is conveyed from the hopper by a board in the throat of the machine back to a place where it drops through the wind blast to the screens below. As the grain falls through the strong wind blast the heavier kernels fall more nearly straight down than do the lighter ones. The upper screen is adjustable, and can be moved forward or backward to catch a small or a large per cent. of the falling grain, as desired. This makes the separation, the heavier grain falling on the upper screen, while the balance is blown just over the end of this screen and falls on the lower screen, where, together with the small, heavy kernels that will pass through the upper screen, it is conveyed to the feed or market grain pile, while the heavy, plump kernels are conveyed to the front of the machine for seed. There is absolutely nothing wasted by the process. The chaff and screenings are as valuable as when mixed with the grain. The seed includes the best seeds from the whole body of grain; the balance is as good for market or feed as before.

As illustrated in one of the cuts herewith, fifty pounds of grain were run through the mill, five and one-half pounds taken out for seed, 2.2 pounds of screenings and chaff removed and the balance left in good condition for feed or for market. The original sample weighed thirty pounds per bushel, the selected seed thirty-eight pounds and the market grain thirty-four pounds.

By selecting a small per cent. of the grain grown, seed adapted to the local conditions—also seed capable of producing and feeding strong plants—is secured and all ordinary weed seeds and dirt removed. There is no better or safer way of securing good seed for the great bulk of the crops grown on the farm than by selecting it from the grain grown thereon.

If you are not entirely convinced of the advantages of properly selected seed grain, select at least enough for one of your fields and we have no hesitation in predicting that your scepticism will disappear when you harvest your grain next Autumn.

Demonstration Orchard Work in New Brunswick.

"Long is the Way by Rule, Short and Easy by Example."

By A. G. Turney.

BELIEVING that many of our farmers would give more care and better attention to their orchards were they more convinced that by doing so they would yield their most profitable crop, it was decided to take hold last spring of the orchard of Mr. Joseph Hawkins, Sugar Island, York County, and a portion of the orchards of Mr. J. W. Clark, Maugerville, Sunbury County, and of Mr. H. L. Steeves, Lower Coverdale, Albert County, with the aim of giving as complete a demonstration as possible of the successful renovation and management of bearing orchards.

GENERAL TREATMENT.

The orchards were pruned, the rough bark scraped off the trees and wounds resulting from sunscald, canker, etc., carefully cut back and painted. A dormant spray, consisting of commercial lime-sulphur, diluted with water one to nine for the purpose of destroying the oyster shell scale and removing lichens and other fungous growths, was applied, and followed by two summer sprays for the control of the apple scab, codling moth worm, and leaf eating insects, as follows:

1st—Just as leaf buds were swelling.

2nd—Just after blossom fall.

In the orchards in Albert and York, a medium application of barnyard manure was ploughed under and applications of commercial fertilizers were scattered broadcast and harrowed in. The orchard at Maugerville being on intervale land, was not ploughed, but top dressings of fertilizers were experimented with. In the other orchards clean cultivation was kept up until about June 25th, when the land was seeded down to cover-crops, such as summer and winter vetches, mammoth red and crimson clovers.

SPRAYING MATERIALS USED AND THEIR COST.

Commercial lime-sulphur and lead arsenate were the materials for the dormant spraying. Lime-sulphur, without any poison, at the rate of four gallons to thirty-six gallons of water, was used. Cost of lime-sulphur landed at the orchard was $9.00 per forty gallon cask or 22½c. per gallon. Four gallons of lime-sulphur for every barrel of dormant spray gives us a cost per barrel of 90c. For the subsequent sprays, when the leaf buds were bursting and after blossom fall, one gallon of lime-sulphur 22½c., 38 gallons of water, and two pounds of lead arsenate at 12½c. per pound, 25c. were used. Therefore, cost per barrel for summer spray equals 47½c. We found by experience that on the average it took two men and a team eighty-five minutes to prepare and apply a barrel of spray mixture. Estimating the pay of a man at 15c. per hour, and the hire of a team at 20c. per hour, we have the cost of preparing and applying a barrel of spray at 75c. This gives a total cost, for the spraying materials purchased, prepared and applied to the trees, of $1.65 per barrel of the dormant spray, and of $1.22½ per barrel of the summer spray.

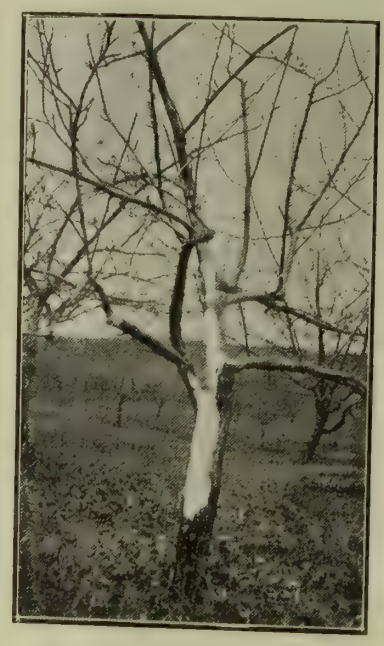
The outfit used in applying the spray consisted of a No. 2 brass lined "Perfect Spray Pump" of forty gallons capacity, with two twenty-foot lines of hose, two double nozzles, and all attachments. These outfits were purchased from the manufacturer, R. B. Westhaver, Mahone Bay, N. S. In all the sprayings only one line of hose was used.

THE SUNBURY COUNTY ORCHARD

This orchard is situated on the eastern bank of the St. John River at Maugerville, on high intervale land. The soil is a dark loam several feet deep and is exceedingly fertile, being part of the old river bed. The orchard is in sod and never cultivated, the ground being moist and rich enough to produce good hay crops and at the same time to keep the trees, eighteen years old 20 x 20, nearly all of the Wealthy and Duchess variety. The Duchess trees have far outgrown the Wealthy, and have twice the bearing surface of the latter.

One block of sixty Duchess and another block of 100 Wealthy, covering in all about one and two-thirds acres, were taken under control by the Department, pruning operations commencing on March 31st. Two double-horse loads of barnyard manure were applied as a top dressing to a block of twenty Wealthy trees, and 180 lbs. of superphosphate to a similar sized block of the same variety.

Before Treating.



After Treating.

Bad Sunscald and Canker Wound Before and After Treating.

EXPENDITURE.

Spring Operations:	
6 days' pruning at $2.00	$12.00
2 days' scraping and painting trees	3.00
1 gallon paint	2.25
2 days' hauling brush	7.00
2 loads of manure applied	3.00
180 lbs. superphosphate applied	3.50
10 bbls. dormant spray at $1.65 applied	16.50
4 bbls. summer spray on Wealthy trees applied, at $1.22½	4.90
8 bbls. summer spray on Wealthy and Duchess applied	9.80
Depreciation in spraying outfit	5.00
	$63.95
Harvesting:	
Wealthy—112 bbls. at 25c.	$28.00
Pickling and packing at 18c. per bbl.	20.16
Hauling to wharf at 2c. per bbl.	2.24
Duchess—100 bbls. at 25c. per bbl.	25.00
Pickling and packing at 18c. per bbl.	18.00
Hauling to wharf at 2c. per bbl.	2.00
Interest at 6 p..c. on $660, value placed on the 1 2-3 acres of orchard by Mr. Clark	40.00
Total expenditure	$194.35

REVENUE.

84 bbls. Wealthy No. 1, at $1.50 per bbl., f.o.b.	$126.00
28 bbls. Wealthy No. 2, at $1.00 per bbl., f.o.b.	28.00
67 bbls. Duchess No. 1, at $1.50 per bbl., f.o.b.	100.00
33 bbls. Duchess No. 2, at $1.00 per bbl., f.o.b.	33.00
Total Revenue	$237.50
Expenditure	191.35
Net profit on 1 2-3 acres	93.15

Net profit per acre, $55.89, which on a valuation of $400.00 is a return of almost 14 per cent.

While the Wealthy trees received the three full sprayings, the Duchess trees received only the first and third sprayings, the second one being omitted. Mr. Clark considers the crop from the Wealthy trees as a fair average one, but states that it was an off year for the Duchess, and he expects to receive over twice the crop in 1913 from the same block of sixty Duchess. In giving the revenue, no mention has been made of the hay harvested from between the trees—which yielded about $12 clear of harvesting expense. Mr. Clark states that the Wealthy apples packed a larger percentage of No. 1's than usual, due to the pruning and spraying. On the other hand, the Duchess, while being practically free from codling moth injury and fungous diseases, produced many knotted and deformed apples, due to imperfect fertilization of the blossoms, hence the larger percentage of No. 2's.

THE YORK COUNTY ORCHARD.

This orchard is situated at Douglas, on a strong southern exposure to the St. John River, and contains about 130 trees of various ages and sizes, planted different distances apart, most of them about fifteen-by-twenty feet. This orchard had not been ploughed for fifteen years, and when taken hold of there was much dead wood in the young growth and almost every tree had developed large trunk wounds from sun-scalds, and were more or less affected with black rot canker. The soil is a medium red loam with gravelly sub-soil. The varieties were as follows: Duchess, Alexander, Wolfe River, Fameuse, Wealthy, McIntosh Red, Montreal Peach, Switzer, Bishop Pippin, Bethel, Eccles Pippin and Gano. The owner placed a valuation last spring on this orchard of $150 per acre.

Pruning operations were commenced on April 27th. In all twelve sloven loads of brush were removed after pruning. On May 3rd and 4th the lime and sulphur not having arrived, the trees were sprayed in their dormant state with fresh lime, slacked, 30 lbs.; water, 40 gallons, and lye, 1 lb., the canker and sun-scald wounds being heavily sprayed with this solution. Eight barrels were sufficient to completely cover every twig in the orchard. On April 27th, fifteen double horse loads of well rotted barnyard manure were applied as a top dressing. The second spraying of commercial lime-sulphur. summer strength, 1 gallom to 38 gallons, of water, and 2 lbs. of lead arsenate, was applied on May 10th and 11th, at which time the leaf buds were opening. The third spraying of the same strength was applied on May 30th and June 1st, just after blossom fall. The top dressing of barnyard manure was turned under on May 15th and 16th, ploughing both ways with one horse, and having a man to hold up low and inter-crossing branches. 430 lbs. nitrate of soda, 1,000 lbs. basic slag and 900 lbs. sulphate of potash, were applied and harrowed in during the last week of May. Crimson and mammoth red clover and summer and hairy vetches were sown as cover crops about the 25th of June. In August a portion of the orchard became rather badly infested with apple aphis and four barrels of kerosene emulsion were applied.

EXPENDITURE—SPRING OPERATIONS.

6 days' pruning at $2.00	$12.00
2 days' cutting out sunscald wounds	3.00
1 day scraping	1.50
2 days' painting	3.00
2 gallons paint	4.50
1½ days' hauling brush—2 men and team	7.50
15 two-horse loads of manure applied, $22.50—one-half chargeable to 1913	11.25
2 days' ploughing, 2 men and 1 horse	9.00
1 day harrowing—one horse	3.00
1,000 lbs. basic slag, 900 lbs. sulphate of potash, and 430 lbs. nitrate of soda, $46.98—one-half chargeable to 1913	23.49
Applying the same	1.75
Freight and hauling to orchard on same, one-half chargeable to 1913, $3.00	1.50
Cover crop seeds	3.75
Sowing the same	.75
250 lbs. fresh lime, $1.50; 8 lbs. lye, 80c. (8 bbls. lime and lye wash)	2.30
To applying the same	6.00
10 bbls. summer spray applied at $1.22½	12.25
8 bbls. summer spray applied at $1.22½	9.80
4 bbls. kerosene emulsion	1.10
Applying same	3.00
Depreciation of spraying outfit	5.00
	$119.44

HARVESTING EXPENDITURE.

147 bbls., delivered, at 30c	$44.10
Picking and packing, at 20c	29.40
Hauling to market, 15c	11.76
	$85.26
6 per cent. interest on $225, the value placed on the 1½ acres of orchard by Mr. Hawkins	13.50
Total expenditure	$218.20

REVENUE.

32 bbls. Wealthy No. 1, at $2.00	$64.00
17 bbls. No. 1, Switzer, at $3.00	51.00
14 bbls. No. 1 McIntosh, at $4.50	63.00
12 bbls. No. 1 Fameuse, at $3.00	36.00
12 bbls. No. 1 Alexander, at $2.00	24.00
5 bbls. No. 1. Bethel, at $3.50	17.50
4 bbls. No. 1 Duchess, at $1.50	6.00
3 bbls. No. 1 Switzer, at $4.00	12.00
3 bbls. No. 1 B. Pippin, at $3.00	9.00
3 bbls. No. 1 Milding, at $2.50	7.50
3 bbls. No. 1 Gideon, at $1.50	4.50
2 bbls. No. 1 Peewaukee, at $2.50	5.00
1 bbl. No. 1 Wolfe River	2.50
1 bbl. No. 1 Gano	2.50
1 bbl. No. 1 Montreal Peach	1.50
113 bbls. No. 1 apples	$306.00
12 bbls. No. 2 Wealthy, at $1.25	15.00
6 bbls. No. 2 Switzer, at $2.00	12.00
4 bbls. Na. 2 Fameuse, at $2.00	8.80
4 bbls. No. 2 Alexander, at $1.25	5.00
3 bbls. No. 2 Natives, at $1.00	3.00
1 bbl. No. 2 McIntosh	3.00
1 bbl. No. 2 Peewaukee	1.75
1 bbl. No. 2 Milding	1.50
1 bbl. No. 2 Duchess	1.00
1 bbl. No. 2 Gideon	1.00
34 bbls. No. 2 apples	$ 51.25
	306.00
Total revenue	$357.25
Total expenditure	218.20
Net profit on 1½ acres	$133.05

Net profit per acre, $88.56, which on the valuation of the owner of $150.00 per acre, is a return of 59 per cent.

It should be mentioned that not more than 90 of the trees bore fruit, and that of those only ten were large, about twenty of the medium size and the balance quite small. In addition to yielding well, the trees made from 10 to 15 inches of new growth, and the deep glossy green foliage indicated an almost complete restoration of vigor and vitality. All four cover crops grew luxuriantly and formed a dense covering, which will not only hold the snow well and afford good winter protection, but when turned under in the spring will greatly improve the mechanical condition and fertility of the soil. Owing to the rather broken-down condition of the orchard when taken hold of, the operating expense was much heavier than will be necessary for succeeding years, and more of it might reasonably be charged to the future.

On an orchard planted and raised to a bearing age with proper care, the annual cost per acre of the spring operations would not even at a high figure, exceed $35.00. In this case, owing to the poor condition of the orchard, the spring operations cost $83.62 per acre; though the yield was not heavy, the actual net profit per acre was $88.70. Add to this the $48.62 extra spring expense over normal conditions, and we have a net profit per acre of $137.32.

THE ALBERT COUNTY ORCHARD.

This orchard is situated at Lower Coverdale, on the Petitcodiac River, six miles below Moncton. The soil is a stony loam with a gravelly subsoil. The site has a northeastern exposure to the river and is well windbreaked with spruce. There are about 625 bearing trees about thirty-five years old, and 21 by 26 feet apart, mostly of the Winter Bough variety.

Eight rows were taken over by the Department of Agriculture last spring, in which were the following trees: 65 Winter Bough, 44 Alexander, 39 Bishop Pippin, 26 Red Streak, 17 Ribston Pippin, 7 Manx Codling, 5 Belliveau, 2 Northern Spy, 1 Greening, 1 Fameuse, 1 Gravenstein and nine others, various varieties, names not known. The Winter Bough, Red Streak and Manx Codling were about all large trees, but many of the Alexander were badly cut up and had had their bearing surface much reduced through black rot canker on the limbs. The other trees were of medium size. Pruning operations were commenced on March 24th. The many numerous large canker and other wounds made the scraping and painting work very heavy, and in reality half the expenses thus incurred should be charged to succeeding years.

Unpruned Duchess Trees.

Pruned Duchess Trees.

EXPENDITURE—SPRING OPERATIONS.

10 days' pruning, at $2.00	$20.00
7 days' painting, scraping and cutting out wounds, at $1.50	10.50
3 gallons of paint, at $2.50	7.50
10 bbls. winter spray applied, at $1.54	15.40
10 bbls. summer spray applied, at $1.12	11.20
12 bbls. summer spray applied, at $1.12	13.44
Freight on 50 lbs. lead arsenate	.50
Freibht on 2 bbls. lime-sulphur (extra)	.50
1½ days, 2 men and 1 horse, hauling brdsh	6.75
36 two-horse loads manure applied, one-half chargeable to 1913, $54.00	27.00
1,000 lbs. basic slag and 900 lbs. sulphate of potash, one-half chargeable to 1913, $38.45	17.73
Hauling fertilizer to orchard, half cost	1.50
Ploughing 1½ days, at $3.50	5.25
Harrowing, 3 times one day	3.50
Cover crop seeds	6.75
Sowing same	.75
Depreciation of Spraying Outfit	5.00
Total	$153.27

HARVESTING EXPENDITURE.

697 bbls. delivered, at 30c	$209.10
Picking and packing, at 25c	173.25
Hauling to station, at 8c	55.76
Freight on 181 bbls. to St. John	41.60
Interest at 6 p.c. on $1,500.00, value placed on 3 acres of orchard by Mr. Steeves	90.00
	$569.71
	153.27
Total expenditure	$722.98

REVENUE.

188 bbls. No. 1 Winter Bough, 35 bbls. No. 2 Winter Bough, at $1.60	$356.80
70 bbls. No. 1 Red Streak, 13 bbls. No. 2 Red Streak, at $1.60	132.80
24 bbls. No. 1 Manx Codling, 6 bbls. No. 2 Manx Codling, at $1.60	48.00
105 bbls. No. 1 Alexander, 35 bbls. No. 2 Alexander, at $1.60	224.00
23 bbls .No. 1 Ribston, at $2.50	57.50
14 bbls. No. 2 Ribston, at $2.00	28.00
71 bbls. No. 1 Bishop Pippin, at $2.75	195.25
59 bbls. No. 2 Bishop Pippin, at $2.25	132.75
22 bbls. No. 1 Various, at $1.50	33.00
8 bbls. No. 2 Various, at $1.25	10.00
10 bbls. No. 1 Belliveau, at $2.00	20.00
7 bbls. No. 2 Belliveau, at $1.50	10.50
1 bbl. No. 1 Northern Spy, at $4.00	4.00
3 bbls. No. 2 Northern Spy, at $2.50	7.50
2 bbls. No. 1 Fameuse, at $3.00	6.00
1 bbl. No. 2 Fameuse, at $2.00	2.00
Total revenue	$1,268.10
Total expenditure	722.98
Net profit for 3 acres	$545.12

Net profit per acre, $181.70, which on a valuation of $500.00 per acre, is a return of over 36 per cent.

In the balance of the orchard, which under Mr. Steeves' own direction was pruned, sprayed twice and a part of it sprayed a third time, but which was not cultivated nor fertilized, there were harvested 1,153 barrels, that is, from about 410 trees, most of the Winter Bough variety. The trees of this variety were very heavily laden and owing to the exceptionally early maturing and dropping of the fruit, picking was not commenced soon enough, and as a consequence nearly all the apples from this portion of the orchard were harvested off the ground and in a more or less damaged condition. Notwithstanding this, the run of these apples averaged $1.40 per barrel. The expenditure and receipts for the balance of the orchard containing 410 trees, was as follows:

EXPENDITURE—SPRING OPERATIONS.

Pruning 410 trees, at 6c	$24.60
Scraping 410 trees, at 3c	12.30
13 bbls. winter spray, at $1.54	20.02
20 bbls. summer spray, at $1.12	22.24
2 days, 2 men and 1 horse, hauling brush	9.00
Depreciation of spraying outfit	5.00
	$93.16
Interest at 6 per cent. on $2,500, value placed on the 5 acres by Mr. Steeves	150.00

HARVESTING EXPENDITURE.

1,153 bbls., at 30c	$345.90
Picking and packing at 20c	230.60
Hauling to station, at 8c	92.24
Total	$911.90

REVENUE.

1,153 bbls., at $1.40	$1,614.20
Total expenditure	911.90
Net profit on 5 acres	$702.30

Net profit per acre, $140.46, which on a valuation of $500.00 per acre, is a return of 28 per cent.

Had the apples not been injured by the heavy drop, they would probably have averaged 10 to 20 cents a barrel more. Though this portion of the orchard yielded $36.00 net profit less per acre than the other eight rows, yet the expenditure, apart from the cost of picking, packing, etc., and the interest charge, is only $18.63 per acre, as against $51.09, and the trees are not in as good shape as those on which the heavy expenditure was placed.

In this orchard the cover crops, which were sown mixed, made an exceptionally heavy growth, in most places fifteen inches high, and forming a dense, close matting which greatly lessened the injury to that part of the crop which fell.

(Continued on page 518.)

Cow Testing, the Indication of Real Dairying.

A Word to the Wise is Sufficient.

By Chas F. Whitley, Dairy Division.

What Cow Testing Is.

COW testing is a simple, inexpensive, reliable and interesting method of determining the real dairy power and ability of each cow in the herd, ability to convert feed into milk at a good profit.

The object of cow testing is to prove to the dairyman through keeping simple records which cows are paying and which are not, so that he may know which to beef and which to retain in building up a profitable herd.

A knowledge of the total production of the herd for a month, or even for the full season, is no guide to the information needed by the real dairyman as to the capacity of the individual cow. That only gives a knowledge of what is the average yield of the herd. An average, only, is likely to mislead, for records prove that one's judgment is apt to be considerably astray regarding some promising and deserving cows, while others exist only to deceive.

The following analysis of a typical herd indicates what differences exist between individual cows in the same herds in several localities.

ANALYSIS OF AN AVERAGE HERD

Average yield, 14 grades, 4269 Milk, 3.4 Test. 147.7 Fat.
Average yield, 7 Best Cows, 4878 Milk, 3.5 Test. 170.5 Fat.
Average yield 7 Poorest Cows, 3660 Milk, 3.3 Test. 125.3 Fat.
The Best Cows average 1218 lb. Milk, 44.8 Fat more than the Poorest.
The Total Earnings of 7 Best are $85.23 more than 7 Poorest.
The Total Earnings of Cow No. 1 are $20.70 more than Cow 13.
With Cost of Feed at $35.00 the Best Cows average $13.78 Profit each, Total $96.43.
With Cost of Feed at $35.00 the Poorest Cows average $1.60 Profit each, Total $11.20.
Cow No. 1 makes $19.60 Net Profit.
Cow No. 11 makes only $1.40 Net Profit.
Thus Cow No. 1 makes as much profit as 14 cows like No. 11.

Why should not each cow you own bring in a good $20.00 or $30.00 clear profit? Many cows do.

THE VALUE OF RECORDS.

A milk record to be of value to the average dairyman should be complete, for the full period of lactation; a partial record is very unsatisfactory, practically useless. Knowledge is wanted of the total production of each cow separately, and less than ten minutes a month spent in weighing and sampling will give definite information regarding a cow's actual yield of milk and fat. At a recent sale the cows with testing association records averaged $11 more than the others.

If the records cover a period of two or three years they are more valuable still. They show if each cow is producing 300 lbs. fat a year, and whether some individuals are yielding 1300 lbs. in 3 years. Then such a cow and her heifers are known to be valuable, either to keep or buy.

Farming has become a specialized business. The business man knows facts concerning his cost, production and profit, the dairyman cannot afford to guess. As he multiplies his output and his profit he cuts down the "overhead" expenses thus working more economically.

Dairy records constitute a valuable "first aid" to injured farmers whose dairy vigour has been dissipated in handling unprofitable cows. Your time is too valuable to waste on poor cows. Records mean less work on the farm, because your selected cows are labour saving machines. Cow testing is one link in the chain

At Pasture on a Dairy Farm Near Sussex.

of golden opportunities which increase with every clock tick.

Good cows make money, poor cows waste it; they also waste feed and stable room, time and temper. Get the dairy dollars now lost in handling poor cows, by selecting good cows. Make double your income and eight times the present profit inside four years, hewing out your fortune with good tools, your own well-tempered dairy ideas, and your good cows. Records post up the effect of storms, whether cold sleet, or hot temper. Lack of care and kindness is a fine of dollars and cents.

A record is an index to the type of animal kept and to the character of her keeper. The individual cow, in whom is being fashioned the dairy ideal of the enthusiastic farmer-artist, is worthy study. And the man is humanized, made the better man by contact with the embodiment of patient unselfishness exemplified in the exquisite types of your profitable cows.

Cow testing is the adjunct of rapid and rational herd improvement through intelligent feeding and wise breeding. Records indicate how much of what particular feed-stuff can be profitably given to a cow while they also designate from which cows the best stock can likely be raised.

CO-OPERATIVE BREEDING ASSOCIATIONS.

Records point out the advisability of making a district known for its particular breed, it is a reasonable and a paying proposition for both buyer and breeder when a locality is advertised as the home of many good specimens of one breed. Buyers don't want to travel miles and miles in picking up a carload, but they will flock to one spot to compete for good cows. Much room exists for this, as well as for co-operation amongst members of cow testing associations for procuring the best possible pure-bred sires of dairy breeds. This simple plan of immense natural benefit can easily be arranged by 15 or 20 members clubbing together for purchase and exchange, so that with three sires and herds divided in three groups a first class sire may be available for three periods of two years each. Co-operation aided in building our factory cheese and butter making, it may reasonably be extended to this community breeding, and is well "worth while;" for herds with the good sire will average an extra 2000 pounds of milk per cow, and the net cost of milk will be rapidly reduced as much as from 83 cents to 66 cents per 100 lbs.

A COW'S REAL VALUE.

The measure of a dairy cow's real value is the net profit she makes above the cost of feed. In dairying the unfailing law of retribution is in active operation. The liberal soul of the liberal feeder waxes fat, and his pocket book does not shrink and flatten if his cows have the opportunity of satisfying their dairy capacity on suitable feed.

Nowadays we must look for large profits from each cow. The old days, of a dual purpose cow producing only 3000 pounds of milk selling for $1.00 per hundred, on feed valued at $30.00, have gone forever, let us devoutly hope.

Large profits are not only desirable but easily obtained according to the experience of members of our cow testing associations. Men who credit each cow with her full production and debit her with the feed consumed

So, may I ask further, what does your milk or butter fat cost? You know its selling price, but as a wise manufacturer does your price book tell you at what rate per pound or per 100 each cow makes it? There lies the secret of success. The whole successful structure of dairying rests on this foundation stone of knowledge of individual performance. We find plenty of cows whose milk costs $1.25 and $1.35 per 100 lb., and whose butter fat costs 25 cents and 35 cents per pound, but no dairyman to-day can afford to keep that type with milk at present prices. Such cows can only be handled by our wealthiest men. Dairy records light the signal fires of intelligent action in selection of the type that will produce fat at 17 cents or less, and milk at 60 cents or less.

By this means we assure ourselves that there is satisfactory return for the investment of all the labour, day in and day out, bestowed on the cows kept. One moment, do you keep them, or do they keep you? Do you work for them or do they work for you? It is high time each factory patron distinctly understood the difference.

POSITIVE GAINS.

Those patrons who grasped this situation three or four years ago have every reason to be thankful. They write to me enthusiastically of the tremendous change in many ways that cow testing has brought. It has meant far more comfort in the home for the wife and children because of the largely increased income. It has meant a new interest in farm work, an appreciation of the dignity of labour, and of adequate payment for it. There has been a trading of every golden minute in the purse of time for improvement through wise dairy thinking of high ideals. Such men are not limited in their notions, they progress, becoming unlimited farmers, farming in their adventures in contentment with the plough of perennial admiration and inquisitiveness all that is best in the world of men and nature.

They harrow the lean hard places of the mind with the sharp tooth of progressive dairy thought. As practical men they in common with the factory owner, school teacher, merchant and banker have welcomed cow testing because it means no loss but positive gain. Note the large increase tabled in these six herds.

COW TESTING
In Account With the Average Farmer.

Debits	CREDITS Increases in Milk Yields Percentage 100 200		Average Yield Originally	Present Yield Per Cow Lb. Milk
NO LOSS AT ALL	Ontario	128 p.c.	3509	8000
	Quebec	191 p.c.	3800	7270
	Nova Scotia	278 p.c.	1459	5515
	N. Brunswick	170 p.c.	4608	7835
	P. E. Island	300 p.c.	1450	5800
	B. Columbia	100 p.c.	3090	6180

find that a rapid increase in the profit takes place as the dual purpose object is attained, the poor cows weeded out and the good cows further improved.

A business man looks for reasonable return on his investment. Do you make a good 5 per cent. or 8 per cent. on your capital sunk in land, buildings, horses, implements and cows? Is the profit being heaped up by each individual in the herd, or do two or three out of your twenty give you no return? You should be in a position to know definitely at your annual stock taking, for you are the one to benefit by any and every step in the direction of herd improvement.

Cow testing is intensely practical. Records show the futility of keeping ten cows to make as much profit as one should; they blazon the white way of endeavour, and crown with success the labours of the men who are wise enough to profit by what the records suggest. Cow testing is one of the best paying propositions ever placed before the dairy farmer.

May I emphasize the fact that the Dairy Division, Ottawa, is anxious to see this cow testing work taken up in real earnest by the farmers and dairymen in New Brunswick. The same generous offer as made during the last six years is open this year,

(Continued on page 520).

Conserve Soil Moisture for Heavy Crops.

Cultivate Early and Sow Early.

By W. M. Lea, Victoria, P. E. I.

WITHIN a very short time, we will again be working on the land; again given another start and another chance to correct any mistakes that may have been made in any past season. One of the gravest of which, I will venture to say, is failing to conserve all the moisture possible.

Now, we are all aware, be it a heavy, light or medium fall of rain, that the ground at some time always contains all the moisture it can hold. It is at some time so wet and soggy that teams cannot walk on it. We must then be watchful for the first day that it is dry enough to work without puddling and do something to mulch the land so as to prevent further evaporation. This is a most important operation and one that should never be neglected for any other work.

At this time the land is very firmly packed, and we must cultivate to break the connection. Our plan is, on fall plowed land, to go over everything that is red, with the spring tooth harrow. This loosens up a few inches of soil which dries in the sun and wind and makes a good mulch. It also helps to warm the land.

For grain we always, if possible, plow in the fall and prepare the seed bed with a harrow, not working too deep, as at whatever depth we break the connection the land, in a dry spell, will dry out, to that depth and if this is too deep for the roots of grain to reach the crop will suffer for lack of moisture which it cannot secure.

Grain should have a fine but not deep seed bed and as firm as possible. If we are forced to plow in the spring we don't plow too deep.

I consider an ideal cultivation for oats, is to plow to a good depth, consistent with the depth of the particular soil in question, in the fall, and leave it without harrowing. Then in the spring, as early as possible, work a fine seed bed with spring tooth harrow, thus scraping the soil without cutting deep makes a nice fine seed bed, with firm damp land not far below. On this sow with a disc drill, which sows the oats to an even depth in the moist soil.

Last season, although very unfavorable, we grew a "very heavy" crop over all our oat land. We always harrow with a light spike harrow just as the oats are about peeping through to again stir up the soil, work the land and renew the mulch. If we roll at all, we do so with a light roller on a dry soil, so as not to pack the surface. Cultivation to conserve soil moisture is a most important feature in the growing of our farm crops. This is one of the reasons why we grow as large an acreage of roots and corn as possible, for we can keep these crops cultivated, throughout the growing season, and they are much less subject, for this reason, to the season's fall of rain. After every rain, whenever the land is fit to work, we always start the cultivator. This gives us control of the moisture content, to a considerable degree, as was noticed last season, turnips and corn being the only crops in many sections of this Province that produced a full return. Early seeding is also most important and very often neglected. It is amazing to witness the liesurely manner in which some farmers go about their spring cultivation, and seeding. They seem to have great faith in Providence as they do little to help themselves.

Now we occasionally get seasons that have a regular rain fall, and these years, neither the difference in cultivation nor time of seeding seem to show such a variation and we often hear of experiments that are quoted from the experiences of these favorable seasons; but we should always make preparation against the most unfavorable conditions, and, if we are favored with plenty of moisture and a good growing year we will have certainly done nothing to injure our chances of a full crop. My advice is: cultivate early as possible, and while sowing always with the season, don't be late.

Cultivation checks the loss of water. The principle of water saving may be briefly stated as follows: After water is stored in the soil and the dry season comes, it rises from soil particle to soil particle, just as oil creeps up in the lamp wick. In the end, unless prevented by some obstacle, it reaches the surface of the soil, where it is evaporated and passes into the atmosphere as vapor. If you can stop it from reaching the surface, you can stop this evaporation. You have, no doubt, seen it stop many a time. For example, you have picked a board from the ground, or a stone, or leaves, or grass, or straw, and you have found wetness beneath these, no matter how dry the surrounding soil was. There was but one way by which this could happen. The moisture had come up toward the surface, and everywhere, except where one of these obstacles was, it had reached the surface and evaporated. But in the cases we have referred to, the stone, or board, or other matter, acted as a blanket and kept the water from reaching the surface. This principle is so well established that from it has been developed the practice of moisture saving by providing a layer of loose, dry soil or mulch, from 2 to 4 inches deep, at the surface, to serve as a blanket to prevent the moisture from reaching the surface and being lost by evaporation.

In order to keep this loose layer of soil, or so called soil mulch, the cultivator should be kept going quite frequently during the growing season. No regular rule, however, can be laid down. Whenever the surface mulch has become sufficiently compacted, so that the moisture rises up through it, then the cultivator must be started. After every rain storm it will be found that this mulch is compacted and there must not be a single day's delay in starting the cultivator. A farmer asked me, last August, how it was that his potatoes grew well until about the middle of August, when a heavy rainfall came, which he thought was just what was needed to push them along. But they did not do so well after this rainfall as during the preceding dry weather. I asked him if he had run a cultivator through his potatoes to break the crust formed by the rainfall. He replied no, and the explanation of the poor growth is very evident. Keep the cultivator going during the growing season.

A factor of great importance in the conservation of moisture is the control of weeds. Remember, when you see a weed growing on your farm, that every pound of dry matter in that weed has required 400 or more pounds of water to produce it. It will not take a very large weed to remove 200 pounds of water. At the Illinois Experiment Station two plots of ground, lying side by side, were prepared for corn in the usual manner, and planted. On one plot the weeds were allowed to grow, but on the other they were kept down by scraping with a sharp hoe without producing a mulch. The moisture content was determined during July and August, giving an average difference to a depth of 40 inches of 342,000 pounds per acre, which is a quarter enough to grow a crop of potatoes. When it is considered that in addition to their effect upon the moisture, weeds consume plant food that should nave been used by the main growing crop, we still further appreciate the importance of completely suppressing them.

By looking after the early cultivation of the soil and by frequent cultivating during the growing season to keep the soil well mulched until the crops shade the soil the moisture will be conserved and other things being equal the prospects will be bright for a bountiful harvest.

Don't be one of those who will be forced to say at the end of the season: "The harvest is past and my crops do not amount to much." "As a man soweth so shall he reap" is an adage that still holds true, but to it I would add another: "I passed by the fields of the slothful and him void of understanding and Lo they were overgrown with weeds." Don't belong to this class.

The Clydesdale Stallion, Baron Kelvin.

Baron Kelvin was imported from Scotland last August by Graham and Renfrew Co. of Bedford Park, Ontario, who recently sold him to John Richards, Bideford, P. E. I. Baron Kelvin is considered to be one of the best Clydesdales in America today and judging by his success in the prize ring and in breeding ranks the claim is justifiable. He was shown at the Toronto Industrial Exhibition where he won first prize in his class and championship over all ages. Later he competed in the state of New York, against all breeds and again won the championship. At the Winter Fair, Ottawa, last January, he met and defeated the very best stallions in Canada. He sold at perhaps the highest price ever paid for a stallion in Canada, which shows that the breeders of P. E. Island are out for the right kind of stuff.

Corn That Will Grow.

Ensilage growers should plant corn that will grow. W. E. J. Edwards, Secretary of the Ontario Corn Growers' Association, Essex, Ontario, has published a circular containing the names and addresses of members of his Association who have seed corn for sale. A copy will be sent to readers of the Maritime Farmer on request.

How I Built My Concrete Piggery.

A Serviceable, Substantial Structure.

By F. C. Beaton, East Point, P. E. I.

THE dimensions of this building are length, 70 feet; width, 18 feet; post, 7 feet, three feet being concrete. Cellar in one end of building 18 x 15 feet, 6½ feet deep, walled on all four sides with concrete; floored throughout with concrete; foundation of concrete three feet under ground.

Excavation for cellar was done with slip scraper and team. Trench for foundation was dug 10 inches wide, allowing two inch batter. Forms for cellar walls were constructed thus: Four pieces of scantling, long enough to reach across cellar and rest on ground, were set on blocks, in parallelogram size of cellar, less uprights and form boards, and securely nailed together and fastened to blocks; uprights (2 x 4) were stood against outside of parallelogram and tacked to hold in position. Foot of uprights were secured by "liners" pieces of scantling placed behind uprights, and held in position by stakes driven in ground. Boards used were ordinary ⅞ inch rough boards, fastened to uprights with 6 dy. nails, soft soap being used to tighten seams.

Foundation for floor was prepared by pounding gravel dug from cellar into ground, grades for drainage etc. were got by using spirit level and straight-edge; pegs were driven in foundation at points required to mark grades. Work was begun on cellar walls, concrete mixture being shoveled into chute leading to bottom of cellar, for first three feet of wall, after which it was dumped into forms from wheel-barrows. When cellar walls were up to height of bottom of foundation, filling was continued all around building. Cellar walls and foundation were brought to floor level, then floor was laid in 10 feet sections, every alternate section being done; four inch strips were laid every ten feet across floor of pens. First ten-foot section was laid, levelling being done by sliding straight-edge on four inch, between, which was next done, levelling being done in this case from floor on either side; this was continued until floor of pens was finished, after which feed-way floor was laid. Gutter was made by embedding in soft concrete two boards nailed together to form right angle, one edge of board being allowed to rest on edge of completed pen floors.

Erecting a Concrete Piggery.

The above cut shows the piggery erected by Mr. F. C. Beaton, East Point, P. E. I., one of the prize winners in the Canada Cement Co's competition for the best concrete work. The Company's ad. appears on another page of this issue.

Then wall forms were erected, uprights held in place by "liners," liners for outside forms being held in place by stakes driven in ground, and inside by 2 x 4 stretched across floor.

Concrete mixture was dumped into forms from wheel-barrows, for which temporary staging was built; walls 8 inches thick, stone fillers used in all walls. Concrete mixed one part concrete, two sand, and five gravel. Six inch bolts were set in soft concrete to hold sills in place. Concrete was mixed by hand on 10 x 12 mixing box, one barrel of cement being mixed at a time. No skilled workmen were employed, we built the forms ourselves, and the only men employed were labourers to assist in mixing and placing concrete. We had no previous experience at concrete work, yet the job has been pronounced O. K. by competent judges.

Door frames were set inside forms before concrete was placed. All lumber used in forms will be used in structure later, so there was no expense for forms except nails and work. Gravel and sand were hauled from sea-shore on farm at odd times.

The cost of the job is as follows:—

54 barrels of cement $2.30 per barrel	$124.20
Hauling gravel, man and team 6 days (from seashore on Farm)	15.00
Hauling sand, man and team, 2 days	5.00
Hauling stone fillers, man and team, 3 days	7.50
Excavating for cellar (root) 2 men, team, scraper, 3 days,	10.50
Digging trench for foundation 10 inches at bottom, 8 inches at top, 3 feet deep, 2 men, 1 day	2.00
Preparing foundation for concrete floor, 2 men, 3 days	6.00
Erecting forms, 2 men, 3 days	10.00
Mixing and placing concrete, 5 men, 7 days	35.00
Tearing down forms, 2 men, 1 day	2.00
30 lbs. nails used in forms	.80
Hauling water for mixing concrete	2.00
TOTAL	$220.00

Nearly all the work described here was done by ourselves (brother and self) only 3 men being employed 7 days, mixing and placing concrete. I have charged local prices for men and horses in this statement. No charge is made for lumber used in forms, as practically none was destroyed, and it will be all used in the building.

To Concrete a Cellar Floor on Wet Land.

How the Difficulties Were Overcome.

By T. W. Keillor, Amherst Point, N. S.

THE first thing is to dig the cellar 6 inches deeper than you want the floor, with a crown of two inches through the center and sloping from three to four inches, according to size of house, toward the drain, which should be three inches below the lowest part of cellar.

Lay a board six inches from the wall starting at the drain, take a mud pick and make a trench along the edge of the board next to the wall about three quarters of an inch deep, move the board along until you have the trench all around the outer wall, back to the drain. Clean off the loose earth you have made in digging the trench and place two inch tiles in this trench, which you will find just deep enough to hold the tile in place.

Break stone quite fine all over the floor, gravel will do by pounding down with a heavy maul, but it is hard to get the gravel as firm as the stone, to a depth of three inches, being careful not to pound directly over the tiles as it will be likely to break them.

Take a piece of wood about ten feet long, one and a half inches thick and from two to four inches wide for a guide board, place the guide board on the coble stone, or gravel, about two and a half feet from the wall. Take two thin boards about one inch longer than will reach from the ceiling down to the one and a half inch guide board, place one on each end of the one and a half inch guide board and spring them in just tight enough to hold the guide board in place. If the guide board is resting on some stones or gravel that happens to be higher than the general run, tap gently on the guide board directly over the high point, this will bring it down to the even level of the stone or gravel.

Interior of Stable Owned by Robt. Malcolm, Brule, N. S.

A prize winner for best concrete work done, as shown by photograph in the recent competition carried on by the Canada Cement Co., whose ad. appears on another page of this issue.

Now we are ready for the concrete. Make a mixing board, about ten feet square, of one inch boards with cleats nailed on the under side, about three feet apart, to keep it firm.

For a measuring box a large confectionery pail which holds about four gallons, can be used on a small job. Fill the pail seven times with bank run gravel and empty it on the mixing board spread it out to a thickness of about four inches. Now fill the pail once with Canada Cement and spread it over the gravel. Take your square mouthed shovel and shovel the mixture over four times on the board. This will mix it ready for water. Take a pail to measure the water in, but don't put too much in at first. Shovel the pile over until the water is well through it, then add more water until the concrete is a little crawley. It is now ready to put on the floor. Spread it in the space between the guide board and the wall, being careful not to have it thicker next to the wall than it is at the guide board, and pound it down with a tamper or hammer made of a stick of wood 8 x 8 x 18 inches, with a hole bored in the end and a shovel handle driven in it to lift it by. As you get the space filled between the guide board and wall level with the top of guide board, slip out the spring boards which hold the guide board down and move it along until you have finished a strip along one wall. Now move your guide

(Continued on page 530).

Beef Production in New Brunswick.

Revive the Waning Though Profitable Industry.

By Ashley George, Upper Sackville, N. B.

AT the recent Live Stock Convention held at Ottawa, the beef industry of Canada was a question of lively importance. One man is reported continued, Canada will in a few years be importing beef for her own consumption." This statement is perfectly justifiable when we learn that beef exports from Canada to Great Britain have decreased during the last six years from 149,000 head to 42,000 head.

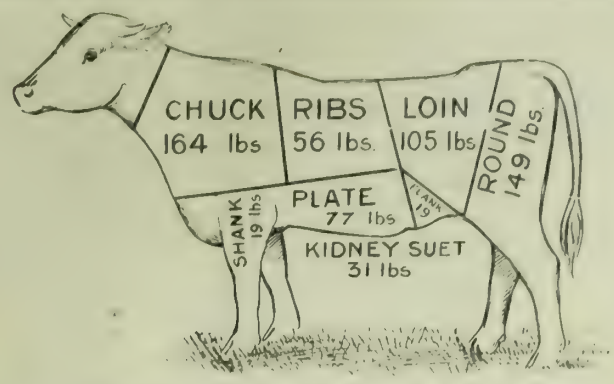
In the Prairie Provinces, where ranching has been predominant, the homesteader is taking the place of the rancher and domestic beef raising, while but in its infancy, is one of the growing industries of that country, and the fact that the railways are totally unable to handle the immense output of grain crop, entailing a loss last year to the grain growers of from 20 to 25 millions of dollars, will stimulate a greater degree of mixed farming of which the beef industry will be one of the principals.

Going back in the history of the beef industry some 15 or 20 years, it was an almost every day occurrence to see a carload of beef cattle leaving our country stations for the market centres of our Province, or across the ocean to Great Britain. I have seen on our own farm, and this instance was only one of the average in our section, some 12 or 15 cows of the old-fashioned grade Shorthorn type, varying in weight from 1200 to 1400 lbs., cows with an almost unlimited stomach capacity, with high udders and teats proportionately large that would in the flush season give from 50 to 60 lbs. of milk of fair test per day. The offspring from this stock were of a hardy growth by nature and when at the age of three or four years, would be fatted and shipped off for beef. This was the time when New Brunswick flourished as a beef producing Province.

At the same time domestic dairying was also a large source of the farmer's income. But not satisfied with that condition of things, the Government undertook to boost the dairying industry by introducing bulls of the special dairy breeds. Travelling dairies with experts were sent over the Province. Fairy tales were told of wonderful records by some Jersey or Holstein cow and government bonused creameries were established in many districts. Then began a distinct retrogression of our large, hardy, old-fashioned grade Shorthorns, which place up to recent years has been taken by the scrub Jersey or Ayrshire grade steer.

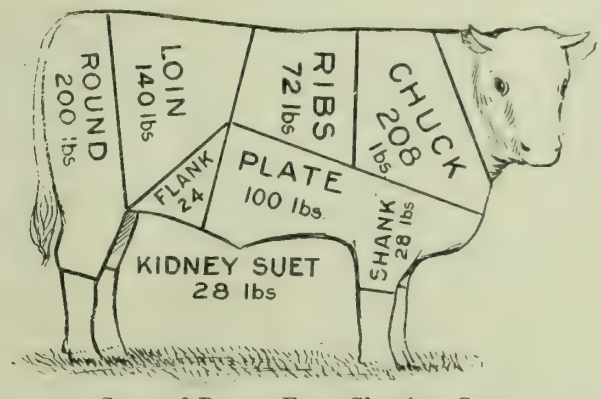
The progress of a farming community is largely judged by the quality of stock kept by its farmers, and the presence of superior animals inspires greater activity and advancement in that particular line.

The Government has, by sending expert judges and professional speakers about our country fairs, sought to improve our conditions. For years past we have attended our Provincial and Winter Fairs. We have seen the best this country can produce. We have been told what has been and what can be accomplished. We return home with a feeling of disgust with the stuff that is around us. Our stock breeders have imported bulls and heifers as near as possible in type to the ideals set by these government experts. We seek to better our stock through these means and after successive years of high breeding we find our stock improved but very much less in number. For this fact, there must be some reason. We know that to make beef raising profitable, dairying must be associated with it, but in the improved stock of which I speak we have a cow that will barely feed her calf and that is altogether unprofitable. We have a calf which when nursed and fed until 2 or 2½ years old, will weigh from 1200 to 1400 lbs. but one which will cost much more than he is worth.



Unprofitable Steer, The Kind Not To Feed.

This steer weighed 1100 pounds alive and 600 dressed. His dressing percentage was 56 p c. His low back, high flank, narrow head and narrow back are all undesirable in a beef steer.



Steer of Proper Form Showing Cuts.

This steer weighed 1300 pounds alive and 800 pounds dressed. This makes his dressing percentage 60. He is an example of the most profitable steer to feed. Note the broad head, straight, level back and deep flank.

Thus it is that this class of cattle can be raised only by the wealthy classes for show purposes and cannot be indulged in with any profit by the farmer of ordinary means.

The Governments of our country have at last awakened to the conditions they have thus created and a strong effort to improve agriculture in this line is being most seriously considered.

During the fattening period of an animal's life, it does not always get proper attention. The stable may lack light and ventilation. The animal may be infected with scab or lice. Warbles are allowed to mature. All these things have a detrimental effect to the profit side of that animal.

Just here regarding the warble;—Naturalists tell us that the only means by which the warble or gad-fly is propagated is through the cattle. If this be true, it would be possible in a very few years to completely exterminate them. The presence of the gad-fly in the summertime is a source of great annoyance and discontent to the animal and must necessarily decrease its beef product. During the periodic stage of the warbles development, the animal must suffer considerable loss and when a beef animal is badly infected, the value of the beef as well as that of the hide is much depreciated. If the farmers owning cattle were compelled to destroy these warbles, it would mean only a few years before they would be completely exterminated.

It is true that the producing end of a steer is of vast importance, but it is also true that the market end is just as important.

When a farmer has finished an animal ready for the block, he looks back over its history. He thinks of it when it was a calf, when for five or six weeks it was fed the rich whole milk, then nursed along through its first winter with turnips and oats, how during the next year and a half it is turned to roughish pasture and fed with rough hay, and perhaps a little roots, then put up in the fall of the second year and fed on the best hay and an ever increasing ration of turnips and meal until finished in the spring of the third year. He realizes that the steer is an absolute necessity for the upkeep of the farm. He thinks of the value of the stuff that has been fed, of the labor that has been expended and feels that an average price of say, 4½ cents per lb. is poor compensation for all his trouble. He holds for a possible raise to 5¼ or 5½ cents. For a time prices remain steady, but soon we find agents of the big Quebec and Ontario meat packers have contracted to supply our markets during the summer for a less price than the foregoing. Thus it is that the beef producers of this Province are somewhat handicapped.

We go to the retail dealer. We find him selling the best cuts for from 16 to 20 cents per lb., when he paid but 10 cents per lb. for the carcass. We ask him why so much difference? He tells us that many of the citizens are very exacting. The cost of delivering so many small lots all over the town at a certain hour of the day is very expensive. The upkeep of slaughter houses, the hiring of expensive labor out of the shop all tend to increase the price of meats to the consumer. It is generally acknowledged that there is too much difference in the price of produce as to when it leaves the farm and when it reaches the consumer. If we could have established Government owned abatoirs with modern cold storage facilities centrally located and with cheap transportation rates both ways, it would tend very largely to eliminate the congested conditions which sometimes prevail and at the same time stimulate to a greater degree the beef production of this province.

One of the best assets of this country was lost to the farmers when our County Councils established pound districts throughout our parishes. Every summer large herds of cattle roamed throughout our wilderness lands where abundance of pasturage was afforded them. We cannot blame those farmers living in the back districts, whose crops were often destroyed by straying cattle, asking for protection, but at the same time it is possible by some legislation to reinstate to the farmers those valuable grazing areas which are now merely the home of the moose and the deer.

Fortunately for the farmer he has the choice of raising beef under these conditions or turning his attentions to field crops and fruit culture.

With the scarcity and high price of labor, it is found necessary to supplement the full cattle barns and large manure heaps by a more modern and comprehensive means of soil fertilization. Science is playing a most important part in the history of agriculture and demands of the agriculturalist, a study which is second to that of no other profession. The use of chemical fertilizers, the growing of clovers and other fertilizing plants, the so-called rotation of crops with its more frequent cultivation of the land, the use of so much modern machinery and other labor saving devices, the prevailing high prices of field crops, small fruits and garden truck are proving themselves more attractive to the student farmer and directing his attentions from the more strenuous and less profitable work of beef raising.

Our Federal Government is appropriating a large amount of money for the direct benefit of the farmers of Canada, and New Brunswick getting its proportionate amount together with the money granted by its own Government, it is hoped that some material benefit to the beef industry as well as to all other branches of farming will result from an honest, wise and careful distribution of these appropriations.

Busy White Orpingtons.

C. Perry Foote, Kentville, N. S., writes:—

Enclosed find ad. copy and cash, $1.10, for 2 insertions in your want column. I have a very fine lot of hens this season and can supply eggs good enough for anybody. I am very much pleased with the White Orpington breed. Last season I had fifteen hens and from the first of April until August we bought eggs to use, as local breeders kept ours bought out all the time, for hatching purposes. From appearances the 21 I have this year will be kept just as busy.

The Third Annual Maritime Horse Show.

Noticeable Improvements in Every Class.

THE third annual Maritime Horse Show under the auspices of the Maritime Stock Breeders' Association was held at Amherst, N. S., on April 3rd, 4th and 5th.

Despite the fact that the weather man did not furnish weather that was all together pleasant, the total gate receipts at the close of the show told the story that the attendance had been larger than at any of the preceding shows.

QUANTITY AND QUALITY.

And the visitors who patronized the show were not disappointed in the number and quality of the exhibits nor in the manner in which they were exhibited and judged. There were over two hundred horses totalling three hundred and eighty-five entries exhibited this year while last year the number of horses exhibited was one hundred and thirty, totalling two hundred and thirty entries.

The quality of the horses shown in the various classes was a great improvement on that of the horses shown in 1911 and in 1910. The judges, who have visited and judged at some of the largest shows on the American Continent, said that in the Clydesdale, Heavy Draught, Agricultural, and in some of the lighter classes they had never seen better exhibits. There was no room for culls or unfitted horses and in many classes after the prize winners were picked out there were enough good horses left, without the money's pale, to make a good showing at some of the larger fairs. It is said that "Competition is the life of trade." We also believe that the friendly rivalry between the various breeders at the Maritime Horse Show will be the means of embuing the horse breeding interests with new life, and as they progress in the work by importing and breeding better stock, their influence will be far reaching.

THE HORSE VS. THE AUTOMOBILE.

With the advent of the automobile a few years ago it was said that the horses' death knell had been sounded and that ere long man's noblest and truest friend would be relegated as a thing of the past. Well we have had the autos for many years but still horses are more popular and in more demand than ever before. An Automobile Show was held in Amherst on the second floor of the Winter Fair Building, concurrently with the Horse Show, but a visitor to both shows could judge by the number of sight seers who patronized the shows that the centre of attraction was around the horse judging ring. The magnificent sturdy draughters, the speedy roadsters, the trappy carriage horses and the prancing saddlers, presented an animated scene from which even the toot of the automobile could not detract the attention of the public.

THE MANAGEMENT.

Col. H. Montgomery-Campbell, president of the Maritime Stock Breeders' Association, Mr. Fuller, the efficient secretary-manager, and the various officers who so did their respective duties so nobly and well deserve a great deal of credit for the success of the fair and the frictionless manner in which they conducted every detail that tended to make an appreciative audience and satisfied showmen.

THE JUDGES.

The Heavy horses were judged by Mr. John Bright, ex-president of the Canadian Clydesdale Breeders' Association, Myrtle, Ontario; the Light horses were judged by Mr, Sheldon B. Fuller, Ottawa. Not a dissenting opinion was heard in regard to the Heavy horse judging as the audience could easily follow Mr. Bright's deductions. On the whole the Light horse judging was also acceptable, but there were some cases where some of the onlookers would not consider a reverse judgment a very grave mistake. We have no doubt, however, but Mr. Fuller, the judge, considered conditions as he found them and adhered closely to the rules set down for judging the respective classes, thus doing his work in a conscientious manner.

May Lothian.

Winner of the Douglas & Co. Silver Cup for the best Clydesdale Mare. any age, at the recent Maritime Horse Show, Amherst, N. S.
Owned and Exhibited by R. A. Snowball, Chatham, N. B.

THOROUGHBREDS.

In the Thoroughbred class, G. W. Fowler's aged stallion, Waterlight had R. W. Carson's Bendemier for a competitor but the red ribbon and championship diploma went to Waterlight, by the famous Watercress and the possessor of a running record of one mile in 1 min. 39 sec. and purse winnings of over $63,000 to his credit. It will be remembered that Waterlight was champion Thoroughbred stallion in 1911.

H. R. McMonagle's Lindahorn, a very trim, three-year-old filly, was the only female representative of her breed.

STANDARD BREDS.

were out in strong numbers. The aged stallion class which was judged on the Amherst Streets, brought out five good ones—Rudy Kip, owned by A. E. Trites, Salisbury, N. B.; Royal Night, owned by C. R. H. Starr & Son, Port Williams, N. S.; Right Wilkes, owned by Geo. M. Holmes, Amherst, N. S.; Baron Duncan, owned by W. S. Teed, Sackville, N. B. and Royal Autograph, owned by M. A. Latta, River Herbert, N. S. The Red, Blue, White and Green went to the horses in the order named. Rudy Kip is a very nice even gaited horse with a track record of one mile in 2 min. 4 sec. Royal Night has size, style and speed. He is eight years old, sound, weighs 1200 pounds and is full of substance. Right Wilkes is a very attractive horse and puts up a very classy appearance. Baron Duncan and Royal Autograph were out in good form.

Tunbrook, owned by G. M. Holmes, and Rush Lake, owned by Everill Purdy, Amherst, were the only entries in the three-year-old stallion class and were placed same as last year in the order named.

Standard Bred mares made a grand showing in the aged class. Grace Abbott, owned by A. E. Trites, second prize winner last year, was successful in capturing the coveted red and championship diploma from Luella Mac, her successful rival last year, owned by J. T. Prescott, Sussex, N. B. Luella Mac captured the blue ribbon, while H. R. McMonagle's McMary came in for third money and the fourth went to Minerva Vernon, owned by W. T. Latta, River Herbert, N. S. Everill Purdy's Jennie Wilkes was not hitched and H. R. McMonagle's Inherites, a very large filly, not being accustomed to so much excitement, would not steady down to show action.

Harvest Hal by Will be Sure, owned by A. E. Trites, Kitty McNeil by Achille, owned by G. S. Jackson, New Glasgow, N. S., Jennie Lin by Judge Wilkes, owned by H. R. McMonagle and Lady Buz Fuz by Buz Fuz, owned by Cecil T. Coates, Nappan, N. S. pulled into the ring for three-year-old fillies and were placed in the order named.

Miss Sure and Nellie Be Sure, owned by G. M. Holmes and Ettar & Lowe, Amherst, N. S., were the first and second prize winners respectively in the two-year-old filly section—same position as last year.

HACKNEYS.

R. A. Snowball's unbeaten Model Performer, in the aged stallion class, was successful in maintaining his prestidge. Seaforth Enterprise, owned by McFarlane Bros., Fox Harbor, N. S. was a strong competitor in this class and was successful in capturing the red ribbon in the Carriage stallion in harness class. Sedgeforth Enterprise was imported by the Nova Scotia Government as a two-year-old and sold for service in the province. His breeding traces back to several of the best sires in the Hackney breed. His get are proving his value as a sire. We understand he will stand for service in Amherst this year.

Snowball's Cock 'O the North had no competitor in the three-year-old stallion class but he was good enough to sweep everything before him in the champion Hackney stallion class.

Rev. R. T. Hawkes, Bartibog, N. B. showed Signal, the only two-year-old Hackney stallion in the ring. He too would stand competition.

W. W. Black's Violet and Dignity came in for first and third honors in the aged Hackney mares' class. Mrs. H. E. Fawcett's Lucille captured the fourth award and also the silver cup donated by Terrace Hotel, Amherst, for Champion Carriage Horse in harness. Wm. M. Johnson, Newcastle, N. B. captured the second prize with Ardimersay May Queen, a beautiful, trappy, imported mare. We understand this mare is for sale and the person who buys her will get a horse of which he may well feel proud. R. A. Snowball's Langton Belle had ne competition in the three year old filly class, but was successful in capturing the diploma for best Hackney mare, any age.

Chatham Lily another Snowball mare had no competition in the two year old class.

CLYDESDALES.

Magnificent indeed were the eight specimens of the Clydesdale breed that appeared in the ring at the director's call for aged stallions. C. H. Starr & Son's Baron Primrose, the champion of the 1910 show and the sire of the 1911 champion, a champion at Toronto and Chicago in his younger days, and also a champion at Maritime Fairs on many occasions, although in his eleventh year, again captured the coveted diploma, and silver cup donated by Graham Bros. for best Clydesdale stallion, any age. This cup was won in 1910 by Baron Primrose, in 1911 by his son, Baron Graham and now it becomes the property of Messrs. Starr. Baron Primrose has size and quality combined and his get are showing up as successful winners in the show-ring. Judge Bright says Baron Primrose is a far better horse to-day than he was when he won the championship at Toronto some years ago. McFarlane Bros.' Baron Squire, sire Baron's Pride, dam by McGregor, was the closest competitor for the silver cup and the winner of second money in his class. Baron Squire is of right royal breeding and is considered by competent judges to be one of the best Clydes in Eastern Canada and should prove a valuable acquisition to horse breeding interests in Cumberland County. McFarlane Bros. are only beginners in the show business and they deserve a great deal of credit and patronage for their energy and progressiveness.

R. A. Snowball's Baron Belgraddon by Baron Primrose, the champion stallion, another typical Clyde came in for third money, while Fred S. Black's Flash Favorite 2nd came in for the fourth award. Other good horses without the money's pale were: Royal Baron's Pride, The Bishop, Vanderbilt and Petruchois Heir owned by H. R. McMonagle, Geo. M. Holmes, McFarlane Bros., and H. Purdy & Son.

The three-year-old stallion class was represented by six good ones. Snowball's massive Chatham Fame by Scottish Fame mounted to the head of the list, followed closely in second place by Starr's Baron Prince by Baron Primrose, which although

not a little lacking in weight possesses excellent quality in foot and limb.

Frank Dobson's Billy Dalkeith by Baron Dalkeith stood in for third money, and the fourth prize went to Ronald Rutherford's Royal Flash, a College bred horse by Flash Favorite. A. H. Clark's Favorite Prince, by Flash Favorite, and McFarlane Bros.' Vanderbilt colt were further down the list and beyond the range of the prize money.

Tom Brown, Geo. E. Fisher's two-year-old stallion by Kilmarnock, had no competition in his class.

Eight magnificent mares were shown in the aged class by Messrs. R. A. Snowball, Logan Bros., Stuart Etter and W. W. Black. Snowball's May Lothian, Logan's Pink Rose by Up-to-Time, a song of Baron's Pride and her daughter Baron's Fancy toed the mark for first, second and third prizes respectively. May Lothian captured the Douglas & Co. silver cup for best mare, any age. One of W. W. Black's mares captured the fourth prize, while Stuart Etter's Adela was put in fifth place. This class did not show as many evidences of 1912 foals as did the same class in 1911.

Starr's Lady Primrose, by Baron Primrose, a full sister to Baron Graham, the champion Clyde stallion in 1911 captured the red ribbon in the three-year-old mare class and the diploma for best Clydesdale mare, any age, the silver cup going to her rival, May Lothian in the championship class owing to the ruling that no exhibitor may not win more than one cup. Purdy's Kate Allen captured the blue ribbon and R. S. Stiles' Rose of Homestead and Etter's Daisy Pride captured the white and the green respectively. Another mare shown in this class was Jessie Favorite owned by Stuart Etter.

Snowball's Moss Rose by Baron Belgraddon, dam Rosie Miller lead the two-year-old mares' class. A. H. Clark's Talbot Queen was in second place and Logan's Soubrette of Homestead by Handy Andy, dam Soubrette, stood in for third money. Soubrette Homestead is a good mover and possesses abundance of quality but was not in high show fit. W. W. Black and Snowball had other entries in this class.

In the yearling filly class, H. S. Pipes & Son's Princess Nora was sandwiched in between Snowball's Miss Mary and Lady Rose.

The Clydesdale Horse Association of Canada's special prizes were awarded in the order in which the winnings were made in the regular sections of the Clydesdale class.

PERCHERONS.

Chas. Symes' Lord Roberts shown in the three-year-old stallion class, his aged mare, Distinguee and his one-year-old filly, Distinguee II had no competition in their respective classes and were the only Percherons at the show.

ROADSTERS.

In the Roadster aged stallion, in harness, class there were five entries and the awards were placed as in the corresponding Standard Bred stallion class.

Eleven horses pulled into the ring for the awards in the class for mares or geldings, 15-2 hands and over, foaled previous to January 1st, 1909, and were placed as follows: 1st, Maud E. owned by A. E. Trites, Salisbury, N. B.; 2nd, Susie Wilkes, owned by J. C. Purdy, Amherst, N. S.; 3rd, Lady Border, owned by J. T. Chapman, Amherst, N. S.; 4th, Bonnie Prince, owned by F. M. Blenkhorn, Nappan, N. S. and 5th, Leulla Mac, J. T. Prescott's second prize winner in the Standard Bred class.

The class for Roadster mares or fillies, under 15-2 hands, foaled previous to January 1st, 1909 was graced by fifteen entries. The trappy mover, Brilliant by Brazilian owned by Alder Elderkin, Amherst carried off the red ribbon, and the St. Regis Hotel silver cup for the best Roadster, in harness. Grace Abbottt, the champion Standard Bred mare went down to second place and was followed in third and fourth places by J. C. Purdy's Gypsey and G. S. Jackson's Monachille by Achille.

At the toot of the horn, eleven horses appeared for their awards in the Roadster mare or gelding, foaled during the year 1909. Merril C. McLean's Prince by Sidney McGregor led the way followed in second place by A. E. Trite's Harvest Hal by Will Be Sure. G. S. Jackson's Kitty McNeill by Achille came in for third money and the fourth place went to G. W. Fowler's Judge by Judge Wilkes.

Two-year-old Roadster fillies were shown by Geo. W. Fowler, Geo. M. Holmes, H. S. Pipes & Son and Etter & Lowe and won out in the order named with Harry, Miss Sure, Gyp. and Nellie Be Sure.

In the yearling Roadster class, G. W. Fowler's Toney by Buz Fuz; and Rudy Kip colts shown by Sutton Steeves and Allie Steeves carried off the principal awards in the order named. An Oakley Baron and a Will Be Sure colt stood outside the range of the cash.

Pairs of Matched Roadsters numbered five. Grace Abbott and Maud E., the first prize Standard Bred mare and the first prize aged single Roadster, 15-2 hands and over, captured the first prize in this class. Elderkin's Brazil and Brilliant both by Brazilian, captured the blue ribbon, while J. C. Purdy's Susie Wilkes and Gypsey, prize winners in their respective classes won the white ribbon and Blenkhorn's Bonnie Prince and Sim took the green.

The other pair shown in this class was C. H. Jackson's Beauty and Lady by Parkide, Jr.

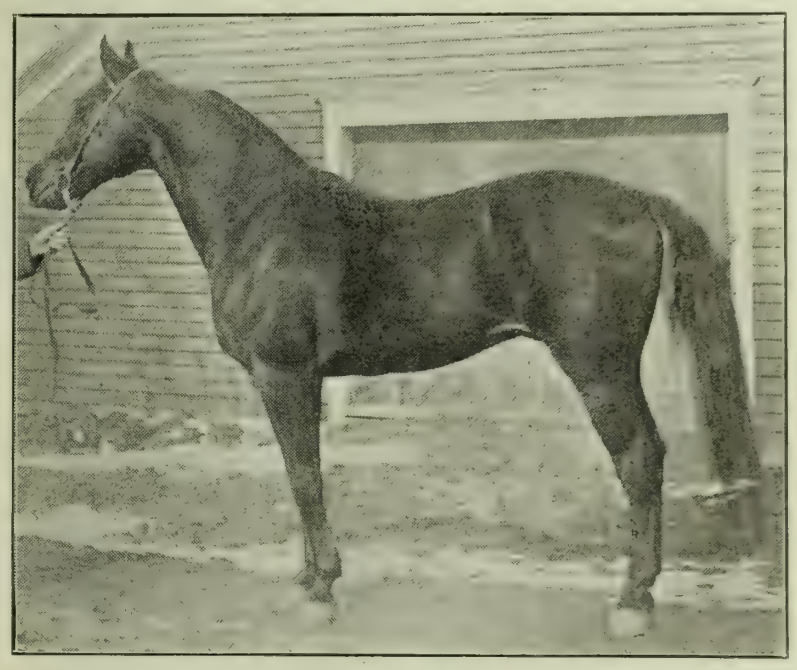
CARRIAGE HORSES.

There were five entries in the Carriage stallion, in harness, class three of which were ruled out, leaving the contest between the first and second prize Hackney stallions, Model Performer and Sedgeforth Enterprise. Thomas Hooper, the efficient horseman at the College Farm, Truro, was invited by McFarlane Bros. to handle their Sedgeforth Enterprise and by his skilful handling of the ribbons, displayed excellent horsemanship and so livened up his horse to carriage action, that the judge was compelled to reverse his judgment in a previous class and put Model Perfotmer down to second place. We have no hesitation in saying that had Mr. vious class and put Model Performer, the decision would have been the same as in the Hackney class providing Performer responded as readily to good reinmanship as did Enterprise.

There were only sixteen entries in the class for Carriage horses in harness, over 15-2 hands, foaled previous to January 1st, 1909.

Gammon & Weir, of New Glasgow had the winner of the red ribbon. F. M. Blenkhorn's Bonnie Prince by Sim, I. I. Peel's Billy, Mrs. H. E. Fawcett's Lucille, the winner of the Terrace Hotel cup, for the champion horse in harness and Etter & Lowe's St. Elmo stood in second, third and fourth places respectively.

In the class for Carriage horses, under 15-2 hands, in harness, Mr. Elderkin's Brilliant the first prize winner in the corresponding section of the Roadster class again mounted to the front in a class of nine entries. W. M. Johnson's Ardmersay May Queen stepped up to second place closely followed in third and fourth places by W. W. Black's Violet and Dignity and in fifth place by G. A. Doncaster's Dolly.



Rudy Kip

Champion Standard Bred Stallion at the 1912 Maritime Horse Show. Record 2.04.

Snowball's Langton Lily, McMonagle's Jennie Lin and E. I. Peel's Minnie C. made up the three-year-old Carriage horse, in harness, class and won in the mentioned order.

Black's Violet and Dignity and Blenkhorn's Bonnie Prince and Sim captured the red and blue respectively in the Matched Carriage pair class.

SADDLE HORSES.

Saddle horses ridden by gentlemen were shown by A. H. Clark, Durham, N. S.; J.C. Purdy, Amherst, N. S.: W. M. Johnson, Newcastle, N. B.; C. B. Embree, Amherst, N. S. and Capt. F. B. Eaton, Halifax, N. S. and were awarded prizes in their respective order.

Miss Blanchard, Kentville, N. S., showed Queen Louise and won first monies in the Saddle horse and Leaper horse, ridden by a lady, classes. H. C. Purdy's Gypsey came in for the second plum. C. B. Embree's Rifle captured the third award and H. E. Fawcett's Jack took the fourth and last prize.

Embree's Rifle touched the high spots in the section for Leaper, ridden by gentleman, Queen Louise ridden by Thomas Hooper leaped to the second highest point, while Capt. Eaton's Phryre not touching so high a notch, had to take the third prize.

CARRIAGE HORSES.

In the section for Carriage horses over 15-2 hands, where appointments counted 25 p. c. and the horse 75 p. c. Mrs. Fawcett's Lucille captured the fattest plum, Spurgeon Gammon's trappy horse came next in the list of awards, Fowler Bros.' Bobby and Geo. M. Holmes' Rex captured the third and fourth prizes. Three good horses remained after the monies were apportioned.

In the corresponding section, under 15-2 hands, Elderkin's Brilliant again pranced to the front. W. W. Black's Violet and Dignity were in third and fifth places, while Snowball's Langton Belle and Doncaster's Dolly captured the second and fourth prizes respectively.

W. W. Black's Violet and Dignity met no competition in the section for pair Carriage horses in harness. They also won first money in the Tandem section. Elderkin's Brazil and Brilliant standing in second place and Geo. M. Holmes tandem taking the third and last prize in the list.

E. B. Elderkin and W. W. Black were the only contestants in the Carriage Four-in-hand class. They both made extremely creditable displays and were awarded prizes in the order named.

The silver cup donated by Col. H. Montgomery-Campbell for the best combination saddle and carriage horse was won by J. C. Purdy's Gypsey.

PURE-BRED HEAVY DRAUGHTERS

Every horse shown in this class belonged to the Clydesdale breed. The prize winners in the section for mares or geldings foaled previous to January 1st, 1909 were the same as the winners in the corresponding section of the Clydesdale class.

The three-year-old mare class had three entries and prizes were awarded to S. M. Stiles' Rose of Homestead and Stuart Etter's Jessie Favorite and Daisy Pride. Etter had the only team in the class for heavy draughters foaled during the year 1909 but in the class for teams foaled previous to January 1st, 1909 there were four entries, Logan's Pink Rose and Baron's Fancy and his Princess May and Polly McGregor quickly mounted to first and second positions followed in third place by Etter's Adela and Titama.

Etter and Logan entered the contest for the Arthur Wallace cup for best heavy draughter Four-in-hand. The coveted silver cup was captured by the Logan four. The judge said he had never seen a better combination Molly McGregor and Princess May made a great wheel team being perfectly matched and weighing 3400 pounds. Pink Rose and her daughter Baron's Fancy made excellent leaders. Baron's Fancy is developing to be the perfect image of her dam.

GRADE HEAVY DRAUGHTERS.

Fowler Bros. led the way in the aged class with Minnie by Prince of Arwick and came in for third money with Major, also by Prince of Arwick. J. R. Lamey's Jim and Forrest Bros. Nance respectively captured the second and third monies.

W. P. Keilor had the first prize winner in the four-year-old section of this class and was closely followed in second and third places by Forrest Bros.

R. A. Snowball's Mart and King were followed in third place by T. W. Keilor's Sul in the three-year-old class.

Fowler Bros.' Minnie and Major made up the best aged team. R. P. P. Fraser, New Glasgow, N. S. won the second highest award with a well matched Ontario bred team and Edgar Fillmore, Amherst, N. S. captured the third prize with his trappy team, Mike and Barney.

The silver cup donated by the Am-

(Continued on page 510).

The General Progress of the Annapolis Valley.

Some Notes Upon the Development of Nova Scotia's Famous Fruit Belt.

By F. E. Cox. Middleton, N. S.

IS progress general in Nova Scotia's famous fruit belt? This is the first question that naturally comes to one as he considers the subject—The general progress of the Annapolis Valley—which has been assigned to me for the special number of the "Farmer."

In a few departments of activity in the Annapolis Valley there is little progress, but in many others there is steady improvement while in everything in relation to the great apple growing industry the advance is phenominal. We can, therefore, safely assert that progress is general in the district in question.

Stock raising would be included in the list first mentioned. In this activity there has not been progress, but rather the reverse. The growing demands of the orchard, the scarcity of labor, the improvement in our horses and the competition of the prairie fed cattle of the West have pushed stock raising in the Annapolis Valley to the background.

Our country roads despite all efforts for their improvement seem to grow worse rather than better. Similarly our rural schools are scarcely keeping up to the increasing educational demands of the times.

But on the other hand there has been a remarkable improvement in butter making on the farms. Fifteen years ago it was hard to find good merchantable butter in private dairies. To-day it is unusual to find a poor article coming from an Annapolis Valley farm. The revival of silo building is giving a new impetus to this industry.

In our graded schools, academies and higher educational institutions, the work now being done is much better and more practical than that of 20 years ago. Permanent road building has been started in most of the Valley towns and it is to be hoped that soon the movement may spread into the surrounding districts.

Again take such public utilities as the telephone and the mail. Many of the farm houses enjoy the advantage of the telephone, there is scarcely a community which has not at least one instrumen t and Wolfville and Middleton have the all night service. In a few weeks several other Valley towns will enjoy the same convenience. Sewerage, light and gravity water systems are to be found in most of the towns and many of the farms at the foot of the North Mountain have private water systems.

A dozen years ago weekly, semi-weekly and tri-weekly mail service was the best that many places could boast, but there are few sections to-day that do not have a daily service and in perhaps a dozen of the best farming districts rural free delivery has been established.

In farm machinery the past two decades have brought much change for the better. In all the new modern barns which dot the Valley are found power forks. The rakes which formerly demanded the attention of a man can now be operated by the merest touch from the hand or foot of a boy. In place of the old spike tooth is now found the disc harrow. The sickle, scythe and the cradle have given place to the reaper and the hay tedder and the manure spreader are coming into general use.

Stone or wooden drains were the only ones used until the past half a dozen years. Now the clay tile is manufactured in the Valley and its use is increasing rapidly. As high as five miles of tile has been placed on a single farm in one year. The extension of drainage in the rich heavier soils promises a great increase of crop production for the future.

China after centuries of stagnation has surprised the world with a political revolution. An industrial revolution almost as complete as that of China is taking place in the apple raising business of the Annapolis Valley. It was not a great while ago that many of the growing orchards were left in sward and those that were tilled only received one plowing and harrowing in a season. Now the leading fruit growers after the Spring plowing keep the harrow going every few days till mid-summer in order to conserve the moisture. In July some nitrogen gathering cover crop is sown to be plowed under late in the Autumn, or in the early spring.

A decade ago many farmers of the Valley regarded spraying with scepticism, or if they sprayed they did more damage than benefit to the orchard. Through the influence of the farm journals, associational gatherings and institute work, spraying is being carried on intelligently and regularly. The fact that the Valley produced the cleanest crop of apples it has ever known, last season, was partially due to the weather conditions, but was probably also due in part to regular and intelligent spraying. The purchase of 150 power sprayers last year and the indications that as many will be ordered this year show how thoroughly convinced our horticulturists are of the importance of spraying.

Another inovation with the farmers of our fruit belt is the thinning of the apples in midsummer. This is regularly practised now by a few of our most progressive men. Although longer keepers our apples grew a little smaller than in some of the warmer fruit districts and in competition sometimes suffer in consequence. The practice of thinning by increasing the size of our fruit promises to be of particular benefit in maintaining the splendid reputation of our apples.

In the handling of our fruit there has also been a revolution. Fifteen years ago there was not a single fruit shipping warehouse in the Valley. To-day there are over 90 with a total capacity of nearly a million barrels. Formerly the fruit was packed on the farm and hauled to the cars as required. No matter what the condition of the roads or the weather, they must be hauled and it generally required a day or two to load a car. Now the fruit is hauled direct to the warehouse at the railway siding from the orchard when the roads and weather are good. At leisure they are packed under a uniform system. When a steamer is due at Halifax, special trains drop the cars at the various fruit houses. The apples are rolled in sometimes three and four cars loading at the same time from a single warehouse. Three or four hours after the cars are distributed special trains are picking them up again and five or six hours after the apples leave the fruit houses they are being swung into the hold of a steamer at Halifax.

No article dealing with the progress of the Annapolis Valley would be complete which omitted reference to the development of the co-operative movement. An attempt was made some 40 years ago to establish the co-operative method of doing business among the farmers of the Annapolis Valley. At that time in this district in common with other parts of Nova Scotia cheese factories were started to be operated upon the mutual basis. One after the other these closed up; the one at Williamston, Annapolis Co., however, survived for over 30 years.

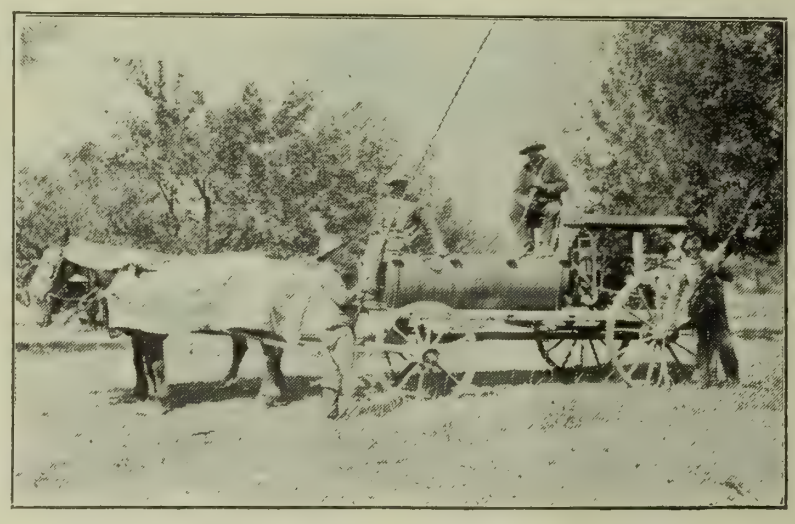
Another attempt at co-operation was made among the farmers of the Valley 15 years ago. An effort was made to form a co-operative shipping company with capital stock of $50,000. The object was to build and operate warehouses and if necessary to charter steamers to carry the apples. The required capital was not raised and the scheme failed for the time being. The building of the first apple warehouse in the Valley which closely followed was probably a ditect result of this agitation.

About four years ago a local co-operative shipping company was formed among the farmers of Berwick. This was probably an outcome of the agitation in favor of co-operation some ten years before. Other local co-operative companies followed until now there are twenty-five and before the next apple crop is ready for har-

(Continued on page 496).

Five or Six Hours After the Apples Leave the Annapolis Valley Fruit Houses They are Being Swung into the Hold of a Steamer at Halifax.

Orchard Scene, Middleton, N. S.



In The Annapolis Valley—Power Sprayer in Action.

The Care of New Born Foals.

Extracts From a Circular of the University of Wisconsin Agricultural Experimental Station.

By A. S. Alexander, V. S.

THE horses of the Maritime Provinces are rapidly increasing in value. The importance of the horse breeding industry suggests the importance of saving the greatest possible number of the foals born each year. At present a large per centage of the annual foal crop is lost. Most of this mortality might be prevented by treating the mare intelligently and giving proper attention to the navel and bowels of the new born foal. It is the purpose of this article to furnish practical instruction on these matters for the guidance of those having the charge of brood mares and foals.

CAUSE OF NAVEL AND JOINT DISEASES.

The navel cord (umbilicus) connects the foal's body with the afterbirth (placental membranes) of the mare. It is made up of gelatinous tissue covering a large vein coming from the foal's liver and carrying impure blood to be purified in the lungs of the mare; two arteries carrying pure blood from the arteries of the mare, by way of the placenta, to the arteries of the foal, and a tube (urachus) from the foal's bladder which, while the colt is in the womb, discharges urine into one of the envelopes (allantois) covering the foal.

When the navel cord breaks at birth its blood vessels and tube promptly close, if all goes well. If pus-forming germs from filthy or soiled bedding, floor, or ground, get onto the raw navel cord, however, they cause infection, inflammation and collections of pus at the point involved and thence germs are carried into the system and form colonies (secondary abscesses) elsewhere in the body and notably in the joints of the extremities.

In cases of generalized infection (pyaemia) abscesses may be found in the liver, kidneys, lungs, brain, muscles and subcutaneous connective tissue. If the urachus fails to close, urine dribbles or streams from the navel opening and, in that event, abscesses of the joints eventually appear, the infection having become general. The latter condition is termed "pervious" or "persistent" urachus. A majority of infected foals die. Recovery is seldom perfect. The colts fail to thrive, or develop perfectly and are apt to have chronic affections of the joints. Treatment of the disease can only be properly conducted by the trained veterinarian and he may employ a special (anti-streptococcic) serum with some degree of success, both as a preventive and curative agent.

Seventy-five per cent. of the cases of this disease affect foals during the first three weeks of life. Fat, flabby foals, with extra large navel cords, often the get of overfed, pampered, under-exercised stallions, or from mares in like condition—are especially prone to the disease and are most likely to succumb. Foals that have small navel cords and are lively at birth, soon on their feet and nursing, are much less liable to attack.

Stallions should be worked, or abundantly exercised, and so fed and maintained as to insure virility, vigor, stamina, robust constitution and the perfect health of every organ. Mares should be similarly treated. Foals will then be likely to come into the world healthy, lively and strong to resist disease.

SYMPTOMS OF NAVEL AND JOINT DISEASE.

A few days after birth the foal is found to be weak, lame, feverish and with impaired appetite. One joint, or another, is swollen, hot and painful. Usually the attack affects the fetlock, hock, stifle, hip, knee. elbow or shoulder. Sometimes abscesses form at the poll, about the ribs, or along the spinal column. The swellings rapidly increase in size and several joints are affected at one time. There is swelling of the navel, and pus oozes from one or more openings. Pus forms in quantities in the affected joints. Diarrhoea usually comes on, or may be alternated with constipation. Soon the foal is too weak to stand, loses appetite entirely, and dies in a few days, or in two or three weeks, in lingering cases. Often urine escapes from the navel, or the foal passes bloody urine; but the latter symptoms may, for a time at least, be present without noticeable symptoms of pus infection.

MANAGEMENT OF THE PREGNANT MARE.

The mare in foal should be worked lightly or abundantly exercised every day. Exercise is absolutely necessary. She should occupy a roomy box stall. Here she will take some additional exercise and will not be afraid to lie down. She will be less likely to become "cast" and escape having "stocked" legs and dropsical swellings of the udder and abdomen. The bedding should be kept clean and dry.

Feed the mare sound, whole oats, bran and mixed or timothy hay. Avoid moldy hay or silage, damaged grain, woody, weathered fodder, dusty or rusty straw, or hay containing ergot. Keep pregnant mares out of corn stalk fields. Provide them with plenty of pure, clean water. In working mares avoid jerking, severe pulling, wading through deep mud, manure piles or snow drifts. Let the work be light, easy and steady. Keep the bowels active by feeding bran and a little flaxseed meal, carrots, or some sweet silage.

The mare goes 48 weeks, or about 340 days with foal. As foaling time approaches decrease the grain ration and increase laxative foods to keep the bowels acting freely. Constipation is dangerous. When wax forms on the teats, about three days before foaling, stop working the mare and place her in a prepared box stall where she can be watched until the foal is born.

After foaling leave the mare alone for a time, if she is lying down. If she does not expel her afterbirth promptly when she rises from resting, inject into her womb one half gallon of luke-warm 1 per cent. solution of coal tar disinfectant, or other mild antiseptic. If the afterbirth then does not come away within an hour or two, it should be removed by hand. An expert should be employed for this operation and when it has been performed the womb should again be flushed out with an antiseptic solution. Half an hour after the birth of the foal, or about that time, offer the mare a pailful of luke-warm water and again at intervals of two hours. Mares are thirsty at this time and should be abundantly supplied with water. An hour after foaling the mare may eat a mash of steamed oats, and bran, if she has been accustomed to such feed; otherwise give her a small feed of her ordinary grain ration. In a few days, if the weather is fine, the mare and foal may take some out door exercise and in two weeks, or thereabouts, she should have recovered from foaling and be taking her usual feed, grazing grass and getting ready to resume light work in harness.

THE FOALING BOX-STALL.

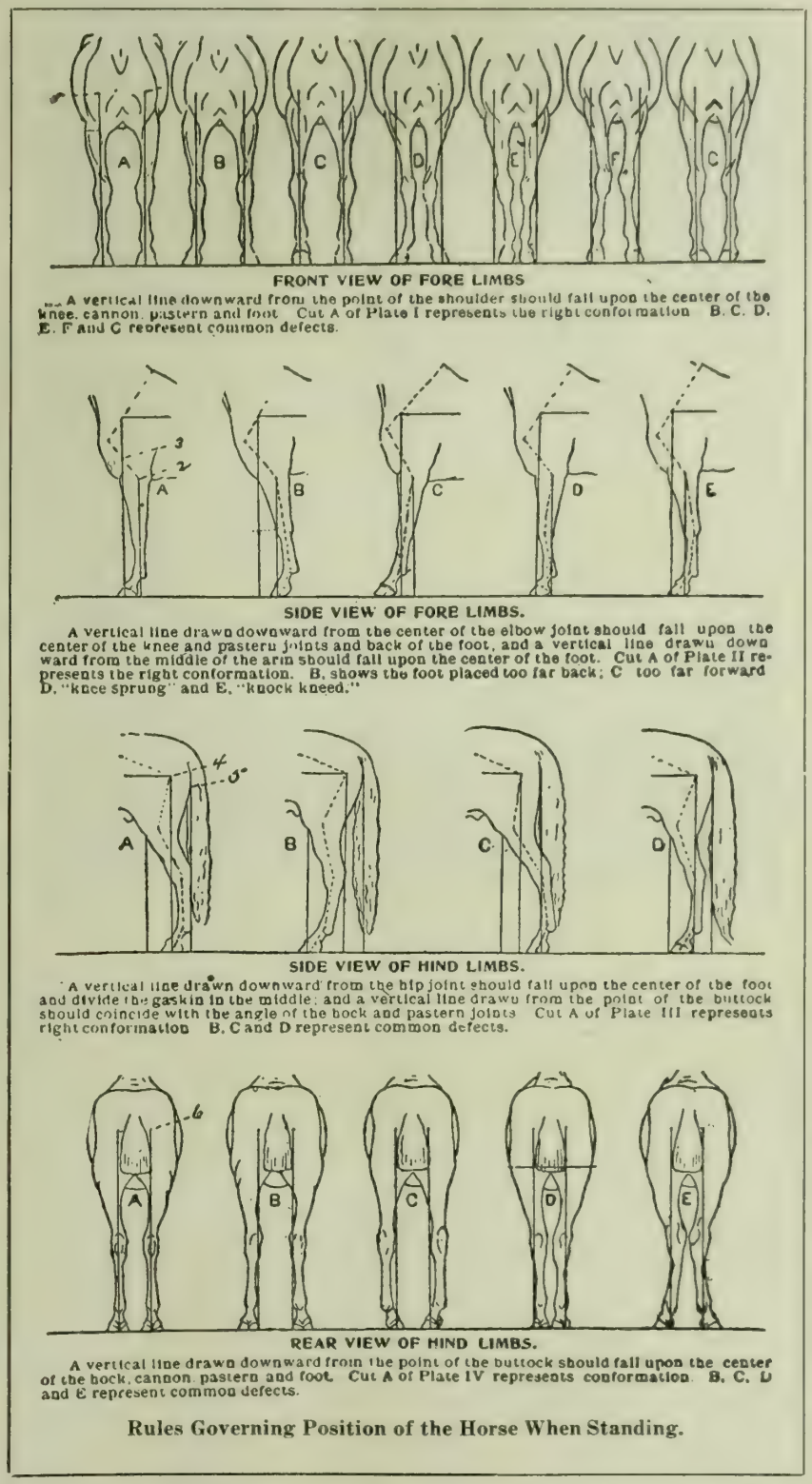
Two 14 by 14 foot box stalls should be kept ready for the use ofmares on every farm where foals are raised. No mare should be allowed to foal in an ordinary stall, or unprepared box stall. Navel and joint diseases will not be likely to attack foals born in clean places. An absolute clean foaling place is necessary and should be prepared as follows:

Remove and burn all loose litter, and manure. Cleanse and scrape the floor; then saturate it with a hot 1-50 solution of coal tar disinfectant, or a solution of 4 ounces of sulphate of copper (bluestone) to one gallon of hot water. Scrub and cleanse the walls with a similar solution of coal tar disinfectant; or a 1-1000 solution of corrosive sublimate. Cleanse the ceiling in the same way; then apply to walls and ceiling fresh made lime white wash, to each gallon of which has been added one-third of a pound of chloride of lime. Cover the floor with fresh, dry planing mill shavings in preference to any other bedding material. Remove manure as soon as dropped.

When the foal is born and has been cared for and the afterbirth of the mare has come away, remove the mare and foal to the second box stall, prepared as was the first. Then clean out, disinfect and whitewash the stall just used and put in fresh, clean dry shavings in readiness for the reception of the next mare. The mare must always occupy a clean, specially prepared box-stall and it should be perfectly ventilated and as sunny as possible.

Where but one box-stall is available clean it out, burn the afterbirth and soiled bedding, use a disinfecting solution freely on the floor and put in plenty of fresh, dry, clean shavings as soon as possible after the birth of the foal. If the mare foals on grass treat the foal as if it had been born

(Continued on page 494).



FRONT VIEW OF FORE LIMBS

A vertical line downward from the point of the shoulder should fall upon the center of the knee, cannon, pastern and foot. Cut A of Plate I represents the right conformation. B, C, D, E, F and G represent common defects.

SIDE VIEW OF FORE LIMBS.

A vertical line drawn downward from the center of the elbow joint should fall upon the center of the knee and pastern joints and back of the foot, and a vertical line drawn downward from the middle of the arm should fall upon the center of the foot. Cut A of Plate II represents the right conformation. B, shows the foot placed too far back; C too far forward D, "knee sprung" and E, "knock kneed."

SIDE VIEW OF HIND LIMBS.

A vertical line drawn downward from the hip joint should fall upon the center of the foot and divide the gaskin in the middle; and a vertical line drawn from the point of the buttock should coincide with the angle of the hock and pastern joints. Cut A of Plate III represents right conformation. B, C and D represent common defects.

REAR VIEW OF HIND LIMBS.

A vertical line drawn downward from the point of the buttock should fall upon the center of the hock, cannon, pastern and foot. Cut A of Plate IV represents conformation. B, C, D and E represent common defects.

Rules Governing Position of the Horse When Standing.

Soiling Crops in Relation to Dairying.

An Address Delivered Before the Farmer's and Dairymen's Convention Held Recently at Fredericton.

By G. H. Cutler, Lecturer in Cereal Husbandry At Macdonald College.

I am deeply sensible of the honor which this Association has conferred upon me in again asking me to assist at this time. And it was with much pleasure that I accepted your invitation, not because you wished me to serve in this capacity, but as one coming from Macdonald College I regarded it as a special opportunity to become acquainted with the farmers of New Brunswick whose sons and daughters come to our halls. For at this convention one meets representatives from all parts of the province.

The subject which I shall discuss is one of much moment to people whose climate resembles yours of New Brunswick or ours of Quebec. Despite your many natural advantages for Dairying, an unequal distribution of rainfall coupled with periodic spells of intense heat make it that the pastures do not maintain their abundance or juiciness throughout the growing season. Moreover an almost annual visitation of dry weather of varying degrees and duration is to be reckoned with—which parches the pastures to a point of uselessness. This condition combined with tne heat and nuisances of flies inevitably cause a reduction in the milk flow and simaltaneously an appreciable decline in the cow's flesh. It is to meet this distressing state of affairs that I wish to emphasize the soiling crop—a crop which can be used as green feed in the stall.

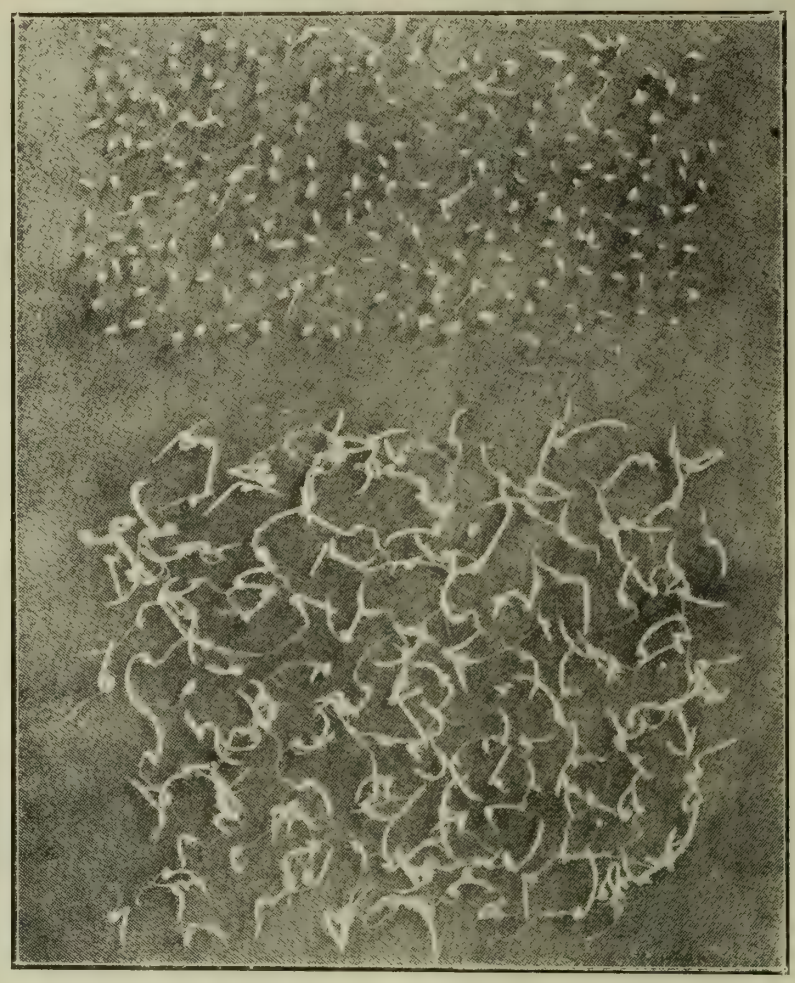
For a number of years in the Province of Quebec the summer silo has been employed with varying success. This system has its ardent supporters since it possesses many commendable features. The systematic adoption of soiling crops on the other hand has never met with any degree of permanence in spite of the advantages accruing. In fact it cannot be said that either system neither separately or in combination has been accepted in a way commensurate with the importance each merits. An extra expenditure of labour has always been offered as an objection to either system. But if one is desirous of supplying the milch cow with food closely approximating the June pasture, he must use green feed as a supplement. For feed of this nature in season and out, summer and winter, becomes absolutely essential to greatest efficiency. The soiling crop serves to economically maintain the milk flow and what is quite as important the cow is kept in much better heart for the approaching winter work.

The need for the provision of green feeds for summer feeding is therefore fully apparent. For proof of the feasibility of some system of soiling we have only to turn to the Danes and Dutch, our greatest rivals in Dairying. These people have thus increased not only the individual output of the cow and herd but they have actually increased the fertility of their farms—thereby their cattle holding capacity. To-day they are aspiring to maintain one cow per acre, while we consider one cow per five acres quite an accomplishment.

Before deciding upon what we shall use by way of crops for soiling let us get clearly in mind a few essentials the observance of which is quite necessary for most satisfactory returns. Because while one crop may supply one essential it may be lacking in another and thus less profitable. The aim should be to use that crop which combines as nearly as it is possible all the good qualities sought. Then and then only is one enabled to produce the maximum amount of feed at a minimum of outlay and with the greatest measure of satisfaction.

The essentials to be borne in mind are briefly these:—

1.—Palatability, 2.—Nutrition, 3.—Succulency, 4.—Bulk and Yield, 5.—Adaptability.



Two samples of Timothy Seed under germination test three days. The upper sample shows weak vital energy, while with the lower one it is strong.

These qualities are not always available in any one crop but may be procured in a mixture where two or more crops are combined. From the standpoint of production and quality of feed a combination of certain crops is economical. At Macdonald College we have been testing numerous crops singly and in combination in varying proportions to ascertain the best combinations for soiling purposes. I shall therefore base my discussion of the crops themselves upon our own investigations. The crops under test are, Oats, Peas, Winter Rye, Hairy and Common Vetch, Alfalfa, Corn, Rape, Mangels, Fall Turnips and Millets.

In selecting an Oat for this purpose, choose a heavy strawed leafy one such as Early Gothland or Early Blossom. By so doing one not only gets greater yields but greater succulency and palatability. In the Peas the same type character should be kept in mind. Where combination is attempted the ingredients should reach the same stage of maturity at about the same period. The Prussian Blue or Golden Vine pea gives very good results with the Early Gothland Oat. In fact when seeded at the rate of 2 bus. of oats to 1½ bus. peas per acre these two crops provide nearly every essential looked for in a soiling crop. Barley is not often recommended on account of its beards but there seems very little reason why a large strawed sort cannot render valuable service.

The Winter Rye might be used more widely than it is. There should be little difficulty occasioned in growing it successfully in New Brunswick. It is a very hardy plant, growing rapidly and thriving on a wide range of soil conditions. All these peculiar qualities combined with its earliness and productiveness commend it very highly as a soiling crop. This because of the fact that Winter Rye is seeded in the fall for the following season's feeding.

The Hairy Vetch is a Winter annual and may be used in conjunction with Winter Rye to increase its palatability and nutrition. Moreover the Vetch like the Rye persists to grow after being cut, thus combining well to provide a second cutting. Oats are also sown with the Hairy Vetch with fair success but while they mix well to produce a good feed they fall off appreciably in yield. Moreover the high cost of Hairy Vetch seed restricts its use very materially.

The Common Vetch is not so expensive but unfortunately it does not give economical yields. With Oats however, where Peas cannot be grown this crop is worthy of a trial.

Alfalfa stands high in the estimation of Dairymen as a green feed. Many of you present may feel that alfalfa cannot be grown in this province, but I see no valid reason why every county should not some day grow profitable crops of this almost perfect soiling plant. The failures thus far to obtain satisfactory crops can be attributed in many cases to a lack of acclimatization of seed used and in part to cultural methods employed. The alfalfa plant is most exacting in its demands as to soil, situation and cultural methods. As a soiling plant one could scarcely imagine anything approaching nearer perfection. It provides an almost continuous supply of green feed, closely approximating bran in feeding value; in profitable quantities and of a kind that all classes of live stock eat it with the keenest relish.

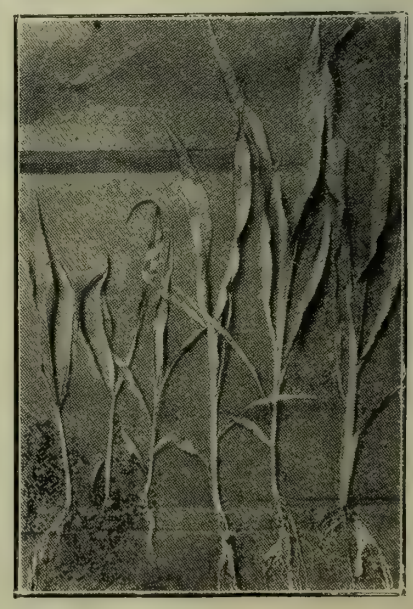
Corn has in most countries played a very important role as a soiling crop. In New Brunswick much care should be exercised in the choice of variety. There are few of the large ensilage sorts which warrant using in this climate. The growing season does not permit sufficient maturity of stalk and ear. Dairymen must confine their attention to the Flint sorts-sacrifice quantity for quality and thereby produce a feed of superior feeding value. The Longfellow and Quebec yellow and others of this class should not be overlooked, the former produces a surprising amount of fodder of good quality while the latter matures in a shorter season but cannot compete in point of yield.

The Rape crop cannot be omitted, while many take exception to this crop for milch cows on the grounds that it imparts a flavor to the milk; others favor it. Nevertheless in succulence few crops equal rape and in nutrition it compares very favorably with the clovers. Rape can be grown abundantly in New Brunswick. Any well prepared soil of average fertility, drilled in rows if foul; broadcasted if clean will return profitable yields of exceptional value.

The millets might be mentioned here although they take an inferior position, as a soiling crop. They lack succulence, palatability, and nutrition being more useful as a secondary crop in meeting an emergency. Their chief value lies in supplementing the stall fields as a hay fodder.

I have not discussed the root crops in this relation as such would be presumption on my part before a New Brunswick audience. Few people in this vast country can produce better roots or in greater abundance than you can. As a soiling crop mangels and turnips are almost unequalled. They possess every essential in a form which affords almost complete digestion. As a feed therefore they can fill in admirably.

Thus many crops commend themselves for soiling purposes. These when properly arranged can be made to provide a continuous supply of green fodder throughout the entire season. Where Dairying is followed extensively such an arrangement would doubtless help out backward pastures in the spring and dry pastures in the summer and fall. For where the crop was not needed for soiling purposes when it reached its proper stage (blossoming) it could be cut and cured for winter feeding.



Strong Vs. Weak Seeds.

Corn plants from strong and weak seeds. Plant only seeds of strong vitality ascertained by testing previous to planting.

Methods Employed in Eradicating Noxious Weeds.

Weeds Increase Cost of Production.

Ewing Cup A. E. Maclean, Lot 16, P. E. I. Richards' Cup

An enthuastic member of the Canadian Seed Growers' Association and the silver cups won by him for the largest and best exhibits at the P. E. I. Provincial Seed Fair, Summerside, and at the Maritime Winter Fair. Mr. MacLean is also interested in the Black Fox Industry.

THE greatest difficulty in the way of producing a more abundant supply of clean clover and grass seed, as well as seed grain, is the prevalence of weeds. In order to produce high class clean seed, farmers must be constantly on the alert to keep the weeds on their farms in check and prevent the introduction and spread of new varieties. In various ways weeds lower the yield, depreciate the quality and value of crops, and add to the cost of production. They rob the soil of plant food and of moisture, thus increasing the effects of drought by taking up water from the soil and wasting it by evaporation; they crowd out more useful plants, being hardier, and, as a rule, more prolific; they increase the cost of every farm operation and cause depreciation in the market value of crops because of the presence of weeds in hay or of weedseeds in grain; the eradication of the worst weeds is costly in labor, time and machinery, and frequently prevents a farmer from following the best crop rotation or from growing the most advantageous crops; many weeds are conspicuous and all are unsightly on farms, and thus depreciate the value of land; some weeds are harmful to stock, while others are injurious to their products; weeds attract injurious insects and harbour fungus diseases.

New weeds are introduced on farms with grass, clover or other commercial seeds, and commercial feeding stuffs which often contain vital weed seeds. They are spread from district to district through various transportation facilities, such as railways, and become disseminated within a locality in stable manure from towns and cities, and through threshing machines and farm implements. The wind carries some weed seeds long distances, not only in summer but with drifting soil and over the surface of the snow in winter. Streams distribute them along their courses. They are also distributed by seed-eating birds and herbivorous animals, through the stomachs of which the seeds pass undigested; or they attach themselves by special contrivances, such as hooked and barbed hairs, spines, gummy excretions, &c., to passing animals.

CLASSIFICATION AND ERADICATION.

Weeds are classified according to the length of time they live, as annuals, or one-year plants; biennials, or two-year plants; and perennials, or many-year plants. In eradicating weeds it is of the greatest importance to ascertain under which of these heads they come.

ANNUALS.

Annuals complete their growth in a year. As a rule, they have small fibrous roots and produce a large quantity of seed. Some weeds, called winter annuals, are true annuals when the seeds germinate in the spring, but they are also biennial in habit; that is, their seeds ripen in the summer, fall to the ground, germinate and produce a certain growth before winter sets in, and then complete their development next spring. Annuals may be eradicated from land, however badly infested it may be, through any method by which germination is hastened and the young plants destroyed before they produce seed.

BIENNIALS.

Biennials require two seasons to complete their growth, the first being spent in collecting and storing up a supply of nourishment, which is used the second season in producing flowers and seeds. Biennials must be either plowed or cut down before they flower. Mowing at short intervals in the second year, so as to prevent the development of new seeds, will clear the land of this class of plants; but a single mowing will only induce them to send out later branches, which, if not cut, will mature many seeds. Where plowing is impracticable, such plants should be cut off below the crown of the root.

PERENNIALS.

Perennials are those plants which continue to grow for many years. They are propagated in several ways, but all produce seeds. Perennials have two distinct modes of growth; some root deeply, while with others the root system is near the surface. The most troublesome are those which extend long underground stems or rootstocks beneath the surface of the ground, as Canada Thistle, Perennial or Field Sow Thistle, Field Bindweed and Bladder Campion. Representatives of the second class or shallow-rooted perennials are Pasture Sage, Yarrow and Couch Grass. Some perennials extend but slowly from the root by short stems or offsets, but produce a large quantity of seed. Of these, Ox-eye Daisy, Dandelion, Goldenrod and Yarrow are examples.

Perennials are by far the most troublesome of all weeds and require thorough treatment, and in some instances the cultivation of special crops, to insure their eradication. Imperfect treatment, such as a single plowing, often does more harm than good, by breaking up the rootstocks and stimulating growth. For shallow-rooted perennials, infested land should be plowed so lightly that the roots are exposed to the sun to dry up. For deep-rooted perennials, on the other hand, plowing should be as deep as conveniently possible. The nature of the land must determine the depth of plowing. In light or gravelly soils shallow plowing may be preferable as deep plowing might interfere with the mechanical texture of the soil, which is so important in the storing of moisture.

The rootstocks of some perennial weeds are very persistent. Some sections or cuttings from them will quickly take root when they are distributed by plowing or cultivation. Where such persistent perennials have become well established, it is usually advisable to adopt the most convenient method of cultivation that will bring the rootstocks to the surface. They should then be gathered and burnt or otherwise destroyed. Most perennial weeds will, however, succumb to continued thorough cultivation that will prevent the growth of leaves.

Plants take in most of their food through their leaves. Perennial plants, which live for many years, have special reservoirs where some of this food, after elaboration, is stored in such receptacles as bulbs, tubers and fleshy rootstocks. The first growth in spring, particularly flowering stems, is produced mainly by drawing on their special store of nourishment. Plants are therefore in their weakest condition when they have largely exhausted their reserve supply of food and have not had time to replenish it. The stage of growth, then, when plowing will be most effective is when their flowering stems have made full growth but before the seeds, which would be a source of danger, have had time to mature.

SUMMER FALLOWING.

The practice of summer-fallowing land, whatever may be said against it, affords the best opportunity to suppress noxious weeds. For lands foul with persistent growing perennials, a thorough summer-fallow will usually be the most effective and, in the end, the least expensive method of bringing the weeds under control.

The amount and nature of the cultivation of a summer-fallow will depend on the habits of the weeds, the kind of soil, and the climatic conditions. In some extreme cases of perennial weeds, it may be advisable to allow the plants to exhaust their reserve vigor by growth until the flowers are formed, then cut and remove the surface growth, plow to a depth of four or five inches, and bring the rootstocks to the surface before they have had time to renew growth. After cutting and removing the surface growth cultivators may, after several applications, be forced to the bottom of the furrow, thus unearthing the network of rootstocks. Perennial weeds having deep rootstocks may require a second and deep plowing before all the underground vegetation can be unearthed. If perennials alone are to be dealt with, they may be treated as above directly after an early hay crop.

When the destruction of annual weeds is the chief purpose of cultivation, deep plowing two or three times during the summer, with surface cultivation each week during June and July, and less frequently later in the season, should secure the germination and destruction of the maximum number of seeds. On account of the soil and climate, one plowing of summer-fallow is favoured in the Prairie Provinces.

SHORT ROTATION OF CROPS.

To keep farms free from weeds, few methods give such good results as a systematic short rotation of crops, with regular seeding down to grass or clover at short intervals. Weeds are most in evidence in districts where the production of cereal grains predominates and where the systematic alternation of crops is not generally practised. Thorough cultivation with a systematic rotation of crops, combined with the maintenance of as many sheep as can be kept to advantage, is a certain and profitable means of keeping weeds under control.

SEEDING TO GRASS.

Lands foul with some kinds of weeds, particularly annuals, may advantageously be seeded to grass for hay or pasture. The cultivation of hoed crops becomes too expensive for labor when the soil is polluted with weed seeds. Grain crops may also be unprofitable because of weeds, and they afford an opportunity for the weeds to increase. Seeding to grass and cutting the hay crop early will prevent most kinds of weeds from ripening more than a relatively small number of seeds, and the number of vital weed seeds in the sub-surface soil will rapidly decrease from year to year. If perennial weeds are also prevalent, it would be well to pasture with sheep and mow the roughage closely each year, before the spring growth has formed seeds.

FARM IMPLEMENTS TO DESTROY WEEDS.

The best time to destroy weeds is within two or three days after the first pair of leaves has formed on the seedling plant. In friable soils the 'weeder' is a useful implement for that purpose. The 'tilting' harrow is also satisfactory for comparatively loose soils and is preferred as a weed destroyer on firm or clayey land. Weeds are irregular in time of germination; consequently it is necessary to apply the weeder or harrow frequently throughout the growing season. Fields of potatoes, corn and cereal grains, when sown with a drill, may advantageously be treated with these weed destroyers once or twice before the crop distinctly shows above ground, and again, with corn and ordinary grain crops, when the plants are three to six inches high. Even relatively heavy harrows ordinarily in use will do little damage to the potatoes, corn or grain plants if the land is not wet, and the loosening of the surface soil benefits the crop in addition to the destruction of the weeds.

For perennial weeds, or seedlings that have become well rooted, a cultivator having diamond shaped or other relatively broad shares is needed for hoed crops. The disc is a favoured implement for destroying weeds in summer-fallow or in preparing a seed bed. When, however, it is desired to unearth and remove the root stocks of perennial weeds such as Couch Grass, a narrow-toothed cultivator, that will loosen the soil and bring the underground vegetation to the surface, is preferred to an implement that will cut the rootstocks, the small cuttings of which may be exceedingly persistent in growth.

HAND WEEDING SEED CROPS.

Even with the greatest care and the best of cultivation some weeds are almost sure to appear in clover and grain crops intended for seed and the only practical means of handling them successfully is hand pulling or spudding. With clover seed crops especially it is essential that the fields be carefully gone over and the weeds removed or destroyed before they go to seed. Failure to do this often results in the production of clover seed that is badly contaminated with weed seeds and its market value is thereby greatly reduced or entirely destroyed.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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NOTICE TO ADVERTISERS.—Changes of ads should reach this office one week before date of issue, in order to insure insertion.

APRIL 16, 1912.

DATES OF ISSUE.

April 30

May ..... 14—28

COUNTY VICE-PRESIDENTS' REPORTS.

On other pages of this issue will be found the reports submitted by the County Vice-Presidents of the New Brunswick Farmers and Dairymen's Association to be read before the recent convent at Fredericton. Several of the sereports were read while others remained unread and none of them were discussed.

We believe each and every Vice-President's county report should be read and then be handed to a committee to pick out the most salient points and have these matters brought out for discussion.

Several ideas are set forth in these reports to the consideration of which the association might well devote some time.

One of the primary objects of the Association is to be a regular farmers' parliament where subjects of vital interests to the various sections of the province may be discussed and forwarded, under the auspices of the farmer fraternity, through proper channels to the notice of the powers that be.

We do not believe in running to the government with every little idea that Tom, Dick or Harry may suggest. Select the wheat from chaff by considering the important questions and with the sanction of the farmers in the form of strong resolutions behind them the powers that be cannot fail to take steps to legislate on these matters.

Even the good ideas embodied in the President's address were not discussed. In the framing of next year's programme we trust ample time will be devoted to discussions on questions of general interest to the farming fraternity. It would also be a good idea for every agricultural society in a county to forward suggestions to their county Vice-President so that he may embody them in his report. In this way the reports would voice the sentiments of a greater number of farmers.

MAKING FARM LIFE ATTRACTIVE.

It is human nature to wish for the things that are just out of reach. Thoroughly acquainted with the unpleasant features of the present occupation, one learns mainly of the brighter side of the work and amusements of other people. The darker side is kept in the in the background by the effort of people to present a brave front to the world. Thus city people look longingly toward the country, while farmers' sons and daughters imagine that the city holds the greater measure of opportunity and happiness.

The traffic experts of city interurban lines find that the young people within the radius of interurban transportation gain increased contentment in farm life. While still living on the farm they are enabled to enjoy the advantage of city friendships, sights and amusements. They also learn of the hardships of city life without suffering from them. With an understanding of both sides of city life, boys and girls reared in farm families are likely to choose the free, healthful, substantial life of the country.

The extention of agricultural education to rural schools is solving another phase of the problem of keeping the boys and girls on the farm. Fully informed regarding the possibilities of profitable farm practices. the young people see the wide-open door to a full measure of satisfaction in rural life. These teach the children the very latest discoveries in scientific discoveries. Accustomed to rural life, informed from childhood on farming methods, and by direct observation fortified against the seductions of the city, the children should grow into a contented enjoyment of rural prosperity.

EVERY LINE OF IT IS READ

Woowards Cove, Grand Manan,
March 26th, 1912.

The Maritime Farmer,
St. John, N. B.

Gentlemen: I should say "the Maritime Farmer" must be considered a great authority among the farming population. If my correspondence is any evidence they certainly read every word in it. As for instance one women signed herself enthusiasticaly "Mrs. C. W., a faithful reader of the Farmer," (her very words.) So many say I would like eggs of turkeys or geese as the case may be, and nearly always end with the information "I raise lots of poultry but only the common kinds. You ought to tell them in a tactful way that there is no law against raising something uncommon if they want to. Would you kindly change my ad. Copy enclosed.

Very Sincerely,
SARAH E. MOSES SMITH.

I. C. R. TO RUN "FARMING SPECIAL."

Farmers along the line of the Intercolonial Railway in New Brunswick will have opportuni. ty next June to take advantage of lectures on "better farming" to be delivered by members of the staff of the Provincial Government Department of Agriculture, in connection with the tour of the "Better Farming Special" train. The Intercolonial Railway will furnish the exhibit train, which will consist of three baggage cars laden with specimens for illustration and demonstration, a passenger car where the lectures are to be given, and a car for the habitation enroute of the officials in charge. The train will start from Fredericton about June 20th and its stop is governed by a schedule which will be announced at a later date. The principal points along the Fredericton Division, to Blackville, will be visited, thence via the Indiantown Branch to Millerton and thence to Newcastle aud Chatham.

From here the "Farming Special" will proceed East as far as Sackville, making stops long enough for lecturing purposes at Barnaby River, Rogersville, Harcourt, Memramcook and Dorchester. Returning to Moncton where a two hours, stop will be made, the schedule will then cover Salisbury, Petitcodiac, Sussex, Norton and Hampton. The North Shore will then be visited and stops made from Bathurst to Campbellton and Dalhousie, after which tne train will return to Fredericton.

The object of the tour of the "Farming Special" is to instruct the farmers in the more advanced and scientific method of agriculture and the exhibit material carried on the train is merely for the purpose of demonstration. A hearty invitation will be extended to farmers all over the Province to assemble at the most convient railway point on the day scheduled for the visit of the train, and attend these lectures, and bv questioning and inspection gain whatever knowledge or enlightenment they may require.

These "farming specials" have been run in Ontario and the West with most satisfactory results, and they should prove a great benefit to the farmers of New Brunswick.

PROGRESSIVE PICTOU COUNTY FARMERS.

The farmers of Pictou County, N. S., are a live body as will be seen by the following news item from the columns of a recent copy of the Westville Free Lance:—

"Under the auspices of the Pictou County Farmers' Association a company has been incorporated, to be known as the Pictou County Ditching Company, Limited, for the purpose of buying a Buckeye Traction Digger to be operated in the County of Pictou. This machine costs in the vicinity of $3,200.00, landed in the County and is similar to the one imported two years ago by the Provincial Government. The officers are: H. S. Kennedy, Alma, President P. C. F. Assn. President; Dan Macdonald, Director N. S. F. A. Sylvester, Vice-President; Harold Falconer, Sec. P. C. F. A. Alma; James W. Maxwell, Director P. C. F. A.; C. R. B. Bryan, Sec. N. S. F. A., Durham, Directors of the company. The head office is at the residence of C. R. B. Bryan, Durham, who is acting as the Sec'y Treasurer. They are issuing $4,000.00 worth of stock in 800 shares at $5.00 each, fully paid and non-assessable. Quite a number have been bespoken and anyone wishing for application forms should apply at once to the Secretary.

This should be of great advantage to the farmers, as they can underdrain their land quickly at a great reduction in cost to hand digging. The machine can do a lot of work in a day, and if it gets fairly steady work should earn a good dividend. The County Farmers Association is progressive."

The Pictou County farmers are on the right track. They understand the benefits that follow in the wake of a thorough system of under drainage. They have taken note of the advantages offered by the Buckeye Traction Ditcher imported to Nova Scotia for demonstration purposes by Prof. M. Cumming of the N. S. A. C and are following in the line of advancement, that Prof. Cummings' action in introducing this machine was destined to accomplish.

EDITORIAL NOTES.

In ordering seed from any seed company examine it closely and test it. Seed companies—at least certain kinds—often send out some pretty poor seeds when their supply gets low, and it is just as well to know what you are planting, especially when you expect to put in a season's labor trying to make a living from this seed.

Lime Sulphur Demonstration at Berwick.

Conducted by the Berwick FruitCo.

Address by L. D. Robinson.

ON the afternoon of the 3rd inst., a meeting af the Berwick Fruit Co. was held at their spacious warerooms, for the purpose of demonstrating the merits of the home-made Lime-Sulphur concentrate. The demonstration was highly successful. A clear concentrate was produced testing 27½ degrees Beaume and containing very little sediment. Previous to the demonstration an address was given by the writer, which was designed to prepare the way for what was to follow. The Company were under obligation to J. N. Chute, their able manager, for the loan of his boiling apparatus, as well as for the materials used, in the demonstration.

THE ADDRESS.

Although the history of Lime-Sulphur is brief, yet many changes have taken place both in its manufacture and the uses to which it has been applied. It was first made with salt as one of its components and used as a sheep dip. Later this combination of lime, sulphur, and salt was used with great effect against scale insects infesting fruit trees. It was early discovered that salt was not necessary for the extermination of scale pests. To Prof. Lordly of the Agriculture Station, Oregon, belongs the honour of the discovery, that weak washes of the Lime-Sulphur combination could be used effectively in controlling apple scab without russeting the fruit.

The winter wash made according to the formula, 20-15-40, or 20 lbs. lime and 15 lbs. sulphur to 40 gallons of water proved very unsatisfactory as a summer spray, partly because it must be applied hot and partly because of variations in strength. Soon, however, the commercial concentrates of Lime-Sulphur appeared and the triumph of Lime-Sulphur over Bordeaux mixture was complete. Several investigators now turned their attention to the making of a home boiled concentrate, with the result that it is now possible for any fruit grower to make a Lime-Sulphur concentrate that is in every way equal to the commercial article, except in strength. Professor Stewart, of the Pennsylvania Station, developed the most approved method of making the home made concentrates. He made the discovery, that a formula consisting of 1 lb. lime, 2 lbs. sulphur to each gallon of water, would give excellent results. This is represented thus 1-2-1

The lime should contain 90 to 100 per cent. calcium oxide and be free from air slaked matter. The sulphur may consist of flowers or flour of sulphur. Soft water will give better results than hard water.

Applying Strong Lime Sulphur Wash in April in a New Brunswick Orchard.

Gathering Brush—Trees in background not Pruned.

Clean Cultivation in a New Brunswick Orchard.

APPARATUS.

This consists of a boiler, a measuring stick and a hydrometer—the whole of which should not cost $10. The boiler should be about 6 feet long, 3 feet wide and 12 to 18 inches high. It can easily be constructed by making a rectangular box of 2 inch plank firmly spiked together, having a sheet iron bottom double nailed. This box should rest on a foundation of cement, or brick somewhat smaller than the boiler so as to insure the wood work against fire. A piece of 7 inch stove pipe, consisting of not less than two joints, should be built into one end of the foundation and an opening about 15 inches should be left at the other for the purpose of feeding in fuel. A 1½ inch hole should be bored near the bottom of the boiler so as to facilitate drawing off the liquid. The boiler should have a cover to keep in the heat with a narrow slit running lengthwise through which a hoe or some other stirrer may be worked.

The measuring stick is simply a rod held upright in the boiler while it is being filled, notches being cut in the stick to mark the height of water when 5, 10, 15, etc., gallons have been placed in the boiler. Nails driven into the planks would serve the same purpose. The use of the hydrometer will be explained later.

HOW TO MAKE A LIME-SULPHUR CONCENTRATE.

Put 15 gallons water into the boiler and start a brisk fire. When the water begins to get somewhat warm, put into it 55 lbs. best lump lime free from air slaked matter. As soon as the lumps have crumbled dust in 110 lbs. (one bag) of dry sulphur free from lumps, stirring the mass vigorously meanwhile and adding water from time to time so as to maintain a thin paste. After the whole has become thoroughly mixed, gradually thin it by adding water, preferably hot, till the liquid reaches the 60 gallon mark. The extra 5 gallons will help to make up the loss through evaporation. It does not matter however, whether the number of gallons at the close is exactly in accordance with the formula, but it is better to keep as near the mark as possible. Water may be added during the process of boiling but it should be hot so as not to stop the boiling. Bring the mass speedily to a boil, and boil vigorously for a full hour with constant stirring, especially during the earlier stages. Much of the success attending the making of concentrates depends upon keeping up a strong heat.

HOW TO MAKE A WASH OF ANY DESIRED STRENGTH.

The hydrometer is absolutely essential in making washes, suitable for use on foliage, from the home-made concentrates. The margin between the effective strength and danger point of a summer wash is narrow. Even in the case of the commercial concentrates the hydrometer should always be used especially when making washes for foliage. The rule—3 to 40 for dormant spraying or 1 to 40 to summer work is at best only a makeshift. It has been proved by experiment that a wash suitable for dormant spraying should have a strength of 1.03, that for use just as the blossom buds are bursting, 1.009; and that for use after two-thirds of the blossoms have fallen, 1.008.

Place the hydrometer in a portion of the concentrate, and when it comes to rest, note the reading of the surface of the liquid—the first figure of this will be 1, a whole number, the rest a decimal. The proper dilution is found by dividing the decimal of the concentrate by the decimal showing the strength of the wash desired. Example—Suppose the strength of a concentrate is 1.225 and we wish to make washes with strength 1.03, 1.009 or 1.008. We simply divide the decimal .225 by the decimal .03, thus .225 divided by .03 equals 7.5—that is one gallon of concentrate to each 6½ gallons of water for dormant spraying. Similarly .225 divided by .009 equals 25, that is 1 gallon concentrate to 24 gallons water for use just as blossom buds burst.

IT WILL PAY TO MAKE HOME BOILED CONCENTRATES.

At the present prices of commercial Lime-Sulphur it will undoubtedly pay the farmer who has more than 8 acres of orchard, to make his own Lime-Sulphur. The cost of the home boiled Lime-Sulphur is small compared with the profit, and, as has been shown, the operation is simple. Moreover, this work can be done in April when farm work is not urgent. Co-operative companies should find it very profitable to manufacture the Lime-Sulphur used by their members. In the case of co-operative manufacture it would be more economical to use steam for boiling than dry heat.

In the figures given below 2 cents per lb. has been charged for sulphur and ¾ cent per lb. for lime. These were the figures paid for these materials by the writer, last year. By buying these materials in large quantities a great saving could be effected. It is considered a fair assumption that the value of a Lime-Sulphur concentrate varies as its strength. Lime-Sulphur sold in Berwick last year for about $7.00, the buyer returning the barrel, or at about 17½ cents per gallon clear of the barrel. The average strength of this commercial concentrate was 32 degrees Beaume.

DR.

To 110 lbs. Sulphur @ 2c. per lb. $2.20
To 55 lbs. Lime @ ¾c. per lb. ..... .41
" Fuel ..... .20
" Labour ..... .50

$3.31
4.51

Balance in favour of the Home Made Concentrate 4.51

CR.

By 55 gallons concentrate 26 degrees Beaume test @ 17½c. per gallon Beaume test 32 degrees.

$26 x 55 x 17½ / 32 equals $7.82

After Spraying With Lime and Lye.

N. B. F. & D. A. County Vice Presidents' Reports.

Needed Improvements Solicited.

1911 Crop Conditions.

Following are the reports submitted by the County Vice-Presidents at the recent N. B. F. & D. A. at Fredericton, N. B.:—

ALBERT COUNTY.

It becomes my duty as Vice-President for the County of Albert, to make a short report as to the agricultural conditions in this County, but first it becomes us (as citizens of this great and growing Canada, loyally united to the greatest Empire on earth) to give thanks to the Almighty, Allwise and Beneficient Ruler of the Universe, for another year of peace and prosperity.

I would say that I have had no communications from any Parish in the County excepting Hillsboro, but from personal observation I think I am safe in saying, that, taking the products of the year as a whole, we have had a good average yield. Of wheat and barley not much can be said as our people do not produce them to any great extent, although I have seen some small fields, which showed good samples of those grains. Oats which is a large part of our field crops was hardly up to the average, the straw as a general thing being lighter than usual, but in the early sown, fine heavy grain was produced. The buckwheat, as a rule was very light, some fields hardly producing enough to pay for sowing and harvesting expenses, and I might here say that to my mind with respect to this crop, many farmers make the mistake of thinking that any kind of worn-out land with the poorest possible culture is sufficient, which is far from being the fact. Potatoes all over the county yielded abundant crops, perhaps the best we have had in many years and in addition to big crops brought record prices. Turnips and other root crops might, I think, be called an average though not so good as the previous year. The apple crop was excellent and of a superior quality, partly I think on account of the favorable season, and partly on account of the supervision and painstaking instructions of our horticulturist, A. G. Turney Esq. Of the smaller fruits I am not able to furnish any information. The hay last season was considerably below the average crop, but by a little shifting, there will be more than is fed before the new cut.

With regard to our Elgin Agricultural Society, would say, that for the past few years we have not been up to the standard, having failed to introduce pure blood in our stock, but we have a new secretary this year, who is a progressive farmer and a hustler and we are hoping for a much better future for our society. The society at Hillsboro lately instituted is going ahead by leaps and bounds. In their horse breeding for draught purposes they have been using the "Shire" principally until last year the farmers bred to a Percheron. The society owns five Shorthorn bulls and one Holstein. The Yorkshire and Chester pigs have the preference. In sheep the Shropshire and Cotswold are the breeds most raised, but on account of the dog nuisance they report not many kept, they also report hay and grain crops light but apples an extra crop.

There has been something said about suggestions on Immigration, but perhaps men of wiser heads and larger experience in that line would do better in discussing that matter. To my mind it is a vast problem while everybody who is anxious for the development of our whole country heartily wishes a larger increase of a good quality of Immigrants and are willing to give every encouragement, yet many hold that if we could solve the problem of keeping our native born at home it would tend more perhaps to build up a wise, strong and loyal people such as is desired to make Canada great. And if a scheme could be devised to give our young men something which they could hold in possession and call their very own, before they scented other lands, I think that would overcome the difficulty.

But we must not make our reports so long that we weary the hearers, so I will close by saying that I believe that if this fair Province was sufficiently advertised it could be filled with a happy contented people, who would believe with us that the sun shines on no fairer, better land in which to dwell.—Robert A. Smith.

Baron Primrose—A Sire of Prize Winners.

Champion Clydesdale Stallion at the 1912 Maritime Horse Show, Amherst, N. S.
Owned by C. R. H. Starr & Son, Port William, N. S.

CARLETON COUNTY.

The spring of 1911 opened somewhat earlier than the two preceding springs so the farmers were able to get on their land early. Seeding began the first week in May and with a continual drought all through the month, it afforded an excellent time for getting in crops of all kinds. During the month of June we had considerable rain with somewhat more showers in some parts of the County than others—on a whole a fairly good growing month.

Haying began about the 12th of July. Owing to the early drought the hay was not more than two-thirds of a crop; but on low land that was under good cultivation there was a fairly good crop.

The grain crop also was affected with the drought. Oats was not up to the average, although the quality was good and it was harvested in fine condition. Wheat was probably below the average. Grain, dry and of fine quality. Early sown buckwheat did not give more than half a crop; that which was sown the latter part of June was considerably better. Potatoes, turnips, and all root crops were somewhat above the average. Potatoes were of fine quality and housed in excellent condition. Owing to the high price of potatoes, a large acreage will be planted this year. In some sections of the County farmers are selling off their stock, buying fertilizer and planting a large portion of their farms in potatoes.

Fruit of all kinds yielded abundant crops, much above the average.

Our cattle consist of a mixed grade of Ayrshires, Holsteins, and Shorthorns. The milk is made into butter at home.

Owing to the increasing demand and high prices for all kinds of farm produce, and with bright prospects for better railroad facilities, the farmers of the County are looking forward to a bright and prosperous future.

On a whole Providence blessed our County with a bountiful harvest and the farmers in marketing their produce are reaping a rich reward. Let us hope that they will work for the best interests of our Country, continue to prosper, and make their lot a happy one.—Robert J. Ronald.

CHARLOTTE COUNTY.

I have the honour to submit herewith a short report on agriculture in Charlotte County. The spring was dry and cold until June after which we had plenty of showers.

Hay was a good crop and was well made and stored.

Oats was very good, both in quality and quantity and was well harvested.

Buckwheat was a very good crop.

Wheat is very seldom grown in Charlotte County. Potatoes were of a very good quality but in some places there was not many in a hill. All field roots and garden stuff as well as all small fruits yielded good returns.

Our apples were of good quality and most of the trees bore well. Forest Tent Caterpillars were very numerous in most places and did a great deal of damage to the trees.

Last year we had four societies in good standing. Nos. 88 and 26 both held fairs and they were quite creditable. No. 120 imported four pure-bred Ayrshire bulls and placed them around among the members of the society. Our farmers are getting very much interested in pure-bred stock of all kinds.—E. E. Emmerson.

GLOUCESTER COUNTY.

Spring opened early. Crops got in in good condition. General growth fair, but the season was too dry for rapid growth.

Hay an average crop. Haying season good and the crop well stored. Oats an average crop and grain heavy. Not much wheat grown in this section, but what was grown turned out a good crop. Barley a fair crop, but not much grown. Potatoes a good crop for the quantity that was planted. Owing to the potato bugs, not much planted. Stored in cellars in good condition, and prices higher than usual. Turnips an average crop. Carrots and beets a fair crop.

Fruit an average crop.

Stock:— Cattle are principally Ayrshire, a few Shorthorn and Holstein. The Society imported Yorkshire, White Chester and Berkshire pigs, and get good satisfaction from the stock. Sheep make a good showing. Breeds are mostly Leicesters, Shrops and a few Hampshires. Owing to the dogs, not so many kept as a few years ago.

The Government promised us a grant to hold an exhibition this fall in Bathurst for the Counties of Restigouche and Gloucester, and, no doubt, they will fulfil their promise. —John Miller.

KENT COUNTY.

I beg leave to submit herewith a brief report of the agricultural situation in the County of Kent during the past year.

The spring of 1911, while a little cold and backward was fairly favorable for seeding and conditions during the summer were especially favorable for the growth of the different crops. While there was at times too much rain for good harvesting, yet on the whole crops were saved in good condition, although some of the oat crop suffered slightly from the effects of the heavy rain during the harvesting period.

The yield of all crops was above the average. The hay crop, while not so heavy as the record crop of the previous year was satisfactory, and the hay was of excellent quality and saved in good condition. In some cases in the Northern end of the county the wheat was attacked by rust and a number of farmers lost their whole crop, but these cases were not numerous. Oats, as a rule, yielded well and were generally harvested safely, except in some instances of damage through bad weather conditions. The buckwheat crop was above the average.

Potatoes were a first class crop. The turnip crop was lighter than that of the previous year.

The market for potatoes was unusually good in the fall of 1911, the shipments from Richibucto and Rexton particularly being many times greater than in any previous year. Farmers within a practical hauling distance of these points reaped the advantage of this demand, but in the extreme northern end of the county, the distance from the nearest railway and the consequent long haul, rendered it impracticable to sell. These districts feel the need of better railway communication.

The price of grass and clover seed at present high and showing a constant upward tendency, would seem to make it almost obligatory upon the farmers to consider the advisability of producing these varieties of seed upon their own farms. Any suggestions from the members of the Association along these lines would be appreciated.

On the whole I feel that the farmers of Kent County are showing a

renewed interest in acquiring improved methods of cultivation, and that their condition is steadily improving.

Submitted with best wishes for the prosperity of our Association.—M. J. Poirier.

KINGS COUNTY.

In regard to agricultural conditions in the County of Kings, I shall first call your attention to the fact that according to the census just taken the County has had a decided falling off in population, and it is regretable to note that those who left were for the most part from farming districts. Whole sections of highland farms have been vacated, and places which were the homes of large families have become, through lack of knowledge in rotation of crops, or bad management, and poorly handled fertilizers, an almost barren place; but, on the other hand through sections of the river valleys and along the railroad where dairying is more prominent, the farms present a more flourishing condition; and I think it would be well to call the attention of the Department of Agriculture to the fact that when sending out Institute speakers, a man could be sent who is familiar with conditions similar to those required in the place where he is to speak.

The dairy herds throughout the County are in an average condition, and farmers are beginning to realize the necessity of better care during the winter months. Some have already erected new and more modern barns while others are preparing to build in the near future.

The Government's aid in behalf of the dairyman could be given in two ways, first, by protecting the producer of a first class article from the inferior qualities brought into competition, and second, by helping to keep down, and drive out, the much dreaded disease of tuberculosis.

The protection of a good article might be accomplished after the same plan as now exists on fruit and maple products, or by compelling the producer to have his name and Post Office address placed on every package; and as the public in general are concerned in regard to the disease of tuberculosis, the neglect and expense of the farmer to find out about its presence in his herd might be overcome, by having an inspector qualified to inspect all dairy herds, and where animals showed symptoms of disease to make a positive test.

During the past season the supply of pork has been good but the prices were considerably lower than on the previous season.

The field crops in general were on an average. A dry period in the early part of the segson made the hay and grain crop in the Eastern part of the County rather light, while in the Western part the moisture from the river produced a decided increase. Vegetables were an average or better, while potatoes were good. A few trial plots of Alfalfa throughout the County have proved very successful.

Small fruits were below average, and though they gave prospects of a good crop, tne dry season caused early ripening, which prevented full maturity. Considerable interest is now shown in the setting of new orchards in connection with the other farming, and everything points to better days.—Edgar Shamper, Kingston, N. B.

NORTHUMBERLAND COUNTY.

The spring of 1911 was dry and favourable for seeding. Many farmers had their potatoes and grain in the ground by the middle of May.

The early part of June was also very dry and crops suffered considerable on light soil. The later part of June and July was very rainy which helped the crops greatly.

Hay was a fairly good crop but not as heavy as in 1910.

At the beginning of the haying season we had some wet weather. Farmers who began cutting early stored their hay in poor condition, but the month of August was finer and a quantity of good hay was housed.

September was a fine month and grain ripened early. Oats was a medium crop, but not much grown here, as we have no grist mill nearer than 22 miles—at Rogersville.

Potatoes were a good size and of extra quality but not very plentiful in ground. Turnips and mangels were an average crop but not so extensively grown in this district as they should be. Small fruits, such as strawberries, raspberries, and blueberries were very plentiful. Apples are not extensively grown in this section, but varieties grown are of good quality.

Our live stock is gaining in quality. The principal pure-bred herds of cattle are: Ayrshire, Shorthorn, and Holsteins. In pure-bred horses we have some fine Clydesdales and Hackneys also a Percheron stallion.

Sheep raising is decreasing on account of the ravages of dogs.—W. M. Johnston.

The Imported Clydesdale Stallion—Baron Squire.

Second in his class at the 1812 Maritime Horse Show.
Owned and exhibited by McFarlane Bros., Fox Harbor, N. S.

QUEENS COUNTY.

The summer of 1911 will be remembered in Queens County as one of exceedingly fine weather—a splendid spring for putting in crop but a little too fine and dry for early growth, (a condition that reduced the crop of hay, which otherwise would have been an excellent one as the seeded ground wintered well).

Frequent snowers during the month of June gave all crops a good start, so that even the hay crop was above the average. Potatoes were an exce,-lent crop, both in quantity and quality; oats, better than for the last two years; buckwheat, rather poor, (mainly on account of being sown too early); turnips and garden stuff fairly good.

On the whole—good crops—many expressions to that effect heard at the end of harvest from those who farm.

Of course there is a wail—with many—a sad and bitter wail—"The harvest is past, the summer is ended and we have nothing. To be sure we sowed nothing. Too poor a prospect for us to plow and sow in May. The ground burning up with drouth. Oats a month coming up. We hired to drive and raft at $2.00 a day, but the job only lasted till about the first of June. Fine growing weather now. If we had only planted potatoes and sowed oats and put in a good garden it might have paid us after all—too late now. Prices March 1st—Potatoes, $2.50 to $3.00 per bbl.; Oats, 70 cents per bushel; Buckwheat, about 75 cents; Middlings, $1.65 per cwt.; Bran, $1.50; Beefsteak, 18 cents per pound. We have to buy all these things. This is a hard County to live in. I'll have to move out West." And so it goes.

It has been a matter of regret to me that at these Farmers' Meetings in Fredericton, for the past two years very little time or attention has been given to the subject—(important above all others to the farmer) viz. Soil Cultivation, and the Growing of Crops. Is this subject to be sidetracked again this year? It would almost seem so from the programme.

In the County of Queens the one thing that has most hindered the advancement and prosperity of the place has been the failure to properly cultivate the land. I do not mean simply that most of the land has never been cleared, but the farms that have been cleared are not half cultivated.

I am quite confident, from my own experience, that at least double what is now grown on all the farms in the parish of Chipman could easily be produced on the same acreage, with more thorough cultivation and rotation of crops. Until we get something that will stimulate us to give our land more thorough cultivation and grow something to sell and a better quality of feed for our stock, we cannot look for much improvement, and we'll have to swallow the statement made at a public meeting a short time ago, that "there are very few good farmers in New Brunswick." The meeting referred to had for its object the development of New Brunswick by importing not stock—but practical farmers—a good idea—but is there no hope of improvement among ourselves?

We hear the note: "Back to the land" sounded occasionally by those who have tired of other professions. Let the farmer who has been disappointed in his pure-bred stock, who has failed to make them pay, because kept in a half starved condition or kept up by buying feed at $30.00 per ton, take the hint and get "back to the land" and grow for feed: clover and turnips, which he easily can do—and corn and alfalfa if he can, and a patch of strawberries to bring in $100.00 or more in July, and a couple of acres of potatoes extra for sale. The potatoes can be grown on poor land, well cultivated, and with the application of one-half ton of good fertilizer to the acre. This has been my experience at least.

I believe that our Local Government, our Public Meetings, and our Agricultural Papers give undue prominence to Pure-bred Stock. Something is wrong or the statement could not be made—as it was made in the Farmers' and Dairymen's Meeting here last winter, and made without contradiction—that New Brunswick had more cattle and better cattle thirty years ago than it has today.

I believe the remedy for this is mainly a problem for each farmer to work out for himself; but ought we not to expect our Agricultural Papers, our Public Speakers and above all our Government—(those who are at a sufficient distance from the Cow to get a square view of the situation), to locate the cause of the comparative failure of the dairy industry in New Brunswick. If it is mainly because we do not grow the feed—feed which our land and our climate are well adapted to grow—then we need our attention turned in that direction.

A stimulant is a dangerous thing, but there are times when it is a necessity, and I believe the Dairy Farmer needs a dose now—one strong enough to set the machinery in motion the first of May and put to the test the statement: "He that soweth bountifully shall reap also bountifully."

One other matter and I am through—The price of Horses at the present time stirs us to enquire—why are not more good colts raised by farmers? In the Chipman section of Queens County there are a large number of fine mares, mainly of Clydesdale breeding, weighing from 12 cwt. to 15 cwt. Why don't we raise colts? I'll tell you. We have no good stallion in the place. Occasionally one comes along from some other section with the result that might be expected. The man who has a mare to breed generally misses the chance.

The price of a good stallion and the cost of keeping him the year round is such as to put it beyond the ability of a small Agricultural Society to handle. The society which existed in Chipman some years ago, was broken up by the purchase of a horse. Our Society is at present trying to interest some private parties to purchase a good Clyde. stallion, the society to guarantee patronage and a bonus such as its finances will admit. We are met with—"It is not likely to pay us for the outlay and risk. It does not appeal to us." What are we to do? One of two things—do without or get one with the assistance of the Government. If I am rightly informed, the Dominion Government gives a bonus of $250.00 a year to anyone keeping for service a stallion of the breed known as "Thoroughbred." As I understand it this bonus applies only to that breed. If we thought that was the best kind of horse for us we could get a stallion and draw that bonus. We believe that the Clyde. is the best for us either to work or to sell. In all fairness, we should have a like bonus. There are several reasons why we should have it. I will just mention two or three. First, we need it because we cannot get started right without help. Second, it would enable the owner of the horse to put the fee down to say, $10.00. Third, it would give the Agricultural Society a chance to make some arrangement with the owner of the horse and thereby ensuring his being kept in a certain district. Will our Government not assist us in this matter? Let us try them by passing a resolution at this meeting asking them to do so.—Isaac W. Baird.

RESTIGOUCHE COUNTY.

The spring of 1911 came in early, dry and warm. Nearly all the seeding was done in May.

The month of June was very wet.

The hay crop was the heaviest and best ever known.

The wheat crop was below the average, but not very extensively sown on account of no proper mill for grinding.

(Continued on page 500).

Good and Bad Features in Horse Collars

Good Collars, Careful Grooming and Attention to Details Lessen the Risk Occasioned by Sore Shoulders.

By R. J. Currie, Horse Collar Specialist, St. John, N. B.

"No foot no horse" is an adage with which every farmer and horse handler agrees. Next in importance to the foot and a healthy, normal body is a good shoulder and many good horses have been practically ruined by the neglect of their grooms and the use of impractical, ill-fitting, dirty collars.

The horse's shoulders should be kept scrupulously clean by thorough grooming so that all loose hair and dry sweat will be brushed off before the collar is put on and care should be taken that the bearing surface of the collar is scrupulously clean. It takes a horse's shoulder a long time to heal, so prevention is better than cure. A horse with sore shoulders endures a lot of agony and is often forced to do a lot of heavy work with the main part of the draft on an injured spot, and if not relieved the animal soon loses flesh, and may cause a sound animal to become balky.

To assure sound shoulders the collar should be well made and well fitted and as already stated it should be kept scrupulously clean by thoroughly rubbing to eradicate any accumulations of sweat as soon as it is taken off the horse. Wash the dried sweat off the collar at night, and bathe the shoulders with cold water after the horse is unharnessed.

The first symptom of a sore shoulder is that the hair stands erect in the location of the injury. Later, if the animal is continued at work with the same kind of collar, the skin and hair slough, leaving a raw, bleeding surface. The size of the sore may be from that of a silver dollar up to three inches in diameter.

Many times a soft swelling appears just above the point of the shoulder. If opened at the outset, a straw-colored liquid escapes. On the other hand, if not molested it becomes infected and an abscess forms.

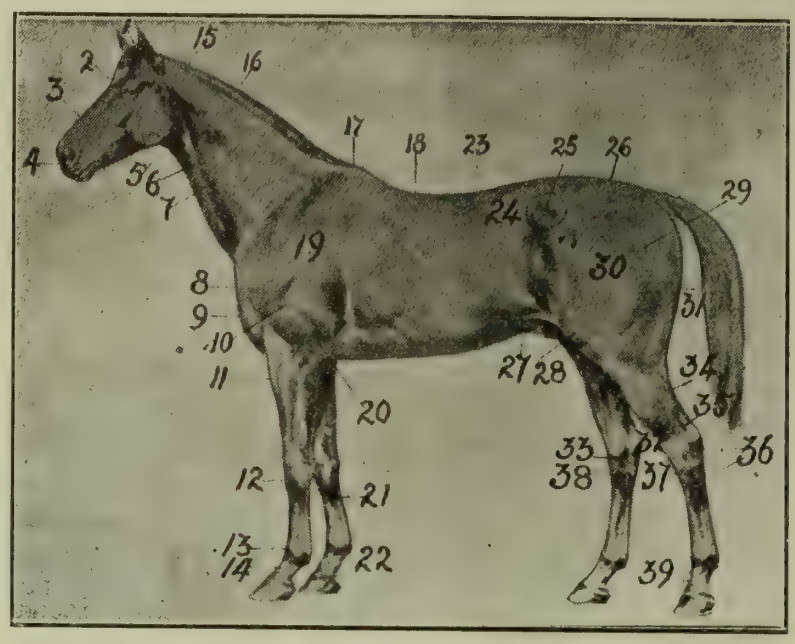
These abscesses are often superficial, but may be deeply seated and require expert attention. The deep abscesses may be located six inches or more below the surface of the skin, between the shoulder joint and the chest wall. These abscesses often prove serious and should only be treated by a qualified veterinarian.

Some men are great believers in the use of sweat collars; to others their use is an abomination as they retain moisture from sweat or rain, and being constantly in touch with the horse's shoulders in the wet state they very soon harden and an irritation sets in.

In the manufacture of horse collars good quality of the stock used is of primary importance. The rim should be strong and well stuffed into shape. The body of the collar is most important and here it is where some of the most skilled workmen fail in their attempt to produce an ideal collar. The body of the collar should be made in such a way that it will have a level bearing on the horse's neck from the top down to the point of the shoulder then slacking off to allow the point of the shoulder to work easily without interferring with the motion of the horse. A great many collars are made too full at the point of the shoulder and as a consequence a sore develops at this point.

The manufacturer must also look after the style and finish of the collar for if it is wrongly cased it will always be an eyesore for the lack of proper filling and smoothing.

Many collars are made too light in the top and too full on the draught. A collar of this kind will rock on the horse's neck and when hauling will either pull back on top or down on the shoulder points.



Key To Chart of Horse.

1, Poll, Seat of "Poll evil" 2, Forehead; 3, Face; 4, Muzzle; 5, Throatlash; 6, Windpipe; 7, Jugular Groove; 8, Point of shoulder; 9, Chest; 10, Arm, from shoulder point to elbow; 11, Forearm; 12, Knee; 13, Fetlock; 14, Pastern; 15, Neck; 16, Crest; 17, Withers; 18, Back; 19, Shoulder; 20, Elbow; 21, Seat of splint; 22, Seat of Sidebone. Quarter-crack indicated below; 23, Loins; 24, Coupling; 25, Hip; 26, Croup; 27, Flank; 28, Stifle; 29, Hip joint; 30, Thigh; 31, Quarter; 32, Point of Hock; 33, Hock joint; 34, Gaskin or lower thigh; 35, Seat of thoro' pin; 36, Seat of curb; 37, Seat of bog spavin; 38, Bone spavin; 39, Seat of ringbone.

The idea that a hard collar with a sweat collar under it is the proper kind of collar to use is a great error from a practical standpoint. Every experienced collar-maker knows and will admit that a collar for heavy work should have a soft facing so there will be some give to it.

All horses' necks are not shaped alike and consequently each horse should have his own collar. It is a mistake to use one horse's collar on another horse as it destroys the conformation of a collar and its adaptability to the proper horse's shoulders.

In the United States they have tried pulp collars, and sheet iron collars and they all have their failings which prove that no hard substance is suitable for the manufacture of collars.

Pneumatic collars have also been manufactured and they too have met the fate of the impractical. They were made with a rubber tube inside the leather casing and pumped full of air from the top. The oily nature of the leather covering of the collar soon rotted the rubber air tube inside and, as the air compartments in the sides were not connected, one side would frequently get soft, and, as a consequence, it was only a question of a short time until the horse would have to contend with a side draught and be obliged to haul his load by one shoulder. A great many of these pneumatic collars had to be stuffed with some other material before being placed on the market.

The short straw, machine made collar is also a failure to a certain extent as they are mostly made of short straw and whenever a break is made in the casing the stuffing drops out and the collar is ruined. Beside this many of the short straw collars have no facing to protect the horse's shoulders but the hard cut up straw.

The proper filling for a collar is a good hair facing. Moose hair makes a splendid facing for a leather-faced collar. It does not, however, do so well for a cloth-faced collar as the sweat works through the cloth and hardens the hair. The proper facing for a cloth-faced collar is curled hair, which manufacturers and teamsters know is the most durable material that can be used for this purpose. These hair facings are used in the manufacture of long rye straw packed collars, which makes a strong and durable collar with a soft, pliable face that conforms readily to the horse's shoulders.

A long straw collar being uniformly stuffed by hand and made to shape will always retain its shape. Short straw collars are only blocked or pressed into shape and very soon become a shapeless piece of harness.

There are a great many different styles of collars: The sweeney collar, the hard and soft pipe collars, etc., which are very largely stocked by retailers. The sweeney collar is uncalled for and of no benefit whatever to a horse that has good shoulders. It is made expressly for horses that have sweeneyed shoulders, caused by a strain in hauling or repeated bruisings by ill-fitting collars. In cases of this kind the top of the shoulder blades become very prominent and caloused lumps may form on the shoulders. The sweeney collar is narrowed opposite to where the lumps occur to allow the collar to set on the horse's neck without interferring with the lumps.

The pipe collar is also made for a purpose. Perhaps a great many of the readers of the Maritime Farmer have never seen pipe collars and consequently do not know what they are. The pipe collar is made to a point at the throat and runs straight to angles at the point of draught. A piece of iron piping in the rim of the collar helps it to maintain this shape. The pipe collar is used on horses that have prominent wind-pipes and that are chicken-breasted or have prominent breast bones. In cases of this kind the ordinary collar presses too hard on the wind-pipe and sometimes on the breast bone and irritation and sores result. With the pipe collar, the angular shape at the throat makes ample room for conditions of neck and breast as indicated above, without bringing the draught too low. A great many people think that when a collar is choking their horse that they should buy a pipe collar but the choking is from a different cause.

The reason why a collar pulls up on a horse is because it has not enough top to balance it properly and is in all probability much too wide and the longer the collar that is put on the more it will choke the horse. Some horses require their collars much heavier in the top than others as the shoulders slope back much more in some horses than others.

A horse that is worked in a tip cart should have a collar that is good and heavy at the top as the draught is usually high and the tendency is to pull the collar up and backwards at the top.

The soft pipe collar is the same as the hard pipe collar only it has no iron piping to keep its angles in shape and is used for the same purpose as the hard pipe collar.

A great many sore necks and shoulders are caused by not having the collar snugly buckled on top and by having the hames too slack. You will frequently find teamsters that will let out the top strap of the hames so far as to give them so wide spread on the top that the collar is allowed to widen out and roll and slip on the neck. This is a piece of neglect for which there is no excuse.

When the collar is first put on, it should fit the horse close to the inside of the neck, bearing the whole way from the draught to the top. The driver should see that the hames are put on with the draught coming at the proper place and have them buckled snugly into the hame room of the collar by drawing them up as tightly as possible. After the horse hauls into the collar for a day or two, the top strap of the hames will require adjusting so that the collar will be kept in close to the horse's shoulders. In fitting a horse the collar should be one inch longer than the measurement of the neck when the collar is shoved back on the collar seat and fitting closely to the neck.

The collar should have a heavy enough rim to prevent the hames from slipping off.

The most durable facing for a collar is grain leather. Not infrequently manufacturers use sheep skin leather for this purpose but it is not at all durable.

The hand sewn collar is also much more durable than the machine sewn collar and the little extra cost at time of purchase will more than repay the purchaser in extra durability.

Editor's Note:— Mr. Currie is a practical collar manufacturer. He has been engaged in the business for about twenty years and as he learned his trade with and was associated with the foremost collar manufacturer in Eastern Canada, the ideas gleaned from his former employer and his own personal experience puts him in a class by himself as a collar manufacturer. See his ad. on another page of this issue.

How I Make a Profit With Sheep.

By Mathew Lamont, Yarmouth Co., N. S.

Awarded First Prize in the Maritime Farmer Sheep Raising Contest.

IT was among the hills of Scotland, while tending my father's flock, that I first heard of the suitability of these Maritime Provinces, and especially Nova Scotia, for raising sheep successfully.

It was not of much use for the young farmer and stock raiser in Great Britain to look around the land of his birth, with its limited area all utilized to the utmost, for an outlet for his energies.

Australia and especially New Zealand, though far distant, were attracting a good many; but the former, with its immense stretches and flocks in thousands, needs quite a capitalist to handle a commercial flock, and the latter, at that time, seemed to be having a period of depression. Although there was not one-quarter so many sheep there then that there is now, yet there was no satisfactory outlet for the muttom. The Statesmen that have been at the helm there, for the past fifteen years or more, had not then come to the front with the freezing and freight-subsidizing solutions for her difficulties. Her wool and surplus mutton from some twenty-five million sheep now fetch good prices on the British market and those distant islands have become the safest and most profitable part of the world in which to keep a flock of sheep.

At that time the Provincial authorities in Nova Scotia had a handbook circulating among the farmers in Scotland showing how easy it was to own and equip a farm in that Province for sheep raising and that a fortune was awaiting anyone with some knowledge of the business and sufficient capital to make a start. So, some twenty-five years or more ago, I ventured thither, anxious to get where the winters were fairly open and the climate not much more severe than that to which I had been accustomed. I headed for the South Western Counties and eventually secured some 300 acres of land, near Short Beach, in Yarmouth County, where I still abide.

This farm seemed well adapted for sheep; plenty of dry, ridgey land with short rich grass on it, while the northern end of it, 100 acres or so, resembled the moorlands on which our well known Black-faced sheep get a living. It is true this moorland is not covered with heather like the Scottish, but it has a kind of a heath composed of crowberry, cranberry, blueberry and other vines and the wild cotton, an excellent spring bite for sheep, grew abunhantly on sections of it. The buildings on this place were poor and the fences not much better and I was out some $5.00 per acre for the land. No one had lived on the place for a good many years but the mowings and pastures, cranberry bogs and woodland brought in a good rate of interest on the investment. It was bounded by the seashore, for a mile, on the westward; and a lake shore on the southward; but a public road running through the place for a mile made a good deal of fencing necessary. I had quite a few fields on the south end of the farm, near the lake, that had been cultivated some and were enclosed by a low stone wall—too low to make a satisfactory fence for sheep.

It was early summer when I took possession of the farm and I spent the most of the first season fixing up buildings and fences, securing the hay and tending a few crops. I let the cattle run in my pastures that season and towards fall commenced to gather up all the ewes and ewe lambs I could get. I got one small flock of pure-bred Shropshire ewes and a ram. Before winter was over I had bought up, from far and near, 98 head. I had plenty of hay for them, that was hardly saleable, although of good quality, and some turnips. My records of that year show that I saved 93 lambs in the spring of 1886 from this flock. Some of the yearlings had lambs, but there were very few of the flock raising twins. I kept them around the mowings till they had their lambs and then I spread them over the pastures and did not get them sheared until June. I stubwashed the wool, dried it and found I had no less than 418 pounds for sale.

I Need You and You Need Me.

Do your part by bocoming a member of the Maritime Sheep Breeder's Association and working for the protection of the industry I represent. Mr. J. A. Telfer, the gentleman who is posing me, is Secretary of the Maritime Sheep Breeder's Association; he will be glad to get your application for membership. Mr. Lamont has had trying experiences. Cannot matters of this kind be alleviated by concerted effor on the part of the Maritime Sheep Breeders.

The market for wool was better then than now. Every country family and fisherman's household wanted quite a few pounds of wool to make into stockings, mittens, etc. There were double the sheep kept around then that there is now but not enough to supply the demand for wool. The best wool brought 40 cents per pound and inferior wool 5 cents to 10 cents less.

The demand for lamb was also very lively; almost every household then used lamb during the summer months. The butchers were around by the end of June for 12 of my March lambs paying me $3.00 each for them. Such lambs the past few years would bring more than double that money. During July I sold 28 lambs at $2.75 each; in August 32 lambs were sold at $2.50 each and the balance (14) in September at $2.25 each. This left me with 7 of my best ewe lambs to add to my flock, leaving me with 105 ewes and 1 ram. Five of these ewes, not being up to the mark, I fattened up a little on fall feed and turnips and got $3.00 each from them by the end of the year.

I am giving these details so that readers can compare them with present prices. It is evident that if there was money in raising sheep then, there must be much more in it now, if there is not at the same time a good deal more risk and expense connected with the business.

The following figures show what I got out of my flock in the year 1886:

It cost me to buy my flock,	$348.00
Hay, roots, dip and fencing...	54.00
Hire of extra ram.....	1.00
Total.....	$403.00
SALES	
240 lbs. wool @ 40 cents.....	$ 96.00
178 lbs. wool @ 35 cents.....	62.30
86 lambs realized.....	224.50
5 fat ewes @ $3.00.....	15.00
Gain in value of flock by the lambs added.....	15.00
	$412.80

Thus a flock of sheep after being wintered and fenced, costing some $400.00 had returned more than they cost and I still had that flock readier than before for another year's business. I felt well satisfied with the year's returns and the prospects for the future.

FENCING, ETC.

The problem of fencing is one that every sheep raiser has to face. Good straight spruce poles that sawed up into 3 or 4 strips, I found to be cheapest and most satisfactory; first, because I had them growing on the farm and second, because the saw mill was handy. I found that 2 boards with a wire between made a good fence for turning sheep; but if the ground was very uneven it required a barbed wire underneath also, with another barbed wire on top you have a fence that will turn stock of any kind. I have seen small sized dogs and foxes turn aside rather than take such a fence. A fence like this well put up with spruce or tamarac stakes will last 15 or 20 years or more. It will want some fresh stakes but that is not much of a tax to find every 8 or 10 years. Barbed wire would not make a suitable fence for sheep by itself, but mixed in with boards the barbs do little harm to the fleece of the sheep. Also when more than 2 board rails are put on a fence it catches too much wind and it is very hard on the stakes.

WINTER FEED.

After fencing, the next problem for the sheepman is the winter feed for his flock. To the shepherd from Scotland, where the winters are comparatively mild, and large flocks are carried with little provision through the winter, this seems, at first, quite a difficult job. A few years of experience soon simplifies the problem for each of us. I had a great deal of old mowings that were not yielding much hay so I turned over 2 acres of them for oats and another for turnips, to help to provide feed for my hundred sheep during my second winter in the sheep business. The sheep manure composted with kelp and the manure from the oxen also heavily composted were spread evenly over this ground and worked in with the harrow. The turnip ground had also some $10.00 worth of bone and superphosphate spread over it and well harrowed in. Then the rows were drawn out, evened off and the seed drilled in about the middle of June. In a few days they are ready to thin out and it is an easy process, if you tackle the job before they get much growth. Then they need going through with the horse cultivator a few times and I always expect a pretty good crop ready to pull and put away before the middle of November.

In raising oats for feeding to stock of any kind, especially sheep, I sow 4 bushels to the acre. They will come up very thick and fine and if the land is in good heart will grow quite tall. If the weather is fine I commence cutting them as soon as they are fully headed out. They need a lot more making than hay and are best kept in cock for a week before putting in the barn. The cocks, of course, should be turned over occasionally. My first experience here was in 1886 with this crop and I put in the barn nearly 8 tons from two acres. This was very cheaply raised feed but it proved rather wasteful for sheep so I got a straw cutter and fed it cut. I have another method of getting inexpensive wintering for sheep which I will mention. A great deal of my sheep and cow pasture is old mowing, in which the June grass and daisies come up quicker than they can be fed off. I go over this with the mower before it gets tough and gather it up with the horse rake. Some years I secure quite a few tons of it. The sheep are fond of this during the winter months and it is quite nourishing. I generally mix in a few handfuls of coarse salt with it when putting it on the mow and it is quite appreciated. A pound of this kind of hay in the morning and another pound at night for each sheep with two or three pounds of turnips and a run outside during the day will carry a small sized sheep like the South Down or Cheviot along in very good shape.

WINTERING THE FLOCK.

Sheep must have plenty of room and light in their winter quarters, and plenty af air too, but it must be overhead. My barn was only 30 feet by 30 feet and there was not floor space enough for 100 sheep, so I got a shed put up 15 feet wide along one end of the barn. Wool was quite an object in keeping a flock at that time, so I was very careful in constructing my racks to keep straws and seeds from the fleeces of the flock. I believe sheep do best where they have lots of exercise, during the finest part of the day, in the winter time.

When the snow is not deep and the wind not too bitter my flock are apt to find their way to the beach where there is usually fresh supplies of dulce and sea-weed piled in. However

(Continued on page 485).

The Hill Grove Farm Ayrshire Herd.

Dispersion Takes Place on May First.

WE had the pleasure a few days ago of visiting Hill Grove Farm, the home of one of the finest herds of Ayrshire Cattle in Eastern Canada.

Hill Grove Farm is situated in East St. John, about ten minutes walk from the street car line at Haymarket Square.

A great boom, in the way of dry docks and other harbor improvements has come to St. John and consequently land values in sections bordering on the tide waters, where the proposed works are to take place, have increased very materially in value. Speculators are anxious to buy every foot of land that has a water frontage with a view of dividing the various blocks into building lots.

As the Hill Grove Farm occupied a commanding position on the shores of Courtenay Bay, Messrs. James Barrett & Sons, the proprietors of said farm, were approached with a tempting offer for their property and after due consideration they decided to sell. The major portion of Hill Grove Farm is now owned by the Eastern Terminal Realty Company and is being sub-divided into what is now known as the Bay View Lots.

Owing to the fact that they have disposed of their farm and that they must vacate it to the new owners early in May, Messrs. Barrett are obliged to disperse their magnificent herd of pure-bred Ayrshires. They do this almost reluctantly as each and every member of the firm is a lover of good stock and to them the ideal cow is the Ayrshire every time.

The dispersion sale will take place on Wednesday, May First, commencing at 10.30 o'clock a. m., when auctioneer, Jas. A. Telfer will wield the hammer and each and every animal in the herd will go without reserve to the highest bidder.

As the proprietors of Hill Grove Farm have operated an extensive milk route in the City of St. John, for a great many years, one of the primary aims in view when founding their splendid herd, was to establish it with bulls, cows and heifers of high producing quality. After keeping grade cattle for many years they came to the conclusion that it would not cost any more, in proportion to the returns, to keep pure-breds than it would to keep grades and as a large flow of milk testing a fair percentage of butter fat was what they required to keep up their city trade, they systematically followed a rigorous system of weeding.

The grades have gradually been supplanted by pure-breds until we find no fewer than twenty-nine head—24 females and 5 bulls—catalogued for the sale.

Despite the rigors of the long, cold winter that we have just passed through, a visit to the Hill Grove stables will convince the visitor that Messrs. Barrett are good stockmen and that the appetites and comfort of their animals are well looked after. The cows are clean, sleek and fat. The capacious udders, with large well placed teats show that the various cows do not belong to the "robber" class; they give every indication of being good producers. While producing quality has been the first consideration in establishing the herd, the Hill Grove Ayrshires have not been neglected in regard to show ring qualities and they more than held their own, in keen competition, with the best herds in the Maritime Provinces and some of the leading Quebec herds at the big Dominion Exhibition at St. John, in 1910.

All the Hill Grove Farm milk is requited for the city trade and consequently Messrs. Barrett have found it impossible to take their herd away to any exhibition other than that held in the vicinity of St. John, and are therefore not so well known to our readers as they might otherwise be.

Hill Grove White Heather.

Owned by James Barrett & Sons, East St. John, N. B.

Reda of Maplehurst.

Owned by James Barrett & Sons, East St. John, N. B.

Among the richly bred animals that we saw in their stables is the bull, Cherry Bank Sunrise and as a glance at his get, in adjoining stalls, indicate he is certainly showing his worth as a sire of typical, breedy looking stock. Some of the younger things all from good dams, are beauties, of good size, perfect in type, true color and possessing strong dairy conformation. The yearling heifers would hold their own in any company. Cherry Bank Sunrise is a son of America's champion Ayrshire bull, Barcheskie Kings Own, which was imported in 1905 by Mr. R. R. Ness, Howick, Que., who is America's greatest breeder and importer of Ayrshires. Barcheskie Kings Own has never been defeated in any show ring either in Scotland as a yearling or in America since he was a two-year-old. He also has a great number of daughters that are not only show cows of a high order but also good enough producers to qualify them with good margins for the Canadian Records of Merit. The dam of Cherry Bank Sunrise is the grand imported Pansy 5th of Carston, a cow of rich breeding and a prize winner in Scotland as well as in Canada and as a persistent producer has made a daily record of upwards of sixty pounds milk on grass alone. With this rich breeding behind him, and the quality of his get, Cherry Bank Sunrise is the right kind of a bull to head any herd where improvement is desired.

Another grandly bred bull is Springhill Prince. This grand yearling was bred by Robert Hunter & Sons, Maxwell, Ontario and was selected by the Messrs. Barrett at the great Hunter dispersion sale last June, to head their young herd and eventually take the place of Cherry Bank Sunrise. His sire is the imported Lessnessock Durward Lily, also a great Canadian winner and a champion at many shows; his dam was Blossom 3rd of Bargenock, the highest official record cow in Scotland. The dam of Springhill Prince, Susan of G. F. has a record of 11,000 pounds milk testing 3.9 per cent. fat. With such grand dairy breeding behind him, Springhill Prince will surely prove a valuable sire.

The cows offered for sale include: The fine, imported, young cow, Southwick Kate, of large size, splendid type and grand quality that will undoubtedly make a great record as a producer. She dropped her first calf on January 25, 1911 and has milked up to forty pounds testing 4.1 per cent. butter fat per day. She is due to freshen again on August 15th, in good season for the fall shows. She should have a grand future as a breeder as well as a producer.

Scottie of Stockwood also is worthy of special mention. She won second prize as three-year-old in milk and also second prize in the corresponding Canadian bred class at the Dominion Exhibition, at St. John in 1910. She is a large, strong cow and a good producer. Her dam was Lily of Kelso, first in the Canadian bred class at Ottawa and Sherbrooke in 1909. She is due to freshen in August, for the fall shows.

Two other grand, good cows are Maggie of Silver Falls and her half sister Pearl of Silver Falls. As yearlings they were respectively first prize senior and first prize junior yearlings at the 1908 St. John Exhibition. Pearl was also second prize three-year-old in the dry cow class at the 1910 Dominion Exhibition. These are a fine pair of cows. They have varied very little in their daily milk flow which tests 3.35 per cent. fat, since they calved in September and October.

Another cow that we must not forget is the richly bred three-year-old, Lady Mary Stuart. This cow won second as a two-year-old heifer at the great Ormstown Quebec Fair, held on May 24th and 25th, 1911, which was one af the greatest shows of Ayrshire cattle ever held in America. She freshened with first calf in August 1911 and her heifer calf is in the sale. She is due again to freshen in August and will make a strong three-year-old for the fall shows, when she will be a hard cow to beat.

There are a number of other splendid young cows in this sale, all heavy milkers and high testers that have only to be seen to be admired.

In yearlings there is, Hill Grove White Heather. She is by Cherry Bank Sunrise and out of Pearl of Silver Falls. She is a beauty from head to tail, about perfect in every particular and undoubtedly will make a grand producer as well as a high class show animal. She will be a great yearling for the fall shows.

Then there is Hill Grove Lily, Hill Grove Maggie and Hill Grove Dairy Queen, a bunch of yearlings from which any judge would have a hard job to pick out his choice for first place.

Another yearling that is far above the ordinary is Reda of Maplehurst. She is out of the Record of Performance herd of Victor Begg, of Ontario. She is indeed a model of Ayrshire type and beauty, and was a winner at the great Ormstown, Quebec, show in May 1911. She is about as near perfect in every way as we generally get them and will make a flyer for the fall shows.

There are also a number of heifer and bull calves, of the best breeding and that are sure, with fairly good care, to give a satisfactory account of themselves whereber their new of themselves wherever their new

The pluck and energy that the Messrs. Barrett have displayed in the upbuilding of their herd also characterizes the manner in which they are planning to conduct their sale. Teams will meet intending purchasers at Haymarket Square, St. John, and will convey them to Hill Grove Farm. The stock is already catalogued and any interested parties would do well to send for a copy right away. Luncheon will be served at 12.30 o'clock p. m., so that intending purchasers may remain on the grounds until the last animal is sold.

The Canadian Farmer--His Past, Present and Future

"This is the forest primeval. The murming pines and the hemlocks. Bearded with moss and in garments green, indistinct in the twilight. Stand like Druids of eld with voices sad and prophetic."

By W. S. Poole, St. Stephen, N. B.

MANY years ago when the cities of the Maritime Provinces, as well as Quebec and Ontario, were first settled, hardy pioneers pushed their way back into the forest (that, until then had not been touched by the axe of the woodsman) and started to cut from the virgin forest a home for the maintenance of their families. From the first, in some parts of the Country the settlers were harassed by Indians, who did not want the white man in what he thought his country. They would ambush and kill the settlers while at work in their fields, kill or take into captivity their wives and little ones, and burn their homes. Whole settlements were sometimes anninilated and their live stock driven off or killed. The farmers never knew at what time the Indians might make a raid on them, and for their protection they carried their rifles with them when going to their work in the fields. Did these men give up in the face of such discouragement? No, they organized for their defence. Soldiers from the different forts and stations assisted them in driving the Indians back, many on both sides being killed and wounded in fights, but the settlers triumphed in the end and the Indians were compelled to submit to terms of peace, and were given land on which to live and beyond which they must not stray. One after another the hardiest and most venturesome of these strong men, took up an area of woodland sufficiently large to make a good farm when cleared, leaving enough uncleared to furnish them with fuel. As the land was taken up, the settler kept pressing his way back into the almost impenetrable forest, until settlements were being cleared from ten to fifty miles from the places which are now the cities, and from whence they obtained what provisions they had to buy. The roads were simply foot paths from one farm to another. Horses were few and far between, oxen being used for the work of clearing the land. Houses were built of the logs as they were cut in the clearing process, barns were put up in the same way.

The brush was burned as the land was cleared, and the ashes being rich in potash made a valuable fertilizer. As fast as an acre or two was cleared and burned over, it was put in crop of a kind most necessary to their use at the time, grain of some kinds, potatoes and other vegetables. Their stock of cattle, sheep and swine were increased as their farms grew in productiveness. The first crops were put in among the stumps of the trees that had been cut. A hand hoe being used for this work. Only those who have tried this way of putting in a crop of grain or potatoes, have any idea of the amount of work it entails.

In marketing their produce such as butter and eggs, the women often walked with a load to the nearest market sometimes 30 miles or more away, make the trip in one day, and return home the next, with a sack of flour on her shoulder and other household necessities besides. Their butter and eggs sold for a comparatively low price, while they had to pay high prices for what they got in exchange. I may remark right here that the cities have had the fixing of prices of farm produce almost altogether from that time to the present, the farmer himself, and the law of supply, and demand, having very little to do with the prices, so far as concerned the farmer's pocket; and it was largely this condition that made of him more a beast of burden than a man with the stamp of God's recognition on him. He lost for a time in a measure, his birthright, he allowed other men to tell him what he ought to do, and to fix the prices he was to receive for his produce. He was under that yoke for a long time, and in some parts of the country he is still under it to acertain extent, but he is getting his eyes opened and the scales are beginning to drop from them.

But to return to my story: The hardships endured by our pioneer forefathers were not all confined to Indians, and hard work. Wolves and other wild animals devestated their flocks, and constant vigilance on their part was the price of safety. But the dark days of the past were almost over. Large towns and cities were springing up, railways were being built, broad farms and fertile valleys, with large flocks and herds met the gaze on every hand.

Dairymaid of Pinehurst 24656 Adv. R. 843.

Her Remarkable Record as a Dairy Cow.

Year's record as a two-year-old, 7913.50 lbs. milk; 405.51 lbs. butter fat; Year's record as a three-year-old, 14562.40 lbs. milk 860.26 lbs. butter fat. The highest public record for a three-year-old of any dairy cow, and was also the winner of the Iowa State; Dairy Cow Contest. Year's record as a four-and-one-half-year-old, 17285.30 lbs. milk 910.67 lbs. butter fat. Average of her three consecutive years' records, 13253.73 lbs. milk, and 725.48 lbs. butter fat. See page 513

Bred by Mrs. E. W. Strawbridge, Moorestown, N. J. Owned by W. W. Marsh, Waterloo, Iowa. Cut by courtesy Guerns y Breeders' Journal.

Machinery was being invented and manufactured for the tilling of the soil and the planting and harvesting of crops. The steady going old oxen were being replaced by the noble horse. The old ox cart, by the more modern truck for work, and the carriage for driving. Instruments of music were being placed in the homes, good schools were being built, education being recognized as a necessity second only to the food problem.

What progress the farmer is making! the clouds of discouragement and despair, are about to be dispelled, one is seen with a silver lining, it grows brighter and brighter, until at last the sun bursts through, the past is rolled back, and the Canadian Farmer stands triumphant, and rejoicing, in the present. A monument to his courage and heroic self sacrifice.

THE PRESENT.

The farmer has left the woods. He is out in the open now. The past has imparted to him that courage and tenacity of purpose born of long years of adversity. He is beginning to see that he has a goodly heritage in this country of vast possibilities. He is pressing forward to take advantage of the opportunities that surround him. He wants his share of the good things, which others have enjoyed for a long time, and which have been denied him. He is going to have some of them now. In fact when he looks around over this country of abounding prosperity and realizes that it is due in a large measure to his industry, he thinks he is entitled to some recognition, and to at least share in the general prosperity. The present day progressive farmer is a whole College faculty rolled into one man. He is more or less of a chemist, an entomologist, a botanist, a horticulturist, and a veterinary surgeon, he is all these combined, plus quite a lot. And he should have written after his signature the degrees: M.S. and E.M. T., the M.S. for Master of Sciences and the E. M.T. for Earned My Title.

Mr. Farmer is getting to be a power in this land of ours. You have often heard people remark of some strong animal like the horse. "If he only knew how strong he is he would not let man control him so easily." That is the way with the farmer, he has not realized his great strength until quite recently, even now he underestimates his capacity as a force in the development of Canada. Others have felt it before the farmer himself was aware of his strength. Farmers of this country put aside party politics, and unite for your advancement and progress, and all you desire you can have. To use a slang expression, "It is up to you now."

Agriculture is being recognized all over the civilized world as the pivot on which every other industry hinges. Governments are spending more on their departments of Agriculture every year. From the Atlantic to the Pacific are a chain of Experimental Farms, Agricultural Colleges, and Exhibition Buildings that are a credit to the country and of which we are justly proud. Large factories manufacturing farm machinery are working to their utmost capacity to provide the farmer with the machines and implements he demands for his up-to-date farm. Other factories are making his fences, where thousands of miles of wire are woven, ready for the farms every year. Great cold storage plants on land and sea, are being placed at his disposal, in order that his meats, fruits, and dairy products may be kept sweet and fresh, pending their delivery to the home and foreign consumer.

Why! some factories are even manufacturing automobiles for the farmer now. Motor cars for the farmer, just pause a moment in your reading until you realize the full significance ol that short sentence.

"Motor cars for the farmer." Well of all things! But it is even so. Canada has one-half a million farms. In some parts of the country where the farmers have organized for their mutual protection and advancement, they are succeeding better than they are in New Brunswick. Some of them are getting rich, and having their motor cars delivered to them direct from the factory in car load lots. There are some New Brunswick farmers who have auto's too, and still others who could have them if they wished. I wish to impress right here tne necessity of immediate and concerted action, by the farmers of New

(Continued on page 503).

Our Serial Story: "Love's Barrier."

(Continued from last issue)

CHAPTER XXI.

THE PRICE.

Helen knew that they had been under his observation for some few moments before he revealed himself to them. She had never before seen such an expression on his face. It frightened her. Her breath came quickly, but she made no attempt to speak. No excuse could be attempted even if she had wished to excuse herself. Nothing could explain the fact that she was alone with Gerald Hunt in a remote part of the Mardocks Wood, except that she had met him by appointment. Realising that, she held her peace. A sinister smile was on Hunt's lips, and it was he who spoke the first word.

"Your wife and I are renewing an old acquaintance, Mr. Secretan," he said lightly. "For some reason or another she did not give me the light of her countenance last night."

Secretan did not smile.

"My bicycle broke down just outside Iffley Carr," he said to Helen. "I shall have to walk the rest of the way home. Are you ready to come now?"

"Yes," said Helen mechanically. "I am ready now."

She did not again look at Gerald Hunt, but began to walk rapidly away down the path she had come such a short time before. Secretan dismissed Gerald Hunt with a curt nod, and left him to ruminate on the two-fold disaster of the afternoon. It was a disaster that Helen, for some stupid unfathomable reason should have elected to take up such a stand; her husband's sudden appearance on the scene complicated the whole affair. He thought on the whole, however, it would be likely to help him. Secretan would stand no nonsense, and his wife would have a bad quarter of an hour with him; so much Hunt had read in the man's eyes. He grinned rather bitterly as he turned away rolling up a cigarette paper. What fools women were! was his reflection. Why couldn't Helen let well alone? She was doing no good to anybody by her behaviour. He hoped Secretan would give it to her hot enough to make her regret her stupidity, and render her willing to temporise.

Secretan followed slowly, wheeling his machine, and presently they left the woodman's gate and were out upon the open moor. Not a soul was in sight, and the glow of the clear autumn afternoon made an immensity of space about them which at the moment helped Helen. They both stood still as if with one accord, and Secretan steadied his bicycle in a rut of the uneven road.

"What does it all mean, Helen?" he asked quietly, but with a certain harshness in his voice. "For what reason had you to pretend last night that you had never met Major Hunt before?"

"I cannot explain myself, Claude. I acted on a sudden impulse which I cannot now account for."

"Have you any explanation to offer to me now, then?"

"No, none. I knew Major Hunt in the old Colchester days, and that is all."

"It will be better, perhaps, if you give me a full confidence now, Helen. It is not a pleasant thing for me to meet you in Mardocks Wood in such circumstances. My faith in you is very great, and my love is strong, but—but——"

She made him no answer. "You can't tell me anything further, then?"

"Not to-day, Claude," she said with extreme difficulty. "Don't ask me. Trust me if you can a little longer."

A View of Centerville, Carleton County, N. B., Soon to be Reached by the St. John Valley Railway.

"May I ask you just one question? You met him by appointment, of course; when and how was that appointment made?"

"Last night, at High Ridges, when I was playing the piano."

"I see; just one more. Is he the man of whom you told me that day at Colchester?"

She hesitated just a moment. Everything seemed to be slipping from her. She had never seen this cold, hard, judicial side of her husband. It continued to terrify her, simply because she loved him and feared to fall one jot or tittle in his estimation.

"I am waiting," he said quietly. "Is he the man?"

"Yes."

He lifted the machine from the rut and began to move on, dragging it as if unconsciously behind him. So they came without another word spoken to the edge of the moor, and out upon the road which led in one direction through Midcar village, and in the other way across the open country towards High Ridges and the Court Farm.

"If you don't mind, Claude," said Helen, a little hurriedly, "I will not come home just yet. I will walk on to the Court, and take tea with Jane. They will look after you at home. It will be better if we—if we have a little time apart just now."

He did not answer her, but turned in the opposite direction, and walked away much more quickly, wheeling the machine. She glanced back once at him as she took the Court Road, but he made no sign.

When she walked on again, a sob broke from her lips. Her thoughts were a blind chaos; she must have time and opportunity to arrive at some clear understanding of where she stood. When she had, after much travail of spirit, decided where her duty lay, and had set out bravely to fulfil that duty, which was to save another woman from a life of sheer misery and disappointment, she had not taken into account her own husband's possible attitude. He had been so tender, so considerate all through, that she had taken no account of his strength, nor of the darker passions which are in every man's soul, making at once his strength and his weakness. It was going to be a far more serious thing for her than she had imagined, and just for a moment she faltered. She must tell some one. She would seek her house of defence. She was not afraid of Jane's clear eyes, nor of her quiet, convincing tongue. She would never be blinded by passion, but would be able to present as well as to take the sanest view. By what Jane said, then, she would stand or fall.

A little over a mile from the spot where she parted from her husband, a stile marked the short cut through the fields to the Court Farm. Her steps hastened as she approached the house, and her eyes visibly brightened. A few minutes more, and she would be able to lay down her burden in the house of defence. She wondered, as her feet quickly crossed the green sward of the little park, whether such a strong, beautiful friendship was not, after all, a more satisfying thing than love, which could so torture the heart that gave it a home. Love, but especially man's love, was so selfish. She had imagined her own husband different; she had set him on a pinnacle above other men, and lo, he was but common clay after all, the easy prey of the passions he so often condemned! She was not quite just to him, in these first moments of her tortured perplexity, and only regretted that she had so wholly misjudged her own power over him.

The fates seemed all unkind that afternoon. The apple-cheeked damsel who answered her knock informed her that Miss Jane had gone to Bradfield for the day, taking the little boys with her. They were not expected home till eight o'clock, when a fly was to fetch them from the station.

"But won't you come in, ma'am?" said the kindly creature. "I'm just takin' in the master's tea."

At the moment, Courtney, hearing voices, appeared at the dining-room door; Helen was very tired, and in need of refreshment, but the sight of Courtney made her hesitate. She judged from the colour of his face that he had been drinking. He came forward with much show of cordiality.

"Mrs. Secretan, yus sure coom in, and they'll hurry oop th' tea. A'ave been waitin' ever so long. Ivverything goes to sixes an' sevens when sho's out."

Helen did not quite know what to do. She had no love for Tom Courtney at any time, and considered him outside the pale, even when he was sober, but her bodily fatigue pleaded for the rest and the refreshment she so badly needed. She stepped across the threshold of the door and entered the dining-room.

"Surely this Bradfield visit was rather sudden, wasn't it? I heard nothing of it on Wednesday when she was over."

"I don't know. She doesn't tell me much," he said thickly. "She's gotten verry close of late. We beant pullin' in the same boat, worse luck, Mrs. Secretan. How's th' parson, eh?"

"Quite well, thank you," said Helen, and sat down rather gingerly on the edge of the chair nearest the door. She had had no experience of men who indulged in strong drink, and was not certain whether Courtney in his present state were desirable or even safe company. Jane could have told by a glance at him that he had indulged to the extent of a glass and a half of whisky neat. "No, the parson doan't coom verry often this way," he said, as he spread his great arms across the table, and fixed her with his somewhat glassy eyes. "Nobbut doan't coom much here. Sho frightens them aal away. Woan't allow a man a pald or a glass. A'am sick ov it."

"Why not get another housekeeper, then?" said Helen spiritedly. "We should only be too glad if you would, and let her came back to the Rectory I assure you."

"Aa doan't mind, a'am sure," said Courtney, who in his cuus invariably reverted to the broadest tongue of the West Riding. "A'ave noan use for her noo, sho hass noan use fur me. We're quits."

Helen smiled in spite of herself. At the moment the little maid fetched the tea-tray, spread with its fair white cloth, and set it down in front of Mrs. Secretan, who proceeded somewhat mechanically to pour out the tea. She made sure that the cup she filled for the master of the house was good and strong, and when he had drunk it at a gulp, and pushed his cup in for more, she thought his eyes looked steadier.

"See here, Mrs. Secretan, hast tha got a'a tha wants? Mekk thysen to whoam an' let me taak. Couldn't tha do something noo fur me wi' Miss Jane? A'am fair keen on her, A'a am."

Helen shook her head.

"I'm afraid not, Mr. Courtney. Miss Jane is a very strong-minded person. She always knows her own mind, and I don't think she would like me to interfere."

"But couldn't tha noo, just fur onst? A tell tha A'am varry keen. A nivver saa sich a woman. There beant annything she can't dew, and dew weel. Sho's a marvel, an' theer's somethink aboot her that draws a man loike. A'a could get plenty ov them to coom in as missus o' the Court Farm, but they be a'a ower keen. Miss Jane she luks at a man as A'a might luk at an insect on tha window pane, that A'ave noan use fur. That's the kind a man wants, by thoonder, it is."

Helen, munching her bread and butter, wondered how Jane had been able to endure this sort af thing for so long. It was intolerable for her to sit in the room with Courtney even for these few moments.

"A'a say, Mrs. Secretan," he said, waxing more confidential, and drawing his chair round the end of the table to be nearer to her, "A'a want to tell tha something. It was goin' a'a fair an' square 'tween Miss Jane an' me afore that auld red-faced chap coom to Mardocks."

"What old red-faced chap are you talking about?"

"Why, th' noo Squire, av coorse, Sir Anthony. He's been smellin' round here off an' on for th' last fower months, and av coorse Miss Jane, sho beein' the clever woman she is, smells a rat. She thinks to be ma leddy, see. Sho's lookin' a bit higher than bein' an honest farmer's wife."

"Oh, nonsense," said Helen hastily. "You are talking pure nonsense. Let me give you another cup of tea, then I must be going. I have a long way to walk back."

"Theer be noan hurry," he said in the same low, eager tones. "Sit tha still an' gies tha crack. It's the

God's trewth A'am tellin' tha. Sho's a deep un, Miss Jane, sho's playin' her cairds sly. But A'Ave noan done wi' they yet, and if Sir Anthony put a spoke in me wheel, A'al mebbe put a spoke in his, see, Mrs. Secretan?"

Helen rose and drew her white scarf about her shoulders. She hated to hear him speak of Jane like that; it was more than discourteous, it almost seemed like sacrilege. Jane, as Lady Brede, mistress of Mardocks; what a triumph! She almost wished there might be a germ of truth in the half-drunken farmer's words.

He insisted on accompanying her nearly half a mile down the road, begging her most of the way to put in a good word for him to Jane, and waxing almost maudlin over his own loneliness, and the bitter assaults of fate against him. She was thankful to get rid of him at last, though the unexpected diversion into a totally different scheme of things had done her more good than she knew. It had lifted her for the time being clean out of the dismal and chaotic area of her own thoughts, so that when she came to it again in her solitude, she found herself amazingly saner and stronger. Of course, it would be quite easy to smooth Claude down, to assure him that all his suspicions were unworthy. On one point, however, she was determined; she would not, unless driven to it in self-defence go into that sad and sordid story, abase herself by all its details. She had told him all that was necessary that day in the Castle Gardens at Colchester, and he wodld prove himself both ungenerous and unkind to go back upon that day.

She shivered a little, however, at the thought of what Gerald Hunt might do in the way of revenge, if she pushed her resolve to its conclusion. She knew him as an unscrupulous person who would not hesitate to destroy her happiness if she should stand in his way. That happiness had become very precious to her; she had thanked God for it on her knees.

Very gradually the beauty of the Christian life, its power over conduct, its victories over self, had stolen into her heart with unforgettable appeal. She had met men and women who, instead of choosing without hesitation the path of selfish ease and enjoyment, paused as a matter of course to consider whither God would lead them. And even when the way was flinty they did not shrink from it. The spirit of the martyrs seemed to have been wafted from the earlier days, and was still a subtle and strong essence inspiring men and women to heroic deeds in homely places. She would not fall short of these; she would be in line with that high nobility of purpose.

To save Audrey, even at cost to herself, was Helen's motive; no thought of sordid revenge had touched her. So far as she herself was concerned, she would only too gladly have allowed Gerald Hunt to go his own way. She erred, perhaps, in the method, especially in her treatment of her husband. She forgot that the priest is not immune from the weaknesses and passions of common men, nay, that in some respects he may become more easily a prey to them. His sedentary life, his long hours of study and solitude, if he be a priest worthy of the name, undoubtedly conduce to introspection, to morbid dwelling upon troublous thought. He who fights in the open breathes a purer air. Helen, so ready to sacrifice herself in her new zeal for the welfare of others, forgot that her first obligation was to her own husband. Therefore disaster, misunderstanding, bitterness, was inevitable.

She felt very tranquil when she reached the village, greeting many as she passed through it with that sweet cordiality which had won them all. She had completely usurped Jane's kingdom now; "th' passon's wife" had become not only the power behind the throne,but the power upon it.

Jimmy Bates was waiting for her at the open door, a troubled expression on his cherubic face.

"Now, p'raps master will have some tea, ma'am. I made it ever so long ago, and rang the bell, then I knocked at the study door, but he's never come out to touch it."

"Hasn't he, Jimmy? And where are the children?"

"Picnicking at the Fell, ma'am; don't you remember?" he asked in surprise.

Helen did remember then, and felt relieved. The house would be very quiet. So much the better for her, and for Claude.

She passed through the hall, and tried the study door. It was locked, and she could obtain no response to her knock. She passed through the hall again, and went round to the end of the house, where the French window opened on the croquet lawn. The westering sun lay strongly there, in a beautiful golden flood. The study caught the setting sun all the year round, and was thus in the later hours of the day always a cheerful place. The blind was drawn, however, and the window closed. A sharp fear assailed her heart then, and she tapped loudly and quickly on the pane.

"Claude, open the window at once! Don't shut yourself up. I won't have it," she called in a voice of imperious sweetness. After a long moment his hand drew up the blind with a jerk.

"I am busy," he called through the pane. "I don't wish for any tea, and please do not disturb me again."

He turned his back and left her standing on the broad step. After a moment she walked slowly away.

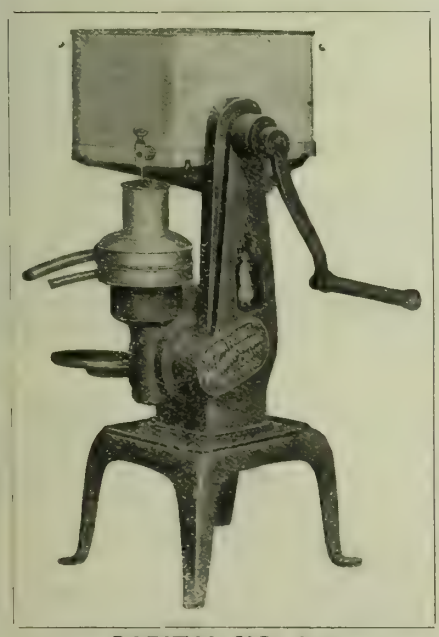
(Continued in next issue).

Don't Whine.

A recent number of 'Medical Talk' has an article on the evil physical effects of 'whining.' Complaints, says the writer, are usually made in the minor key. This monotony rasps the vocal cords, taxes nasal nerves and muscles that should not be brought into play at all in speaking, and tends to shallow, uneven breathing. The whiner, too, is almost without exception, a more or less idle, lazy person. The habit of whining itself tends to sap initiative impulse, and increases phlegmatic tendencies. Habitual whining, not healthy, vigorous fault finding where fault really exists, but the helpless, futile complaining of a narrow nature too indolent to make any effort to right the causes of complaint, has a definite deleterious physical effect upon the whole constitution. Add to this the fact that eternal fault-finding is more than likely to wear out the staunchest friendship, and take the light from the loveliest countenance, and the full effect of this insidious and prevalent habit will be better appreciated.

'Get the whine out of your voice or it will stop the development and growth of your body. It will narrow and shrink your mind. It will drive away your friends; it will make you unpopular. Quit your whining; brace up; go to work; be something; stand for something; fill your place in the universe. Instead of whining around, exciting only pity and contempt, face about and make something of yourself. Reach up to the stature of a strong, ennobling manhood, the beauty and strength of a superb womanhood. There is nothing the matter with you. Just quit your whining and go to work.—Evening Gazette.

Capital Cream Separators



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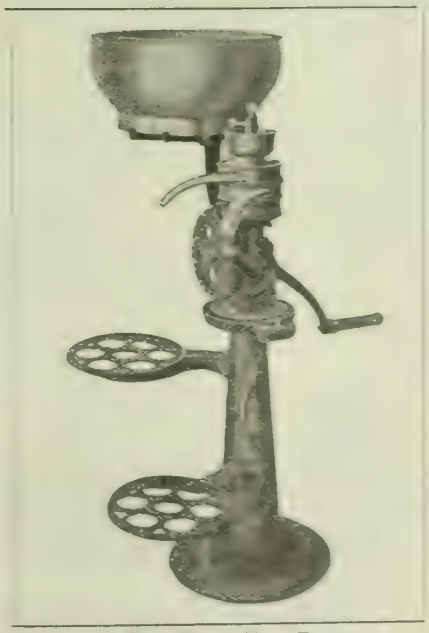

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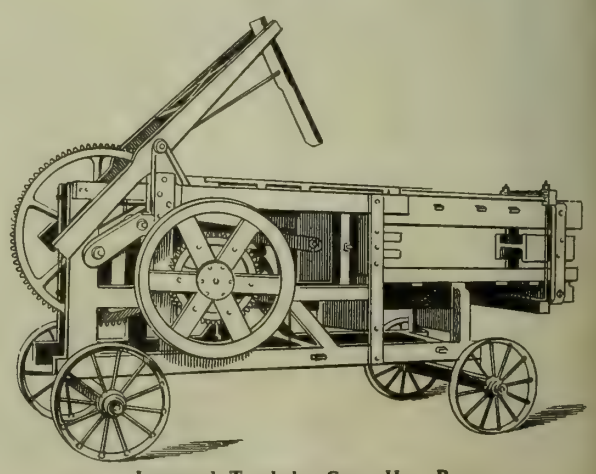

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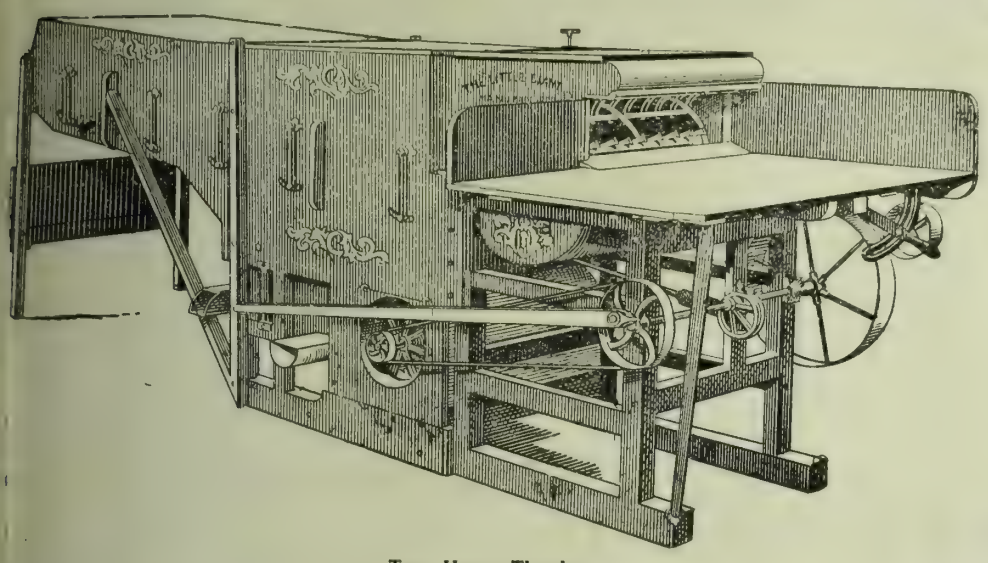
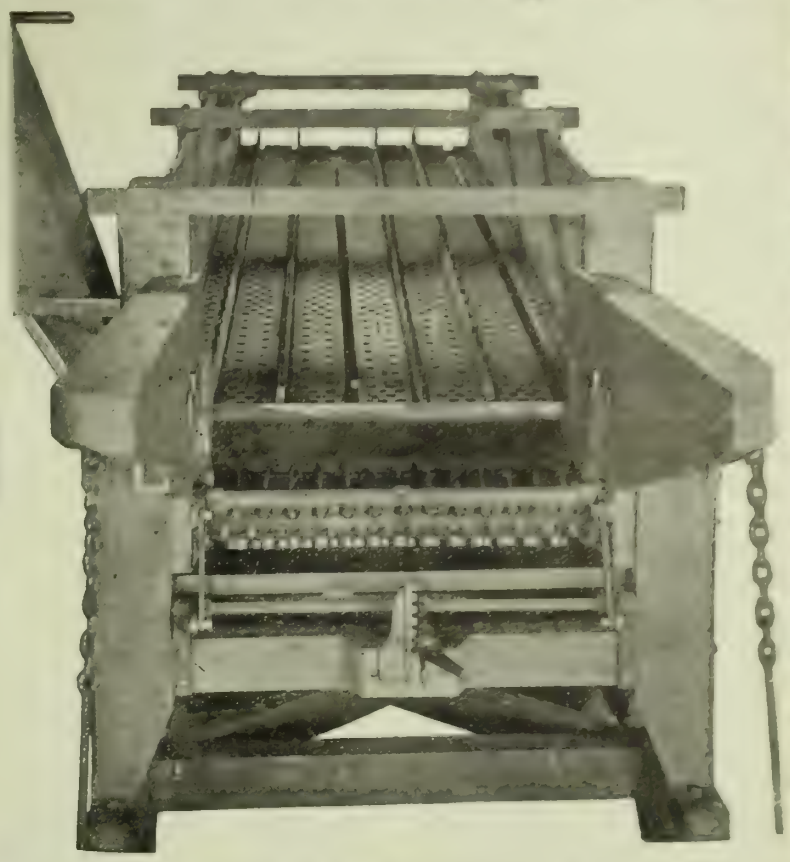


Two Horse Thresher.



Inside of New Model Undershot Thresher.

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It is made very strong throughout. The frame is of the best straight lumber, well joined and thoroughly braced, so that when the machine is running at its full capacity there is very little vibration. The grain can be taken from either side of the machine and change can be made while in operation.

It is fitted with trucks, tailings elevator and one length of straw carrier. A bagging attachment is supplied at a slight additional cost and can be used on either side, to which bags can be easily attached, provision being made for two bags.

The New Model Undershot Thresher is operated with an eight to ten horse power Engine. The main bearings are all equipped with compression grease cups. A convenient tool box is placed underneath the cylinder. thus keeping the tools that you need near at hand.

Inside of New Model Undershot

The body is 40 inches wide. The separating device consists of a number of kickers which thoroughly agitate the straw and take it direct from the cylinder.

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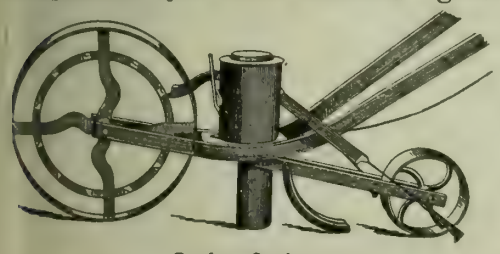

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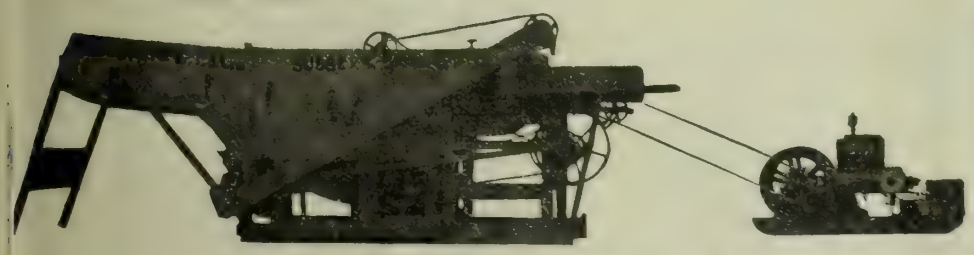

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How I Make a Profit With Sheep.

(Continued from page 481).

the beach has some risks. In severe weather ice makes quite a sea wall and there is usually some entrance which the tide sometimes closes up before the flock get back to come home again. On my second winter here I got a lesson that I have never needed again. Wondering why the flock did not turn up one night, I hurried to the beach where I last saw them and found them out in quite a rough tide. It took Herculean efforts to save the most of them, but 11 of them perished before I could get them out. To those handy to the seashore the sea-weed and dulce is quite a help towards wintering a flock of sheep, but they should not have to depend on it altogether, as they do on many of the islands around the coast.

I have not been in the habit of feeding grain to my flock, as it adds just a little too much to the expense.

In keeping a flock of sheep profitably I have always made it a point to look out that the fleece paid the expenses of wintering and it takes quite close figuring to manage it; but I cannot recall a winter when it did not do so for me. I simply count the cost of making this June grass and daisy hay, that I have mentioned, against the sheep as otherwise it would simply go to waste. I only remember one season, and that was an exceedingly dry one, last year, when the crop of June grass failed. After more than the usual efforts, I managed to secure only one ton of it. However, I did not have to look far for something just as cheap and nourishing to take its place. A neighbour had a small field of weeds that he did not think much of. Usually weeds are pretty hard to make, but this was mainly Lady's Mantle, which cures easily, and makes a nourishing feed for sheep. I got the stuff for $3.00 and it cost about another $3.00 to make it and put it in the barn and there were 3 horse loads of it. By the way the sheep look now and the way this feed is spending it will not consume all the value of their fleece to take them through this winter.

While on this subject I might mention another economy I practise towards the flock in turnip raising. It is no use to count the cost against the flock by the price per bdshel of turnips on the market. Simply count the cost of raising the turnips and raise them as economically as possible. But to lower the cost of production to the flock, I plan to raise quite a few more than I need. Then I pick out all the saleable turnips, when taking up the crop, for which I can find a ready market for table use and sometimes I sell as many as will pay most of the expense of raising.

Thus the reader will see, that it is very little more expensive to get a flock of sheep through the winter here than it is in Scotland. Our pastures get quite a rest and do better for it next summer, our mowing fields, many of them need turning over and seeding, and a patch of land that a good crop of turnips have been taken from is usually in fine condition to be seeded down again.

SHEARING THE SHEEP.

If the lambs come in May it is best if the weather is not too disagreeable, to shear some three weeks earlier; but the sheep must be handled with great care ot you may lose some lambs and perhaps sheep by it. I do all my shearing at that time of year between 9 a.m. and 2 p.m. I do not shear if the day is damp or very chilly. I like to have a little sunshine and try to get a hold of each sheep without any struggling. The sheep to be sheared is set gently on her hind quarters, and the breast and belly are first sheared; then the left side is taken to the back and around the neck, finishing off on the right side. At this season of the year I always avoid shearing close to the skin. The warmth and well being of the sheep is of more consequence than an extra half-pound of wool. All the shearing machines that I have seen are objectionable because they cut too close to the skin. I believe that what we leave one year we will get the next and it is very valuable to the sheep for the time being. I rarely have occasion to tie a sheep's legs while shearing, and when I do, it is with a soft rope made of cloth. Only 3 legs should be fastened, leaving a hind one free. As soon as each sheep is sheared, I commence basting her with grease slightly warmed. Sometimes the grease is rancid butter or lard picked up cheaply at the grocery stores. More frequently it is fish oil but I give them a good dose of it all over and if there are any ticks around, it soon ends them. After the sheep are well greased, they do not seem to mind the cold very much; but their sleeping quarters should be well bedded and dry.

THE LAMBING SEASON.

When the sheep are getting within a week or two of having their lambs, I drop turnip feeding for a while; but as soon as a sheep lands two lambs, I give her all she will consume again. A sheep with a single lamb can generally look out for her own needs. While the lambs are coming it is well to be with the flock pretty frequently. Sheep, however, should never be disturbed at this time as they are apt to be nervous, but a good shepherd can go to and fro among his sheep at all times without their paying any attention to him. If you wish to save your flock from any mishaps do not at this time allow any strange persons or dogs to come anyway near it. When a dead lamb comes I always make it a point to replace it as early as possible, if I have a twin on hand. There is no need to allow a good sheep to run idle a whole season when there are others around raising two lambs. It is a simple process to tie the skin of the dead lamb on to the live one which I wish to take its place. Then the sheep and her foster lamb want to be put in rather dark and warm quarters for a day or so till they are quite attached to each other. If the sheep has plenty of milk she soon gets fond of the lamb. I am often troubled by one sheep stealing a lamb from another, and when I come across a sheep with 3 lambs and others around having only one I always give her credit for having stollen one, and set to work to put things right again. When the lambs have all arrived it is best to dock your likliest ewe lambs as there is less risk doing it while they are young. I have never found that it paid to trouble ram lambs that are meant for the butcher, when 3 or 4 months old.

SUMMER PASTURE.

A good summer pasture for sheep and lambs should have a variety of feed of a nourishing nature, but they do not care much for tall grasses of any kind. The lambs love the clover, the dandelion and the daisy and will put on weight rapidly amidst them.

If there is a flat place in your pasture that has been flooded over and come up flush and green, it should be fenced in to keep the sheep away from them as it is a dangerous feed for sheep. There are apt to be germs in such grass that will cause liver rot for which there is not much remedy. When the sheep begin to show swellings under their jaws they are in too advanced a stage of the disease to be cured. I lost a great many sheep from this cause till I fenced off or drained the dangerous spots and limed and salted them too.

Your pasture should also have plenty of shade and some good water. Sheep, it is well known, will do with

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will tell you that it is **Not A Medicine,** but, the Only Stock Food Containing Molasses, on which you can feed your animals freely, without fear of injuring them.

We back our claims with proofs drawn only from experience.

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less water than any other stock, as they are most industrious when the fields are wet with dew.

I have had no experience raising rape or other sdmmer feed for sheep because feed is usually quite plentiful on my ranges, but it is certain that if your pastures are not good enough to make single lambs dress 40 lbs. when between 3 and 4 months old, it will pay you to have some rape for the flock to help fill their stomachs. At the price of lamb now-a-days there is nothing pays so well as to get as much weight on the carcass as possible. I know a small flock owner who had been in the habit of raising 20 or more lambs, that would dress on an average 30 lbs. each when between 3 and 4 months old. About two springs ago he put quite a patch of old mowing into rape, which made a good growth and so did the lambs when they got to it and the following August they dressed over 40 lbs. each. The work and fertilizer on his rape patch cost him $13.00 and the gain from his lambs amounted to $28.00, leaving him $15.00 clear profit, not to speak of the improvement in the land which was in fine readiness for another crop.

A great many of our run-out mowings are not poor. The grass on them have become exhausted, for when well stirred up and fertilized a little, they respond generously. Now it pays to keep them yielding something, and there is nothing so well worth yielding something for as to add to the weight of our lamb crop.

If it pays to get weight on your porker that only brings from 8 to 10 cents per pound, weight on your beef cattle for which you are glad to get 9 cents to 10 cents per pound, consider how much better it pays to get weight on your lambs that sell readily during August at 14 cents per pound.

DIPPING THE FLOCK.

By greasing the sheep well after shearing, I do not find it necessary to dip before August or September. Dipping the flock then gives them quite a protection against the maggot fly, which is at its worst from the middle of August till the 20th of September. If a little pine tar is put on the nostrils of the sheep, at the same time, they will be safe guarded from another pest, the nasal fly, which is apt to make maggots in the head of the sheep, and which annoys a flock dreadfully at this season. If a flock is going to do its best for its owner, it must not have to submit to annoyances of any kind.

MARKETING THE LAMBS.

When the lambs get over 3 months old and are well fleshed up, I am ready to sell either on foot or dressed at the market price. A good lamb during August will dress half its live weight; so if the market price is 14 or 15 cents for lamb, I want 7 or 7½ cents on foot. If I sell dressed, the skin will pay the expense of dressing and getting to market.

My pure-bred lambs, at least the likeliest are weaned towards the end of August, and have the run of a clover patch, where they are kept gaining till Fair time, when there is usually quite a little call for them. Il the local demand is poor, a small advertisement in the Maritime Farmer brings me all the customers to which my flock can cater.

The worst disadvantage in shipping to a distance, and it is one that public attention should be called to, is the high express charges. Ram lambs cannot be shipped two or three hundred miles by freight as they are too young to stand it, and if sent by express they go promptly forward, but it adds too much to the cost of the lamb and a great many owners of small flocks, who would like to have a pure-bred ram, will get along with some handier grade for this reason. It seems to me that what stock owners want is a fast freight at just

Man's Every Clothes Need

From the Hat for his head to the Shoes for his feet can be supplied here

Men's Spring Suits

$5.48, 6.48, 7.48, 8.98, 9.98, 12.48, 15.48, 16.48, 18.48

Men's Pants—98c., $1.48, 1.98, 2.38, 2.88, 3.48.

Boy's Suits—$2.48, 2.98, 3.38, 3.88, 4.38, 4.88.

Boy's Pants—48c, 68c, 88c, 98c., $1.18.

Bargains in Shoes

FOR ALL THE FAMILY

Men's Dress Shoes	- -	$1.48, 1.98, 2.48, 2.98, 3.48
Women's Dress Shoes	-	$1.48, 1.98, 2.48, 2.98
Boy's Dress Shoes	-	$1.38, 1.68, 1.88, 1.98
Girl's Dress Shoes	-	$1.18, 1.38, 1.48, 1.68
Children's Dress Shoes	-	78c., 98c., $1.18, 1.28

Men's Working Boots

93c., $1.48, 1.98, 2.48

Boy's Coarser Boots

98c., $1.18, 1.48, 1.88

Women's Low Shoes

98c., $1,18, $1.48, $1.68 $1.98, $2.18

Girl's Low Shoes

$1.18, $1.38, $1.48, $1.68

We send goods to any address in Maritime Provinces, and we pay expressage on all orders of $5.00 or more. We give valuable free gifts to Cash Buyers. Send for catalogue of Bargains in Shoes and Clothing and premium goods.

C. B. Pidgeon, Cor. Main & Bridge Sts., St. John, N.B.

double ordinary freight charges. The railways in other countries provide that stock can go promptly to its destination. All that is required is that a freight car be attached to the passenger train. Much more business could be done in the sale and exchange of stock if we had this convenience.

A GLANCE AT THE PAST.

It was many a year before I had such another big year for results as my first year here in the business. Somehow the dogs found me out and pestered my flock unmercifully for many a year. Such a large body of water alongside the sheep pasture became a great source of danger and loss. The dogs in the first instance probably set out to hunt rabbits, but coming on a flock of sheep and finding them as ready to run as the rabbits, they would follow the sheep up and perhaps single out one or two, which when hard pressed would take to the water. Some dogs would follow the sheep out till she drowned. Others would yelp around the beach preventing the sheep from landing anywhere till she would have to give up and all the time the tide would be making such a racket that I could neither hear nor assist till all was over. Sometimes a few sheep would get clear and come for home and give warning and I would get up with the gun and sometimes do a little execution.

On one occasion I went up and found two dogs had a flock of over 50 out in the tide, while they were yelping at them from the beach. So busy were the dogs that they never noticed me till I had one shot dead; the other got off in a wounded condition. Fortunately the whole flock kept together and were bunched around some high ledges, but as the tide was quite rough, I had perhaps the biggest job of my life getting them ashore. A lot of such experiences, year after year, made me sometimes sick of my business.

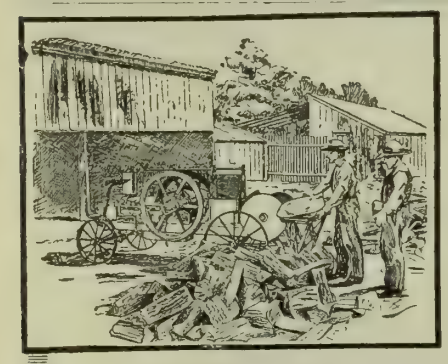
Sheep will not do so well when they are frequently disturbed. An animal of any kind kept in a nervous, excited condition is not feeling very susceptible towards putting on flesh. If you cannot get your lambs to put on flesh as they used to, the sheep business does not seem such a desirable one to be in, so I turned my attention more towards dairying for a few years. Of course I still kept looking to my flock for some returns and they never quite failed me.

To those who have been getting their living, in the easy way that I had been accustomed to get it, from a flock of sheep, dairying seems an immensely labourious business. One is kept at the constant grind, while a flock of sheep, if there are no troublesome dogs around, require very little care and attention.

MY SOUTH DOWN FLOCK.

After a few years I found myself starting a small flock of South Downs. My flock of this breed was founded with eight ewes, all recorded, and one ram bought from the late John Miller, of Markham. A little later in the fall, I got a very fine ram from Wm. Hamilton, Fredonia, N. Y. Two more yearlings the following spring, from Mr. Miller completed my foundation flock. I kept them in the fields handy to the house and did not have much loss for a few years. The increase was encouraging. There was a ready market all around for the ram lambs at a moderate price, and quite a call for ewe lambs and yearlings. Quite a few of them

(Continued on page 492).



An I H C Gasoline Engine Will Pay You Best

IF you really want your money's worth when you buy a gasoline engine, buy an I H C with plenty of power to do your work.

A gas engine that is not well designed, that is built roughly or of inferior material, is worse than none at all. It costs almost as much as a good engine to begin with, and costs much more afterward in repairs and loss of time.

Buy a reliable I H C engine and save yourself an endless amount of worry, lost time, money, and temper.

I H C Gasoline Engines

are simple, dependable, durable. The carburetor or gasoline mixer is the simplest and most effective known. Anyone can regulate it perfectly. Ignition is positive. The ignition apparatus is so simple you can understand it at a glance. The fine-grained, grey, cast iron cylinders and pistons are worked together to a perfect fit. The ground piston rings insure maximum power from the explosion.

All moving parts are perfectly balanced. The bearings are unusually large and carefully fitted. Every part is amply strong and no part is too heavy to be most efficient. In every detail, the I H C is a good engine—one you can depend upon for years to do your work when you want it done.

I H C engines are made in all styles—vertical and horizontal, portable and stationary, air and water-cooled; in sizes from 1 to 50-horse power, to operate on gas, gasoline, naphtha, distillate, kerosene or acohol. Gasoline and kerosene tractors, 12 to 45-H. P. Grinding, sawing, pumping, and spraying outfits, etc.

The I H C local agent will show you the good points of the I H C engine. Get catalogue from him, or, write the nearest branch house.

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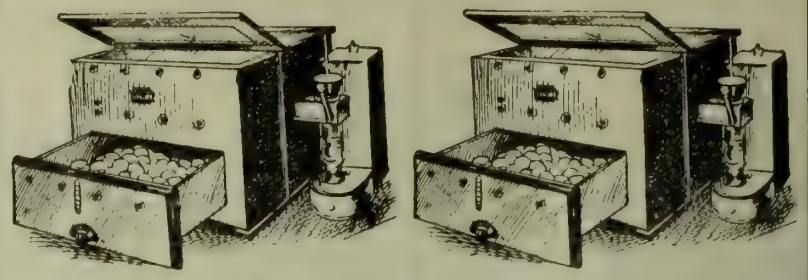
The purpose of this Bureau is to furnish free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A



TAMLIN'S

Nonpareil Hot Water Incubator

Holder of the World's Championship in hatching. Used by the Royal Families of England and all European Countries. Awarded 53 Gold Medals in hatching competitions against Incubators from all parts of the Globe. Breeders of fancy and Exhibiiion stock swear by it. Three shipments already sold this year to the Dominion Government at Ottawa. the delight of Macdonald College, St. Anne, Que. The pride of Ontario Agriculture College, Guelph, Ont. The Danish Government, the World's formost poultry country, would not be without it. Crowds gather around it at every exhibition. Two American Incubator Firms have bought one for their own private hatching, these two sales were made at Winnipeg 1910 Exhibition on condition that we did not use their names. Wherever you see it it will always go. Wherever you go you will always see it. The Nonpareil is the only Incubator in the World that the Sun never sets upon, as it is in use in every country on earth. One Manitoba Farmer says he has never been lonesome since he bought one, as the neighbors for miles have been hearing about it and coming to see it. Thermometer of the Nonpareil registers on the outside of the egg drawer, right before your eyes all the time. Not made down to a price but up to a grade standard. Lamp burns 30 days with one filling. Oil always at the same level in the lamp. Finished like a piano. Fit for the parlor of a King. Made in London, England, and will wear forty years. Canadian customers joyful with results. Different from common makes. 100 egg size will give you more grown up birds to sell in the fall than any other machine of 200 egg capacity. No cold death trap below the egg drawer called nursery in other Incubators, for the chicks to drop into immediately after hatching, where a cold is developed with great loss afterwards. Heated drawer shown in picture with open lid, directly above the egg drawer, where little chicks rest comfortably and happy until ready for the brooder. Our Patent Wick is a revelation to other Incubator Firms, burns smokeless, odorless, will not combust, gives a strong heat with a clear white light that does not flicker and consumes very little oil, sold at 10c. each to fit any Incubator, or honse lamp. The Nonpareil Incubator is the machine you will eventually buy. It will save you $5.00 every hatch over any other Incubator on the market.

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is any time in May or the first week in June, chichs hatched at this season will grow faster and lay earlier in the fall than earlier hatched chicks that have started to moult.

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a work of art, showing poultry farms the World over, giving you many new ideas, also a neat little book on Poultry ailments and their cure. These two books are free. We simply ask that you cover the cost of mailing which is 5c. in stamps, to show that you are interested, send today when you think of it to

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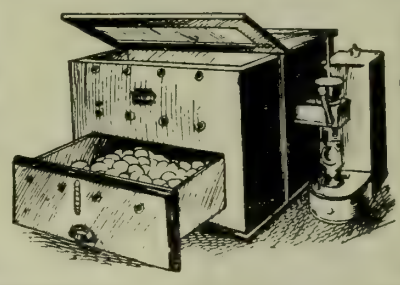
53 Gold medals awarded in hatching Competitions



53 Gold medals awarded in hatching Competitions

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FOR SALE—Our entire flock of Shropshire sheep consisting of 32 pure bred Registered ewes, none older than six years. One imported ram and one yearling ram, and 23 March lambs, some over 1 month old, all in fine fit. The entire flock will be sold at a bargain. For particulars write

R. L. HICKS,
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FOR SALE.

FOR SALE—One Shorthorn bull, one year old, registered. Color dark red. Milking strain. Fine animal. FRANK HICKS, Middle Sackville, N. B.

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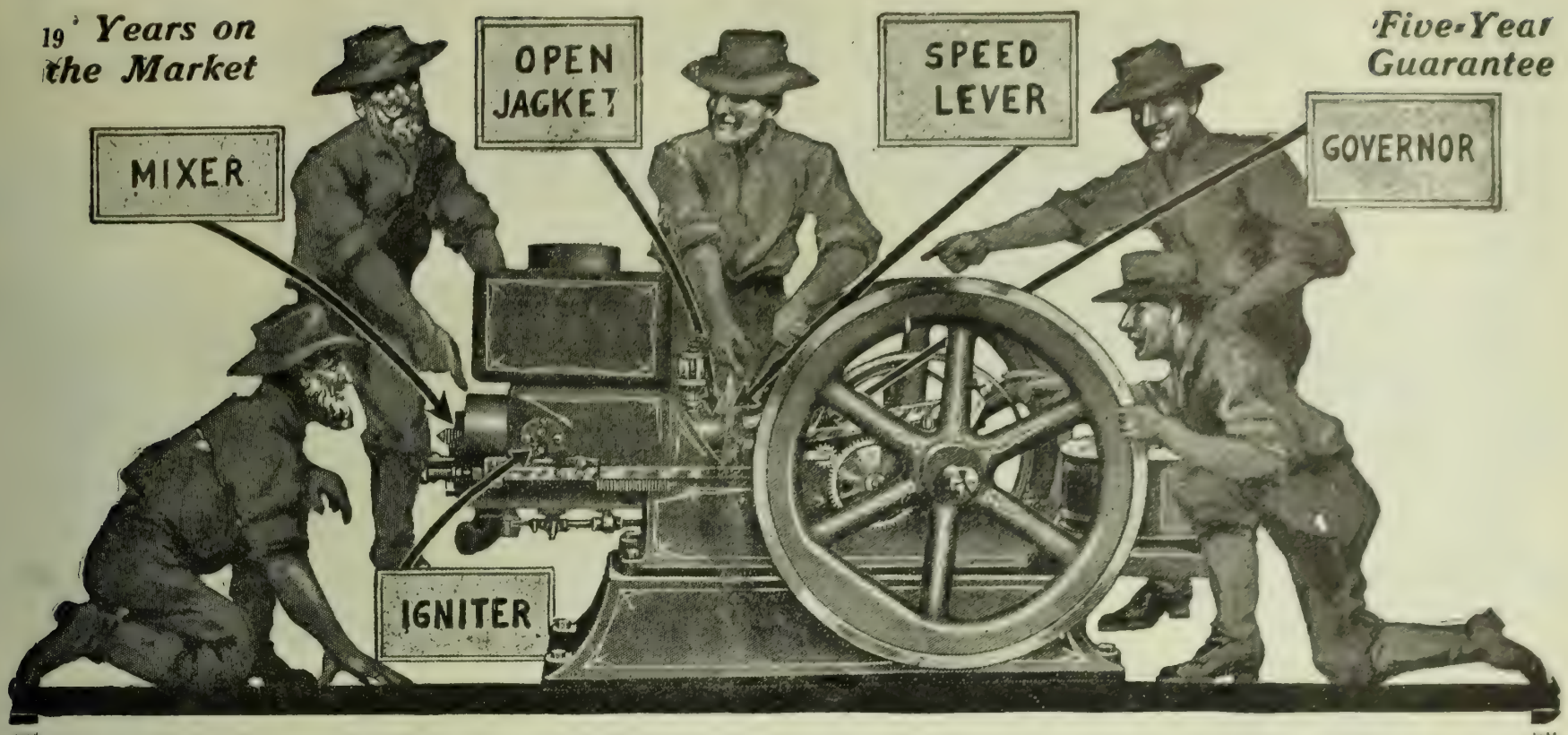
A woman to take charge of Farm House. Must understand butter making, and cooking. Good wages will be paid. In replying to advertisement state age and experience. Address "Farm," P. O. Box 139, St. John, N. B.

An Advertisement in the Maritime Farmer will sell your surplus stock.



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Superior points of their construction are the open jacket, speed lever, governor, mixer and igniter. Our catalog describes these points fully

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WATERLOO BOY ENGINES are practical and reliable. They have few working parts, are so simple that anybody can run them, extremely economical in use of fuel, develop greater horse power than rated.

WATERLOO BOY ENGINES can be started when thermometer is twenty degrees below zero nearly as easy as in July.

WATERLOO BOY ENGINES are backed up by an iron-clad five-year guarantee.

Waterloo Boy Engines are placed in your hands with an absolute five-year guarantee

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These are some of the reasons why the Waterloo Boy Engines are the best for farm use.

"It hath been said" by other manufacturers of gasoline engines that WATERLOO BOY GASOLINE ENGINES are built of poor material and are cheaply constructed, but we say unto you, that verily our competitors do not speak the truth. We challenge any manufacturer of gasoline engines to show a better grade of castings and other material than go into our engines, or to show more pains taking care in machining the important parts of these engines. From the standpoint of material and careful workmanship WATERLOO BOY GASOLINE ENGINES rank with the best.

We frankly admit that we do not put as much labor on our engines in buffing them and polishing certain parts as do some. These things are not the essential parts of a gasoline engine. Labor spent on the unessential parts of the engine does not add one whit to its strength or efficiency, but it does increase the manufacturing cost materially, and these polished parts of a gasoline engine soon get rusty, when exposed to the action of the weather.

Our supreme aim is to produce engines of the greatest efficiency and durability at the least manufacturing cost.

WATERLOO BOY GASOLINE ENGINES are lighter in weight than any other gasoline engines manufactured.

In reducing the weight we have not reduced the strength of the engines.

Unnecessary iron is a dead loss. It adds to the manufacturing cost, it increases freight, it makes more weight to haul around and to handle.

We build, not for show, but for service. The WATERLOO BOY is not a city dude. He is a plain, honest, every day sort of a fellow.

You can depend upon him day in and day out, in sunshine or storm, in heat or cold, year in and year out. Just turn on the switch, give the flywheels a turn or two and he is ready for work. He never shirks, but is always ready and willing to help you.

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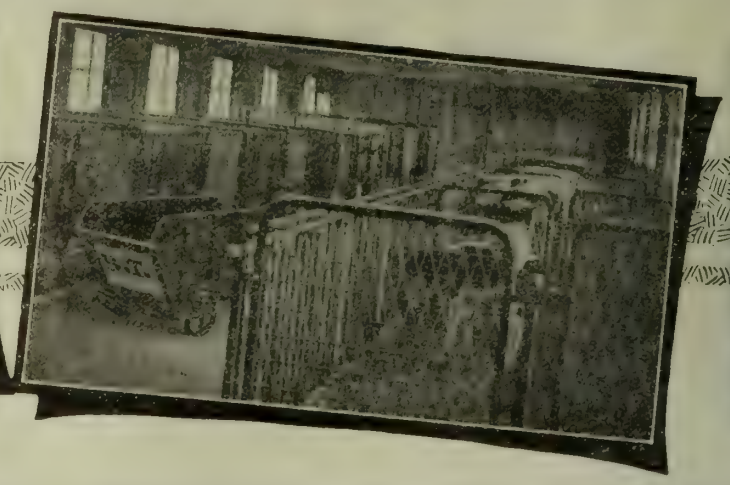
Service and B.T. Sa



WHAT THE PICTURES REPRESENT

A few interior and outside views of barns that are equipped the B. T. way are shown in these pictures. Barns equipped this way reduce stable work to a minimum. They are bright and attractive in appearance. It is no trouble to keep them in a clean sanitary condition.

First we show a long row of cow stalls. Next a row of calf pens, then a barn with litter carriers, another interior view showing stalls (heads out), and, lastly, an outside view of what we consider is a model dairy barn.

FREE BARN PLAN SERVICE

With B. T. Sanitary Barn Equipment you get something besides your equipment. To get the best results from your cows your barn must be properly planned, properly ventilated and constructed up to a certain standard. Good equipment alone will do it. We want our customers to be thoroughly satified with their stables wherever B. T. Stalls are used. For this reason we have gotten out our book, "How to build a Dairy Barn." Fill out the coupon, and you will get it free.

The information and plans shown in this book, if supplied by any competent architect would cost you a large amount, but we go further than supplying general plans and information. We will adapt the plan to meet your specific requirements' no matter what they may be. Whether you are building remodeling or just making a few changes, whether your barn be large or small, the special knowledge of barn-designing and the wide experience of Beatty Bros. is at your service.

YOU dairymen who want increase profits from your milk production must look carefully to the arrangement and equipment of your barn. The inside of your barn is of vital importance. Through the equipment alone you may gain or lose hundreds of dollars each year. Dairy farming is like any manufacturing business. Your farm and your stock represent you plant. As in any other business, one most important means of increasing profits is the cutting down of expenses. In farming this may be accomplished by the correct planing of your barn, together with the use of B.T. Sanitary Barn Equipment. Correct planning of your barn and proper arrangement inside will secure you greater storage room for grain and feed without extra cost. Your barn will be so arranged that your grain and feed can qe housed with the least possible labor. It will enable you to care for more cows in the same sized barn. It will save you and your men time and labor every day by cutting in half the work of feeding and watering stock, in cleaning the stable, and in doing other barn work. It will protect your stock against disease, worry and accident, and many other advantages will be brought to light when you investigate every feature thoroughly—read on and see.

B.T. Sanitary B

DANGER OF FIRE LESSENED

A stable equipped with steel stalls and a cement floor is in very much less danger of taking fire than a stable equipped with wood stalls and a wood floor. In case of fire. cows tied with B.T. Stanchions can be released in buarter the time necessary to release them from a chain tie. Steel stalls and a cement floor offer absolutely no place for harboring vermin.

DURABILITY IS IMPORTANT

A stable equipped as above is practically indestructible. You are not troubled year after year with replacing and repairing. Should it ever be necessary to remove the barn, the steel stalls can be knocked out from the cement floor and set up in any other barn without any loss.

Many of the finest dairy barns have been built according to the plans we have submitted, and equipped throughout with B.T. Equipment.

No matter how many cows you have, no matter whether you are building or remodelling your barn, the saving effected by B.T. Sanitary Barn Equipment will pay for itself in one year's time. In addition, the expert counsel and advice we can give you, due to our wide experience in skill and planning, may save you a large amount of money on the original cost of building. Just by an inspection of plans, we have frequently suggested changes that resulted in the saving of hundreds of dollars, besides making marked improvements.

We have large completed blue prints with floor plans, sides and end elevations, and measurements for a great many different sizes and styles of barns. They embrace the most improved methods of construction, and we can furnish them with complete specifications and bill of material.

THE GOVERNMENT USES B.T. EQUIPMENT

During last summer a great number of Government barns were built in different parts of Canada. In every instance B.T. Equipment was used throughout. Careful investigation was made in every case by the Government authorities before orders were placed. Price was no object. In fact, in at least two cases other firms offered their equipment free, but in every case the full price was paid for B.T. Equipment.

B.T. Equipment must have merit, as these orders given below show, which are just a few of the large barns which we equipped last year. These barns put in B.T. Equipment throughout:

Three barns for the Dominion Government, one at Agassiz, B. C., one at Charlottetown, P; E. I., and one at Cape Rouge, Que.

Two barns for the Ontario Government, one barn at Monteith, New Ontario, and a very large barn at the new central Prison Farm at Guelph.

The large barn for the Saskatchewan University and Agricultural College at Saskatoon.

Possibly the largest and best dairy barn in Canada for the British Columbia Government Asylum Farm at New Westminister.

Seven dairy and horse barns for the Alberta Government for their seven experimental farms which they are establishing in different parts of Alberta, and also a large barn for their Asylum Farm at Ponoka.

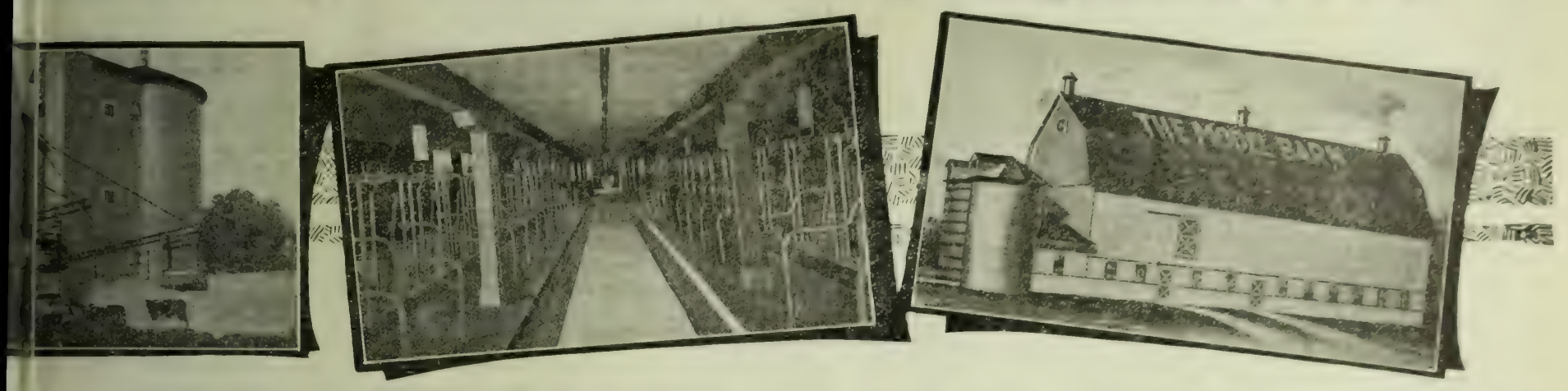
Besides these Government barns, we equipped this last year many very large dairy barns. Among others a barn with 100 steel stalls for the Edmonton Dairy Company, two barns with 160 stalls for the Price Dairy Co., of Toronto, one barn with 120 stalls for the City Dairy Co., of Toronto, a barn with 125 stalls for the Moose Jaw Dairy Co., a large barn for Hayes Bros., of Carstairs, to supply Calgary with certified milk a large barn for the Homewood Sanitarium of Guelph. Also stables on the Farmer's Advocate farm "Weldwood."

You will notice that this list includes many of the largest and best dairymen in Canada. These men won't monkey with equipment that gives trouble. Its got to be right. B.T. Equipment is right.

Our Broad Guarantee

Every feature of B.T. Sanitary Barn Equipment is thoroughly tested in actual use before it is placed on the market. When you buy B.T. Equipment you know that you are not being experimented on, and we know that our equipment in every case will give satisfactory service, therefore, we are able to give an unqualified guarantee with all our equipment. You take no chances in buying B.T. Equipment. It is absolutely guaranteed to give satisfactory service in your barn.

...te Our Free Barn Plan
...nitary Barn Equipment



NOTE THE EXCLUSIVE FEATURES ON B.T. STALLS

There are many outstanding features in which B.T. Stalls excel all others. Some of them are illustrated in the pictures at the bottom of this advertisement. The saving on feed and labor, made possible by the adopting of these features, will pay for the equipment in a year's time.

And in addition, the perfect freedom and comfort given the cows and the greater cleanliness made possible will increase the yield and improve the quality of the milk.

No other investment will pay as big dividends as B.T. Barn Equipment. No other investment will give you greater pleasure than seeing your stable equipped with a bright, sanitary and up-to-date steel stall equipment.

When you install B.T. Barn Equipment you will note many advantages and convenience and a greater protection for your cows. You will see how this equipment lessens abortion, and does away with the principal causes of big knees, ruined udders and many other injuries. You will see how the individual mangers prevent over-feeding and under-feeding.

Read on learn some of the features that mean dollars and cents to you, and comfort and protection for your cows. And, remember, only on B.T. Barn Equipment can you get these features, because they are patented and used exclusively by us.

...Barn Equipment

Double Curved Stall Partition

The B.T. Double Curve Stall Partition affords protection for the cow which you cannot get with a single curved partition. The cow, when lying down, Is protected from her neighbor stepping on her udder and ruining her. The downward curve permits the cow to turn her head in the stall and walk out in the natural way. They are very neat in appearance.

Alignment Device

This, perhaps, the greatest improvement on stanchions ever brought out. It makes possible clean cows, because all the cows, large, small or any size, are aligned up evenly on the gutter. By means of this device the stanchion can be moved back or forward in the stall a distance of twelve inches. This device is patented and used only by us.

Sure Stop Swinging Posts

This device provides a rigid point between the rigid arm of the stanchion and the stall partition when the cow is coming into the stall making it impossible for her to put her head anywhere but in the stanchion. When the cow is in the stanchion, this post may be swung back out of the way, giving the cow perfect freedom.

Stanchion Rates

The stanchion, when open, is held in place by a small clip on the partition. This clip keeps the stanchion always in place, and is very easy to drop the stanchion into, compared to the ordinary little clips and trappings used for holding the stanchion in place while open, and the beauty about it is that it leaves the stanchion open the maximum width, so that it stands from 6 inches to one foot wider open than any other stanchion. With this device, combined with the Sure Stop Post, there is never any trouble getting the cows into B.T. Stalls.

Self-Cleaning Manger

Our Self-Cleaning Manger is made without a bottom—the concave trough built into the cement serves that purpose. The manger is easily raised. All refuse is left in the smooth continuous trough, which when swept out, can be used for watering in. This saves the cost of water bowls. You have a good capacious manger that insures you against waste of feed. You also have an individual feeding place for each cow, so that she can be fed according to her needs.

Other Important Features

We would like to tell you about the B.T. Stall clamp. The B.T. Stanchion Clevice. which gives us our high level curl. The B.T. Stanchion with its strong features. The B.T. Calf Pens. The B.T. Bull Pens, all containing special features which, owing to our patents, cannot be used by other firms, but the space in this ad. will not permit. Let us send you our catalogue. It will cost you nothing, and you will then be able to see for yourself, that what we claim for B.T. Equipment is true.

You will then see that all the large dairymen who buy nothing but B.T. Equipment, and also the Dominion and several Provincial Governments, who always use it and have good reason for their choice.

Fill out the coupon, and we will send you our catalogue, giving you full information, and also our book, "How to Build a Dairy Barn," free.

WRITE TO-DAY

Beatty Bros.

Fergus, Ontario.

The B.T. Litter Carrier

The best way to keep the dairy stable clean is by means of a good litter carrier. They are water-tight. There is no drip or dirt spilled along the passage-way. On a level overhead track it is easy to handle large loads of manure and no matter what condition the yard may be in, the manure can be placed a good distance from the barn. Or, if desired, with just the one handling dumped directly into a wagon or sleigh for hauling to the field.

The B.T. Litter Carrier is well known. More of them are sold in Canada each year **than all other makes combined twice over.** They are built strong enough to give satisfactory service year after year and have many features of advantage not found on other carriers. We show our faith in the B.T. Litter Carrier by guaranteeing it absolutely for five years. Ask your neighbor who is using one about it.

B.T. Hay Carriers

No storage barn is complete without a hay carrier outfit. In fact, today, no one thinks of building a barn without putting one in. The B.T. Hay Carrier Line comprises some 16 different styles of Horse Fork and Sling Outfits. They are in use everywhere. Our catalogue will give you full information about them.

Don't think that B.T. Equipment is too expensive for you. B.T. Stalls cost no more than other makes of steel stalls, and a good steel stall outfit can be installed in your barn as cheaply as the old style wood stall.

Why not have the best? By filling out the coupon you will know what it will cost you to fit out your barn with B.T. Equipment.

BEATTY BROS.

Fergus, 1021 **Ontario**

Please send me free, as per offer, your book, "How to Build a Dairy Barn," and full information about B.T. Sanitary Barn Equipment.

How many cows have you?.....

Are you remodelling or building a new barn?

If so, when?

Will you need a Litter Carrier?.....

Will you need a Hay Carrier?

Name

Post Office .....

Province

By filling out carefully the coupon we will know what books and information to send you.

How I Make a Profit With Sheep.

(Continued from page 490).

were shipped to fill orders from the West Indies and elsewhere at good prices. The crossing of my grade Shropshire flock with South Down rams gave me some handsome lambs. It was not uncommon to get single lambs at 3½ months old that would dress 12 pounds and over per quarter.

To illustrate the rapidity with which these grade lambs put on weight and also to show how I could get more money out of some of my pastures by a flock of sheep than by good Jersey cows, I am in a position to give you the following figures: In May, 1905, I put 12 ewes with 16 grade South Down lambs on my lake shore pasture. They had been sheared a few weeks earlier and, as usual with me, their fleeces more than paid for their wintering. They owed me nothing, consequently what I made out of them would be clear profit. For the three previous years this pasture had been used for cows during the months of June, July and August, later than August it would dry the cows up. It was not a good pasture for cows as there were too many weeds, such as Black Dandelion, Wild Garlie, Lady's Mantle and Yarrow which tainted the butter some during the summer months. During the summer of 1902, three cows yielded 271 lbs. of butter. In 1903, the same cows only yielded 259 lbs. and in 1904, they gave 264 lbs. This slightly tainted butter only brought 18 cents per pound, so that the average yield for the three years was $47.64. The skim milk would not half pay for the labour of milking the cows and making and marketing the butter. I marketed the above mentioned 16 lambs in August, 1905. They were very plump and their live weight was 1282 lbs. which at 7 cents per pound came to $89.74. This was an amazing sum to take out of a small pasture, of 18 acres, nearly half of which is bog and bush and the most of it very rocky. Not more than an acre had ever been cultivated and was then in a run-out condition. If I had tried to sell this pasture no one would have given me a hundred dollars for it. For some years when short of sheep stock I had rented it to pasture a yoke of oxen and got $10.00 by the season for it. It had also been used as a colt pasture bringing in an equal amount. I tried the same flock of sheep on it another season and noted the results. They stayed in this pasture till December when they were put with the ram. They were wintered as usual on hay and roots, sheared in April and their fleeces again more than paid for their care and keep. They were put back in the same pasture on the 16th of May, 1906 and with them they had this season 17 lambs. Nothing troubled them, they were seen to frequently, and occasionally a load of seaweed was spread around the pasture which was much appreciated. This August, 1906, I dressed the 17 lambs myself, and sold 651 pounds mutton at 15 cents per pound, making $97.65. I would like to have some of the Maritime Farmer readers show me an other kind of stock that could be put into a small pasture like this and bring out of it as much or more,

INTERNATIONAL

3 FEEDS FOR ONE CENT

WE POSITIVELY GUARANTEE

that a 25-pound pail of

INTERNATIONAL STOCK FOOD

will save you $7.00 worth of Corn or Oats

Because it promotes digestion and assimilation and enables you to cut down the grain ration 15% to 25% and still get better results. The saving of grain represents a saving of good hard cash to you.

WE WANT YOU TO FEED 100 LBS. AT OUR RISK

¶ It will not cost you a cent if you are not satisfied. See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16 x 22, of our three champion stallions.

Read what James L. Hill, of Fredericton Junction, P.E.I., wrote us on February 15th:

I think International Stock Food is a great thing for stock. We wouldn't be without it for anything. It keeps our horses in fine condition; in fact, every person admires them, they have such a glossy skin and always look well. We give it to young calves and pigs and find it agrees with them splendidly, and the Poultry Food shows itself in a very short time. Our hens have been laying most of the winter. I cannot say too much for your food for all kinds of animals.

INTERNATIONAL STOCK FOOD CO., Limited - - - TORONTO

Sunny Side Stock Farm.

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age. One Guernsey bull calf.

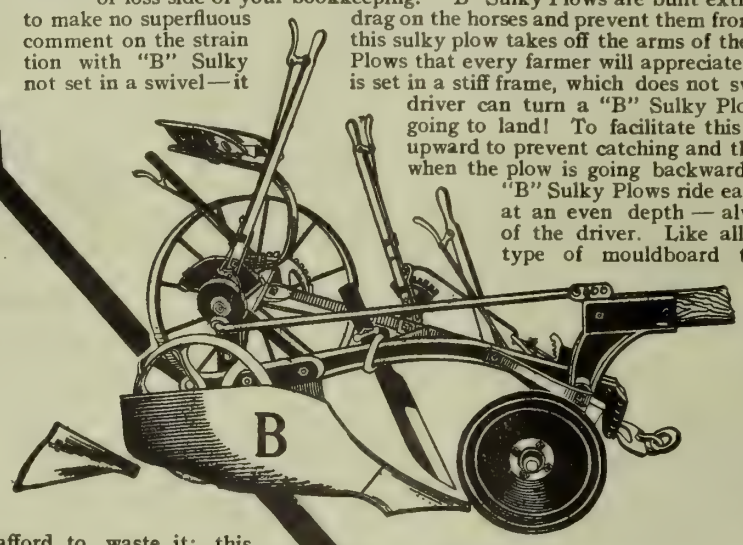
In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

Light Weight Combined With Strength Makes This Plow Stand For Profit On The Farm

WEIGHT and strength are the two essentials in a sulky plow—the strength is needed to stand the wear and tear, of course, and on the weight depends to a large extent whether the plow is to stand on the profit or loss side of your bookkeeping. "B" Sulky Plows are built extra strong for heavy work and still light enough to make no superfluous drag on the horses and prevent them from covering the ground they should in a day. To comment on the strain this sulky plow takes off the arms of the driver is unnecessary. One point in connection with "B" Sulky Plows that every farmer will appreciate is the action of the rear wheel. This wheel is not set in a swivel—it is set in a stiff frame, which does not swing to right or left. The result is that the driver can turn a "B" Sulky Plow around backward—and know where he is going to land! To facilitate this back-up, the rear of the sole is also rounded upward to prevent catching and the colter also tilts automatically on the beam when the plow is going backward. It does not catch in roots and stones.

"B" Sulky Plows ride easily, cut evenly, turn a good furrow, and work at an even depth — always. They are always under full control of the driver. Like all "B" Plows, they are fitted with the exact type of mouldboard to suit the soil where to be used. This mouldboard, of course, is made from soft-centre steel. "B" Sulky Plows enable you to get more work out of your horses without driving them to anything like the exhaustion the ordinary plow demands—even in tough, sticky soils—they will scour anywhere—wet ands have no terrors for "B" Sulky Plows. Why not let a "B" Sulky Plow, backed by the Belanger reputation, save money, time and horseflesh for you—why not buy your plow on the basis that you are going to make it earn enough extra to pay for itself?



This is the light draft "B" Sulky Plow

If your dealer does not sell "B" Plows, write us and we'll tell you where you can see them.

FILL OUT THE COUPON GET THE BOOK FREE

THIS book is an authoritative work on the preparation of the ideal seed-bed,—the foundation of good crops. To buy this book would cost you a dollar, but if you are really interested and will fill out the coupon as an evidence of good faith, we will send you one copy of the complete volume FREE. The story is told in three chapters, — "Soils and Fertilizer," "Plowing and Plows," and "Seeds and Seeding." Each chapter deals with its subject fully, tells the whole story and tells it in such detail that its genuine, practical value to the active farmer is unquestioned.

Your invested capital is your land—your great asset—and you cannot afford to waste it; this book tells you about the most modern methods of conservation — facts which you owe it to yourself to know.

Fill out the coupon—send it to-day—NOW.

A·BELANGER
Established since 1867
at MONTMAGNY Que

FREE $1.00 Book Coupon

A. BELANGER, MONTMAGNY, QUE. 100

Gentlemen:—

I operate a farm of..... ..... Number of Acres

acres of..... ..... Type of Soil soil.

Please send me "How to Increase the Acre's Yield," FREE.

Name.....

Address..... Prov.....

4

in one season, than the whole pasture would bring if put on the market. If there were lots of little flocks like this spread over these Maritime Provinces, what a source of wealth and well being they would be.

Who would bother raising chickens when lambs can be raised at one-quarter the cost, and brings about as much in our summer markets; or who would raise pork when lamb can be raised so much cheaper and bring on the market fully one-half more?

While talking with a farmer recently, who used to keep a small flock of sheep but who had gone out of the business because the dogs had made several raids on his flock, he admitted that he was not doing quite so well without them and that he was only waiting for the dog nuisance to be regulated so he could start again. Said he, "the constant worry and risk from dogs made me nervous, I could not sleep nights for thinking about them."

That dogs are the greatest draw-back towards doing a successful sheep business is generally admitted. I would not like to state fully just how much of a draw-back they have been to me during the past 25 years in case it might deter others, unnecessarily, from venturing into the business; for it must be admitted that the nuisance is much worse in some sections than in others. Before closing this article I must state how they wound up my flock of recorded South Downs. One dark night towards the end of August, 1908, I had been keeping them on my sea-shore pasture, for the previous few years as they had grown too numerous for the fields and I had lost quite a few of them from dogs the previous year. During June and July 1908 some of them began to go again in the old way, chased out into the water and drowned. As the pure-breds were more valuable than the grades, I put them into my lake shore pasture and turned the grades on to the sea-shore. The lake-shore pasture had always been pretty safe from dogs prior to this, because it was quite handy and partly in view. I find dogs always like to get out of sight before they commence to do do much damage. One night, when the wind was blowing strongly, two dogs came into this lake-shore pasture. The sheep were all right at dark, but at daybreak next morning I found them all dead, mangled or drowned in the lake. Not one was saved. I had now only my small flock of grades left. As soon as some of the worst of the dogs were destroyed, I began to buy back a few of my South Downs where I had been selling them in previous years.

So my flock to start the winter of 1908 was only 22 head. I had a liberal supply of feed, of the usual inexpensive but nourishing quality, and they reached the following spring in fine shape. Their fleeces as usual paid well for winter feed and care and they brought forward 29 lambs, anxious to pile on weight for me out of my very much under stocked pastures. I saved 5 ewe lambs to add to the flock. The remaining 24 lambs dressed 1003 pounds, which, at 14 cents per pound realized $140.42. Add $17.50 prize money to this and $25.00 for the 5 ewe lambs added to stock, and it shows $183.00 made out of a flock of 22 sheep in 1909.

My returns from 1910 were even better, but in the fall, the dogs reduced my flock again to some 26 head. I made some reduction in their numbers also, for by the end of the year I had a compost pile to which dead dogs largely contributed that spread over nearly a quarter of an acre of turnip ground next spring.

The summer of 1911 was very dry and the sheep wandered further out of sight than usual. The dogs did not trodble the flock much till July but then quite a few of them disappeared, while I was busy haymaking. Partly owing to the dry season and partly from being frequently disturbed by dogs, the lambs were not so plump and very few of them dressed over 36 lbs. each. The price, however, was good and the receipts from the flock amounted to $167.00, including premiums at the County Fair. The most discouraging circumstance is, that I cannot get my flock to increase. The dogs are bound to keep the numbers down. I have sold on some of my outlying pastures, but still what I yet own, should keep 3 times the number of sheep I have on hand. Yet, until our various authorities can regulate the dog nuisance somewhat, I see little prospect of increasing my flock.

The Nova Scotia Agricultural Report.

The Annual Report of the Secretary for Agriculture for the Province of Nova Scotia has been issued. It contains a review of the work of the various departments of the Agricultural College, including a report of the Experiments carried on with field crops, fertilizers, live stock, etc., as well as a statement of the number of students attending and the character of the work done by the College students during the year. One of the most striking paragraphs of this part of the Report is that which deals with Dairying in the Province of Nova Scotia, in which it is shown that, despite the drought of 1911, 5 per cent. more butter was manufactured in the Creameries than in the previous year.

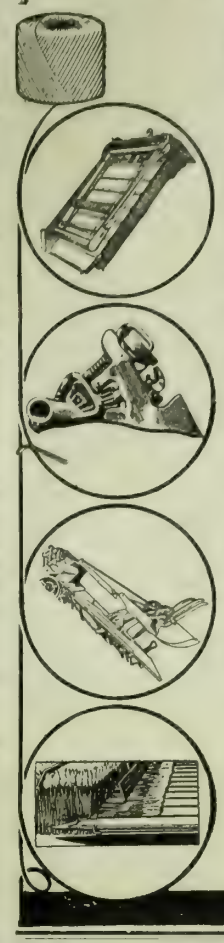
The Report also contains an outline of the work connected with the various Agricultural Societies and Associations in the Province of Nova Scotia and a most flourishing condition of affairs is indicated.

In accord with the practice established five years ago, of introducing into the Annual Report a series of popular articles on topical subjects, the present Report contains a series of very interesting and valuable articles on Horse Breeding in Nova Scotia. These articles deal with almost every phase of the Horse Breeding business, including a description of the various breeds, articles by horsemen on the various phases of the management of horses, and a practical discussion of the methods of treatment of the ordinary diseases of horses.

The whole Report is well illustrated and will prove a most interesting and valuable document to the farmers of Nova Scotia. It is now available for distribution and will be sent free to those who make application for it.—M. Cumming.

Service Table.

Date Served April	Mare, 336 Days	Cwo, 280 Days	Ewe and Goat, 147 Days	Sow, 112 Days
	Date Due.			
	MAR.	JAN	AUG.	JULY
1	2	6	27	21
2	3	7	28	22
3	4	8	29	23
4	5	9	30	24
5	6	10	31	25
			SEPT.	
6	7	11	1	26
7	8	12	2	27
8	9	13	3	28
9	10	14	4	29
10	11	15	5	30
11	12	16	6	31
				AUG
12	13	17	7	1
13	14	18	8	2
14	15	19	9	3
15	16	20	10	4
16	17	21	11	5
17	18	22	12	6
18	19	23	13	7
19	20	24	14	8
20	21	25	15	9
21	22	26	16	10
22	23	27	17	11
23	24	28	18	12
24	25	29	19	13
25	26	30	20	14
26	27	31	21	15
		FEB.		
27	28	1	22	16
28	29	2	23	17
29	30	3	24	18
30	31	4	25	19



Buy A McCormick Binder This Year

GO to the McCormick agent in your town, before the harvest season begins, and have him set up a binder for you to inspect. Buying a McCormick binder is the easiest way yet devised for saying good-by forever to all harvesting and haying troubles in the field. Seventy-five years of invention and experimentation go into this binder. The hardness or softness of every shaft and bolt in McCormick machines is a matter of accurate knowledge. Making a good binder is a matter of many kinds of knowledge and experience, and a good harvest is a matter of a good binder.

Tell the local agent you want a binder made for your province, designed especially for upper and lower Canada, and he will show you the 1912 McCormick, made at Hamilton, Ontario. Ask him to explain the reel adjustment to you. It alone is enough to establish a reputation for any machine. It can be adjusted high, low, forward, or backward to save grain under all conditions, whether it is short, tall, standing, down, or tangled. This reel eliminates the possibility of waste.

Have the local agent show you a McCormick binder, mower, rake, tedder, or hay loader, or, write the nearest branch house for a McCormick catalogue.

Eastern Canadian Branches

International Harvester Company of America
(Incorporated)

At Hamilton, Ont. — London, Ont. — Montreal, P. Q.
Ottawa, Ont. — St. John, N. B. — Quebec, P. Q.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

McCormick

Raise The Crop That Never Fails

Just sit down and write us for full particulars of the best business proposition you are likely to hear this year. Let us tell you, in plain words, how very little money will start you in the profitable business of poultry-raising The Peerless Way. Let us show you why it will pay you well to adopt the Peerless methods, to make use of the advice and aid of the Peerless Board of Experts—pay you well, and profit you speedily.

One PEERLESS user will sell 200-000 fowl this year

Scores and hundreds—twenty thousand people in fact,—all over Canada, are following The Peerless Way to their profit. More than eleven million dollars' worth of eggs were sold in Canada last year. Yet with all this output prices stay high for every sort of good poultry and eggs. The market is far bigger than the present product—and it grows bigger day by day. Poultry-raising is the best business for any farmer, any farmer's child. Pays better for the time and money invested. Profit is surer. Isn't overcrowded—and never will be.

Poultry ought to be a side-line on every farm —

The poultry-crop is the one crop that never fails. Every farmer certainly ought to make poultry a side line, at least—it is a certain profit for him, no matter how bad a year he may have with his other crops. And the Peerless customer need feel no worry about finding a market for all he wants to sell in the way of poultry or eggs. We look after that for him. We find him a buyer who pays the best market prices in spot cash.

Your credit with us makes it very easy to start —

Your credit is perfectly good with us. You can equip yourself fully for successful poultry-raising, and you don't need ready money to do it. We trust you; and we will make the terms so easy for you that you will never feel the outlay. In fact a Peerless Outfit pays for itself and quickly, too.

Within a month or so from this very day, you could have a poultry-for-profit business well under way.

Write and ask us to prove to you that success with poultry, The Peerless Way, is possible for anybody of good sense in any part of Canada. Get the facts about it. They are facts that will probably be new to you. Send for them—it's for your own benefit we suggest that you send for them at once, without another day's delay. Just use a post card, if you haven't a stamp handy—put your name and address on it—say 'Show me'—that's all that's necessary.

LEE Manufacturing Co., Ltd.
118 Pembroke Avenue
PEMBROKE ONTARIO, CANADA

PEERLESS users get valuable help and service free—

Besides finding a buyer for our customers' poultry-products, (which we do free of any cost to you) our Board of Experts stands ready always to advise, counsel, help with practical suggestions free,—entirely so, to Peerless users. These practical men have developed the greatest poultry business in Canada—The Poultry Yards of Canada, Limited. Long experimenting in the hatcheries of this great plant brought the Peerless to perfection and proved it as the one successful incubator for use in every section of the Dominion.

More than 20,000 PEERLESS users are successful —

Poultry-raising with the difficulties taken out of it—that is the reason why The Peerless Way has proved profitable for over twenty thousand people, scattered all over Canada. There is not a reason on earth why it would not do as much for you as it has for the most successful of them. No matter where your farm is, you can do well the Peerless Way—and you won't have to depend much on plain farming, either.

Send right away for interesting offer and FREE very valuable information.

You will know why The Peerless Way is the way to get profit from poultry, once you have read our booklet and proposition that we want you to ask for. With that we will come an offer to equip you for poultry profit on terms that will suit your wishes and fit your means. Please write and ask for this now—make your start now—it will pay you to.

We carry ample stocks in our big distributing Warehouses at Winnipeg, Regina, Calgary, for the convenience of our Western friends. Address all letters to Head office, Pembroke, Ont. They will receive prompt attention.

The Care of New Born Foals.

(Continued from page 473).

in the stable. Navel infection is less liable to occur on grass, but this is possible and preventive treatment, therefore, is necessary, no matter where the foal is dropped.

TREATMENT OF THE FOAL AT BIRTH.

Attend to the navel cord (umbilicus) as soon as the nose of the foal has been cleared of afterbirth. If possible avoid tying the navel cord. It is best for it to break off naturally. If it fails to break and the mare is lying down, make her get up and the cord may then break.

If found necessary to tie the cord use a clean, disinfected string. A dirty string may cause infection. Soak the string in a five per cent. solution of lysol or carbolic acid, or a 7-500 solution of corrosive sublimate (bichloride of mercury). Tie the cord one inch or a little more from the belly; then sever the cord with a clean knife. An emasculator or ecaseur (castrating instruments) may be used to sever the cord in place of tying it and then cutting through below the knot.

Saturate the stump of the navel cord immediately whether tied or not, with the following disinfectant: Powdered corrosive sublimate, 2 drams; boiling water, 1 pint. When it has cooled, color the solution with 2 drams of tincture of iron, label the bottle "poison" and keep it out of the way of children. Repeat the application twice a day until the cord shrivels up, drops off and no raw spot remains. To keep the solution from blistering the foal's belly smear carbolized vaseline or unsalted lard around the navel before making the first application.

A good way to use the solution is to put some of it in a shallow, wide-necked bottle, then hold the bottle against the foal's belly with the navel stump immersed so that it will be completely covered by the fluid. If the navel cord has been tied remove the string as soon as possible, squeeze out the blood clot and instantly soak the navel stump with the corrosive sublimate solution. Use the solution twice a day until the navel is perfectly healed. Remove sloughing portions of the cord each morning, so far as possible, to allow the solution to wet all raw parts of the cord.

GIVE ATTENTION TO THE BOWELS.

A strong foal will be on its feet and trying to nurse in less than an hour from birth. Such a foal needs no help, but a weak one will have to be held up to suck until strong enough to do so without help. Wash the udder of the mare with a lukewarm 2 per cent. solution of coal tar disinfectant and then rinse off with warm water before the foal is allowed to suck for the first time. The external organs (genitals), tail and hind parts of the mare should be washed with a similar solution once a day for the first week or so after the birth of the foal.

Keeping the udder free from infective matter in this way tends to prevent the foal from scouring, for that condition of the bowels often is due to germ infection of the intestinal tract by way of the mouth. Disinfection of the navel cord also tends to prevent scouring. At birth the intestine of the foal contains a sticky mass of fecal matter (meconium). This should come away promptly and usually this is accomplished by the first milk (colostrum) which possesses purgative properties. To assist nature, either insert a small tallow dip candle (made for this purpose) in the foal's rectum, or, within an hour from birth, give an injection of either warm water, warm slippery elm bark tea, flaxseed tea, sweet oil, or a mixture of equal parts of cream, molasses and warm water, and repeat in 12 hours if required. Harm may be done by injecting a large quantity of strong, soapy warm water with an ordinary "horse syringe." A fountain syringe is to be preferred and small, hard rubber nozzle, or a small, clean rubber hose and funnel. Smear vaseline or lard on the nozzle and in rectum before giving the injection. If the bowels do not move within 24 hours from birth and the foal seems sick, shake up two to four tablespoonfuls of pure castor oil in milk, or a mixture of equal quantities of castor oil and sweet oil, according to size of foal, and give as one dose. Then continue the injection at intervals of six hours.

RAISING AN ORPHAN FOAL BY HAND.

In case the mare dies or has no milk the foal may be raised on cows' milk, if the attendant conducts the work patiently and intelligently. Choose the milk of a cow that has recently calved, preferably one which gives milk low in butterfat, for mares' milk while rich in sugar, is poor in fat. Sweeten the milk with molasses or sugar and dilute with warm water. Give a little of this prepared milk at short intervals from a scalded nursing bottle and large rubber nipple. Be careful to keep the bottle and nipple scrupulously clean. Add an ounce of lime water to each pint of the prepared milk and allow half a cupful once an hour at first.

As the foal grows, gradually increase the amount of milk fed and lengthen the intervals between meals. In a few days food may be given six times a day and, later, four times daily. The foal will soon learn to drink from a pail, if allowed to suck the attendant's fingers at first.

Until the bowels move freely, give rectal injections night and morning. If the foal scours at any time, give two to four tablespoonfuls of a mixture of sweet oil and pure castor oil shaken up in milk and stop feeding milk for two or three meals, allowing sweetened warm water and lime-water instead. Let the foal lick oatmeal as soon as it will eat and gradually increase the amount and add wheat bran. In five or six weeks some sweet, skimmilk may be given and the amount gradually increased daily until, in three months or so, it may be given freely three times a day in place of new milk. The foal at this age also will be eating freely of grass, grain and bran.

At all times supply pure cold drinking water. Let the foal run out in a lot or grass paddock for exercise. Accustom it to be handled daily. Feed small quantities of nutritious food often, keeping all food vessels clean and the foal should thrive and develop well.

We are Head to Foot Clothiers, "at a saving." We will send to your address, no matter where you live, anything from a Shoe String, to a complete outfit of Clothing. Write for our catalogue of bargains in Shoes and Clothing and free gifts to cash buyers. Mail orders shipped the day we receive them, and we pay all delivery charges on all orders of $5.00 or over.

We can save you money. Try us. —C. B. Pidgeon, Cor. Main and Bridge Streets, St. John, N. B.

Some Durability Facts For You

On account of the remarkable records for close-skimming that the **"STANDARD"** Cream Separator has established, it has become known as "The World's Greatest Separator." While we are proud of the **"STANDARD'S"** reputation for close-skimming, still we do not want you to lose sight of its other great features, such as:

The Enclosed Dust-Proof Gearing—The Self-Oiling System—The Low Supply Can—The Centre Balanced Bowl—The Liberal Space Between Disc Edges and Bowl for Holding Accumulation of Impurities—The Materials used in Construction of the Machine.

Standard

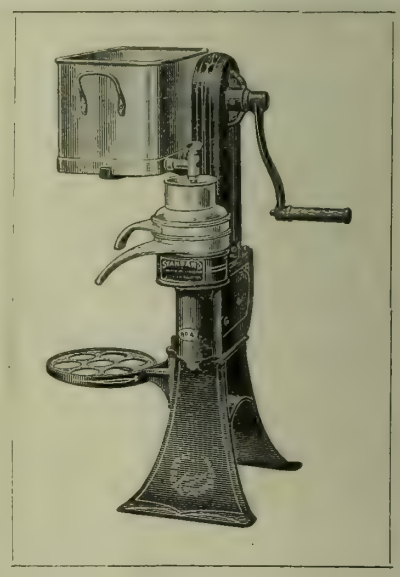
The materials used in the construction of a separator are very important. We could skimp, and build the **"STANDARD"** of cheaper materials. You would not likely know the difference. It would skim well too, but it wouldn't last nearly so long.

There is no separator in the world made from finer materials than the **"STANDARD,"** Every single part of it is made of the materials best suited for the purpose. For instance the gear spindles are made from a special grade of tool steel, ground and polished—a steel so hard and wear-resistent that tools are made from it for drilling through ordinary steel. This special tool steel costs five times as much as steel in ordinary separators, but ten ordinary steel spindles wear out before one **"STANDARD"** spindle.

The **"STANDARD'S"** Discs are made of steel, heavily and smoothly tinned. Stand on one and test its strength in comparison with aluminum or tinned iron discs. The Bowl Bottom is made from special steel forging. If the **"STANDARD"** bowl falls on the floor it won't bend or break.

The gears are machine cut. They are tested for accuracy on a special machine that can be adjusted to a 1-10,000 of an inch.

But why go further? You've learned enough to know that the **"STANDARD"** is built to last

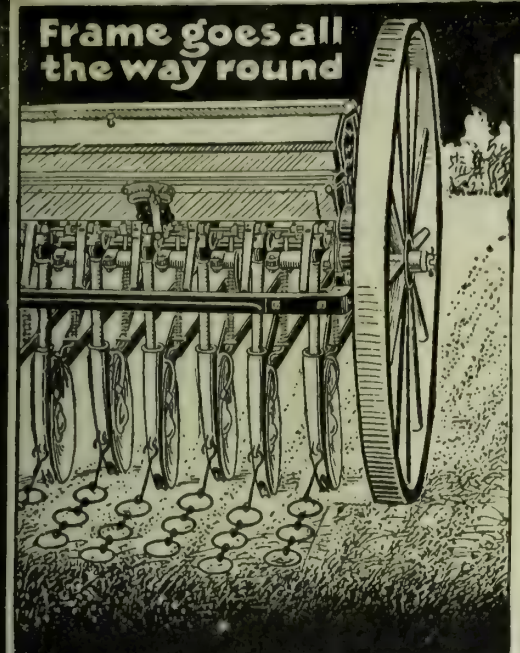


long. And it has been given a test equal to skimming 100 pounds of milk every day for six years. At the finish there was no wear visible on the working parts. It was easily good for 20 years more. The test is fully described in our booklet. Write for a copy today.

THE RENFREW MACHINERY CO., Limited

Head Office and Factory: Renfrew, Ontario

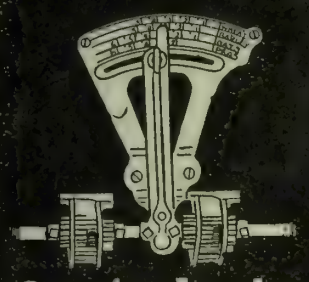
Sales Offices: Winnipeg, Man. and Sussex, N. B.

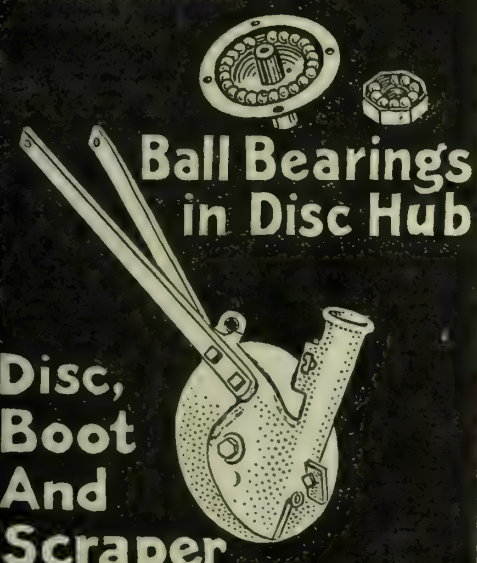


Sow Your Grain in Drills Get LARGER Crops More Profits

Sowing grain in the old style way is wasteful. While some spots get too little seed, most of the ground is generally too thickly seeded.

But sow your seed with the Champion Disc Drill and waste is eliminated. It sows with precision, just the right amount of seed in every inch of every furrow. The same amount of seed goes farther, produces larger crops and yields you more profits. The Champion way is the profitable way to sow your grain.





Frost & Wood

Champion Disc Drill

The Champion Disc Drill has made a great name for itself in "dirty" fields. Corn roots, tangled grasses and straw manure do not bother the Champion. It cuts right through the "meanest" field, sows the seed and covers it up.

The Champion is a wonderfully light draft machine. Instead of the usual iron to iron bearings at the hubs of the discs, the Champion has sets of dust-proof ball bearings. It's the only disc drill so equipped. This smooth-running, friction-reducing feature, together with no neck weight, make the Champion Disc Drill easier on horses than any other disc drill we know of.

The Champion Disc Drill is a strong substantial machine. It has a stationary axle to which the frame and grain boxes are solidly attached. It is built to give you many years of satisfactory service.

It is so built, too, that it is a pleasure to sow seed with it. There are no notches into which a shifting lever must be shoved. You can sow to a fraction of a pint by simply adjusting the Index. The Champion is thoroughly tested before it leaves the factory, and you are thus assured of getting perfect satisfaction when your Disc Drill bears the name "Champion."

We have a special Drill Catalog that we are waiting to send you directly we receive your name and address. Send us a card by next mail.

Frost & Wood Co. Limited, St. John, N. B.
SMITH'S FALLS. MONTREAL.
Sold in Western Ontario and Western Canada by
COCKSHUTT PLOW CO., Limited, Brantford and Winnipeg.

The Engine That Costs Nothing To Run

The wind furnishes the "fuel" FREE and you get all the power you need when you have a

CANADIAN AIRMOTOR

Investigate. Learn the cost and the advantages of wind-power. Write for our FREE book,

ONTARIO WIND ENGINE & PUMP CO., Limited
Winnipeg TORONTO Calgary

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

The E. B. EDDY COMPANY, Limited,
HULL, CANADA.

Makers also of Wooden Pails, Tubs, etc.

General Progress of the Annapolis Valley

(Continued from page 472).

vesting there will probably be thirty. A central association has also been formed.

The central association last year handled 300,000 barrels of apples in addition to those handled by the local societies direct. It now looks as if very soon practically the whole crop of the Valley would be handled through one central association, or through a number of central associations each acting for a number of contiguous local societies. The purchase of seeds, fertilizers, etc. is also being taken up by the co-operative organizations.

Along with these improvements in the apple industry have come very tangible evidences of progress. In the past fifteen years the yield has twice doubled. The half a million barrels raised in 1896 was the largest yield up to that time. The crop of 1911 was over two million barrels. If the same ratio of increase continues, it will mean four million barrels in 1918, or eight million in 1926.

Whether, or not these large figures will be realized time only can reveal, but a new spirit of progress and optimism is abroad among its people which promises great things for the Annapolis Valley.

Charlottetetown Market Report.

GRAIN—Oats, white, 50c. to 58c.; black, 55c. to 65c.

FEEDSTUFFS—Bran, $1.50 to $1.55; Shorts, $1.60 to $1.70; Middlings, $1.60 to $1.70; Oil-Cake, $2.50 to $2.75; Corn Meal, $2.00.

GRASS SEEDS—Timothy, 16c. to 20c.; Com. Red Clover, 25c. to 28c.; Mam. Red Clover, 25c. to 28c.; Alsike, 25c. to 30c.

LIVE STOCK—Butcher's Cattle—5½c. to 6½c.; Stockers, $18 to $35.00; Milch Cows, $24 to $45; Sheep, 4c. to 4½c.; Lambs, $3.00 to $3.75 each.

DRESSED MEATS—Beef (carcass), 8c. to 12cf; Beef (retail), 8c. to 16c.; Mutton, 9c. to 11c.; Pork, 8c. to 8½c.

HORSES—Drafters, $150 to $250; Roadsters, $150 to $250; Carriage, $150 to $250.

DAIRY PRODUCTS—Creamery Butter, solids, 33c.; prints, 34c.; Dairy Butter, 25c. to 28c.; Cheese, 15c. to 15½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c.; Fowl, 8c. to 11c.; Chickens, 10c. to 13c.

FRUIT—Apples, $2.50 to $4.00.

MISCELLANEOUS—Hay, $12.50 to $13.50; Straw, $6.00 to $6.50; Wool, 25c.; Beef Hides, 10c.; Sheep Skins, 65c. to 90c.; Lamb Skins, 15c. to 20c.

VEGETABLES—Carrots, 60c.; Potatoes, 60c.; Turnips, 17c.; Beets, 60c.; Parsnips, $1.25 per cwt.

Since our last report there has been some changes, especially in vegetables, the supply of which is limited, except potatoes which have been offering very freely considering the season of the year, the high prices having induced the farmers to bring them out but most of the receipts are still in the hands of the shippers here awaiting opening of navigation. The Minto opened the harbor here on Sunday last and boats are now running here regularly, which will have the effect of stimulating trade. Oats are coming in very slowly and the demand for seeding purposes has established a price beyond the value for shipping. We have quoted a wide range of prices which even the price shippers are willing to pay and prices being paid for seeding purposes, but these prices do not mean the prices charged for recleaned seed—true to name sold in a retail way by seed houses. Butter remains scarce and prices are firm but increased supply which may be expected shortly will cause a drop in value. The prices on eggs have held up remarkably well and demand is good at prices quoted.

The Maritime Farmer's Competitions

for the best articles giving practical experiences on the questions "How I Make a Profit with Sheep" and "How I Grow Potatoes on a Business Basis" which closed on March 20th, brought out some excellent practical, personal experiences. The first prize article in each competition is published on other pages of this issue. The other prize winning articles will appear later.

How I Make a Profit with Sheep Prize Winners are :

First prize, Mathew Lamont, Short Beach, Yarmouth Co., N. S. $25 00
Second prize, Andrew McPherson, Rocklin, Pictou Co. N. S..... .... $15 00
Third Prize, Donald Innis, Tobique River, N. B. .....$ 5 00

How I Grow Pptatoes on a Business Basis Prize Winners :

First prize, Fred C. Fawcett, Upper Sackville, N. B. $25 00
Second prize, A. E. L. Fritz, Lunenburg, N. S. $15 00
Third prize, John Howlett, Annandale, P. E. I. .... $ 5 00
Fourth Prize, James Howlett, Gowaen Brae, P. E. I. ..... $ 3 00
Fifth prize, H. R. Flemming, Debec. N. B. .... $ 2 00

We wish to thank the gentlemen, who responded to our offer as we feel that accounts of how they attend to details, in the succesiful management of their flocks and fields will be helpful to other readers of the Maritime Farmer.

St. John Market Report.

Beef, western, 9c. to 10½c.; Butchers beef, 8c. to 10½c.; Beef, country, 7c. to 8½c.; Mutton, per lb., 8c. to 9 c.; Veal, per lb., 8c. to 10c.; Lamb, per lb., 11c. to 13c.; Pork, per lb., 9c. to 9½c.; Cabbage, per doz., 70c. to $1.00; Lettuce, per doz., 40c. to 50c.; Eggs, hennery, per doz., 24c. to 26c.; Eggs, case, per doz., 22c. to 24c.; Tub butter, 22c. to 24c.; Creamery butter, 34c. to 36c.; Calfskins, per lb. 15c.; Fowl, per pair, $1.00 to $1.25; Ducks, $1.25 to $1.50; Celery, 80c. to 90c.; Calfskins, per lb., 16c. to 17c.; Hides, per lb., 11½c.; Turkeys, 27c. to 30c.; Maple sugar, per lb., 14c.; Maple syrup, per gal., $1.00 to $1.25; Turnips, 80c. to 90c.; Carrots, per bbl., $2.00 to $2.50; Beets, per bbl., $2.00; Potatoes, per bbl., $2.50 to $2.60; Lamb skins, 75c. to 90c.; Sheep skins, 80c. to $1.00.

SEEDS.

Timothy, Canadian, per 100 lbs., $19.50 to $21.00; Red clover, $24.00 to $26.00; Mam. clover, $25.50 to $27.00; Alsike clover, $22.50 to $24.00.

"The Man Who Makes Two Blades of Grass Grow, Where Only One Grew Before, is a Benefactor to His Country."

Every progressive farmer is a benefactor to his country.

Intensive farming must naturally follow increased values of farm lands, so that one acre can be made to produce what two acres did before.

Even greater increases than these may be obtained by the judicious use of fertilizers, containing a large percentage of Potash.

Write us for copies of our free bulletins which will instruct you how to fertilize economically.

German Potash Syndicate
1905 I. O. F. Temple Bldg., Toronto, Ont.

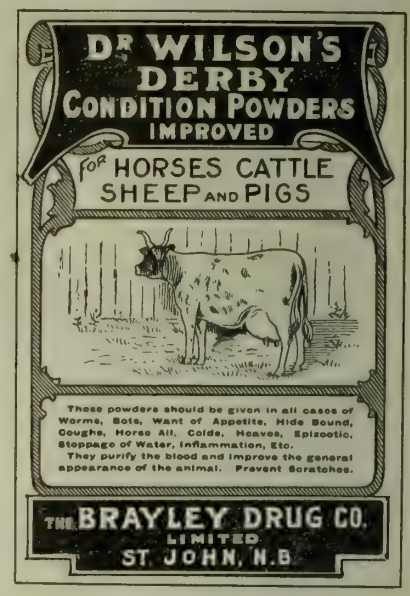
Canada's Leading Stock Men Strongly Recommend the use of

Dr. WILSON'S DERBY CONDITION POWDERS

for Horses, Cattle, Sheep and Pigs

The names of the successful Stock Breeders whose testimonials appear in this advertisement, are household words in the Maritime Provinces. They are some of the leaders who are setting the ideal to which progressive fellow farmers aspire. They are authorities on the care and management of Live stock.

Read what they say about Dr. Wilson's Derby Condition Powders, the best Live stock conditioner on the market as it purifies the blood and improues the general appearance of every animal to which it is administered.


DR WILSON'S
DERBY
CONDITION POWDERS
IMPROVED
FOR HORSES CATTLE
SHEEP AND PIGS
Those powders should be given in all cases of Worms, Bots, Want of Appetite, Hide Bound, Coughs, Horse Ail, Colds, Heaves, Epizootic, Stoppage of Water, Inflammation, Etc.
They purify the blood and improve the general appearance of the animal. Prevent Scratches.
THE BRAYLEY DRUG CO.
LIMITED
ST. JOHN, N.B.

Amherst, N. S., July 10, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen: It affords us great pleasure to let you know of the great success we have attained by the use of your Condition Powders. We have been feeding them for some time back and are satisfied that they are as good as you claim them to be and in our estimation there is no better in these parts.

Wishing you continued success, we are,
Yours truly, LOGAN BROS.
Breeders Holstein Cattle and Clydesdale Horses.

Truro, N. S., Jan. 12, 1910.
The Brayley Drug Co., Ltd.
St. John. N. B.

Gentlemen : It affords us great pleasure to recommend Dr. Wilson's Derby Condition Powders to anyone looking for genuine Powders. We think they are a very good medium for fattening cattle and improving their appearance. We would not be without them as their cost is not to be considered with the vast amount of good they do. Yours truly,
RETSON BROS.

Buctouch, N. B., June, 10. 1909.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen : I believe I have been using Dr. Wilson's Derby Condition Powders since they were first introduced in New Brunswick. I am well satisfied that they have done my cattle a power of good. I have used no other in four years despite many inducements offered. Yours truly,
J. D. IRVING, Seaview Farm.
Breeder Holstein Cattle and Clydesdale Horses.

Truro, N. S., April 19, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Dear Sirr : I will be needing some more of your Condition Powders very soon. When will your agent be in Truro?

I might take this means of congratulating you on your manufacturing such an excellent powder. I have recommended Dr. Wilson's to many of my friends who breed cattle as I feel sure they will be as well satisfied as I am. Yours very truly, C. A. ARCHIBALD.

Silver Falls, St. John Co., N. B., Sept. 10, 1909.
The Brayley Drug Co., Ltd.
St. John, N B.

Dear Sirs : Dr. Wilson's Derby Condition Powders were recommended to us and we decided to give them a trial. We feel sure they have proved their worth to us in many ways. We feed them regularly and we feel safe in proclaiming them the best Condition Powders we have ever used. Yours truly,
JOSELYN & YOUNG.

Burnside Farm, Howick, P. Q., March 21, 1910.
The Brayley Drug Co., Ltd.
P. O. Box, 301, St. John, N. B.

Gentlemen:—You will no doubt be pleased to hear what I have to say. I want to say a word in favor of your Dr. Wilson's Condition Powders. They were recommended to me at a Dominion Exhibition in Halifax, N. S.. and I decided to try them. I have used many Condition Powders before but never with such remarked success as with yours.

I think I have as nice a stock of Ayrshire cattle as can be found anywhere and can give your Dr. Wilson's Condition Powders a share of the credit.

Ever wishing you success, believe me,
Dear Sirs, Yours very truly,
R. R. NESS.

Dr. Wilson's Derby Condition Powders may be purchased in every town in the Maritime Provinces and is manufactured by

BRAYLEY DRUG COMPANY, LIMITED, St. John, N. B.

The Woodview Poultry Yards

LONDON, ONTARIO, CANADA

The Home of Canada's Champion

BARRED PLYMOUTH ROCKS

During the past season we have supplied more prize winning birds for shows from one end of Canada to the other than any other breeder of Barred Rocks in the Dominion. The winners at leading shows in New Brunswick, Nova Scotia and Prince Edward Island were bred and sold by us.

A few Cockerels bred from our champion males, still on hand and for sale at slaughter prices, quality considered, $2.50 and $3.00 each.

We are going to raise 800 chicks this year, and will be in a position to supply Beauty and Utility specimens for all desiring the best Canada can produce.

Satisfaction guaranteed or money refunded.

W.W. DODS, Supt. **JAS. PRINGLE, Prop.**

Dispersion Sale of High-Class and Show AYRSHIRES

Having sold their Farm, Messrs JAMES BARRETT & SONS, will on

Wednesday, May 1st, 1912

At their farm **East ST. JOHN,** sell by auction their entire herd of **30 Head** of richly bred, heavy producing and Prize-winning Ayrshires.

As a result of careful breeding and selecting this herd is composed of some of as good specimens of the Ayrshire breed as may be found anywhere in Canada, many of them descending from the world's famous Nellie Osborne and the celebrated imported Bull Glencairn 3rd. There are also a large number of grand-daughters and grandsons of America's Champion Ayrshire Bull, the unbeaten "Barcheskie Kings Own" imp. They are certainly a grand lot of young animals, all out of Prize-winning and high producing dams many of them giving over 50 lbs. a day testing as high as 5.2. No animal in this herd over 7 years of age and all have the best of their lives ahead of them. This is a grand chance for breeders to select a winner for the fall shows. All animals in this herd tuberculin tested.

Cherry Bank Sunrise

On day of sale conveyances will meet intending purchasers at Street Car Line, Haymarket Square, every 15 minutes.

TERMS: Under $40, Cash. Over that amount Notes will be accepted with approved security, bearing interest at 6 per cent. for 6 months.

Sale will begin at 10.30 a.m. Luncheon will be served at 12.30

The richly bred stock bull, Cherry Bank Sunrise and the grandly bred yearling Bull "Springhill Prince," will be included in the sale. Among the cows included in sale is the choicely bred imported cow "Southwick Kate" who has given 40 lbs. milk a day testing 4.1 with first calf.

JAMES A. TELFER, Markhamville, N. B.,

AUCTIONEER.

Catalogs on application to JAMES BARRETT & SONS, East, St. John P. O., N. B.

Picking Apples.

Editor Maritime Farmer:—

I have been a dealer in apples for quite a number of years and during that time many cases have come to my notice of people who do not know when this king of fruits should be picked. Sometimes we find apples that are almost worthless owing to the fact that they were picked either too early or too late.

Although I am the largest grower and shipper of apples in the County of Lunenburg and have talked and advised the growers of this County personally and through the public press still I find that a great many are inclined to follow the haphaszard system.

A few months ago a certain buyer was buying a lot of apples in the Annapolis Valley. He met with a fruit grower who had picked too soon and found that the apples he was offering for sale were too green and consequently he would not buy them.

W. A. Hebb.

A prominent farmer and fruit grower, Lunenburg, N. S. He is also an accomplished musician and leader of the Lunenburg Brass Band.

Fruit growers who make mistakes of this kind must suffer great losses which they try to alleviate by palming off inferior stock on some one who does not know his business.

A brown or green Baldwin is flat, bitter and a mean tasting apple. If the tree carries too much wood, it should be pruned and the apples should remain on the tree until the underside or green side, turns from green to a lighter tinge or cast.

Spies, in most cases, should not be picked until they begin to turn as mentioned above.

Ribstons should be picked early or they will deteriorate on the tree and in a very short time become very inferior.

Golden Russets should be picked fairly early and kept covered from the air as they wilt if long exposed.

In picking Kings and Spies it is best to pick off the outside and top of the tree first and then wait about a week and go over the trees again, when the remainder of the fruit will be much improved in color. In some cases it is advisable to leave the greener apples for a third picking. In this way they will all become of fair color and will grade a greater percentage of No. 1's.—W. A. Hebb, Bridgewater, N. S.

The Dairy Courses at the Provincial Dairy School, Sussex.

The Course for Butter and Cheese Making at the Provincial Dairy School Sussex, closed on April 12th. In all there was an attendance of twenty-five, a number being from Prince Edward Island and Nova Scotia. Eleven ladies attended for Butter-making and Soft Cheese-making.

A Butter-making Course framed to meet the requirements of farm dairies is being considered for next Autumn. It is during the winter season that most of the churning difficulties are experienced, and as a course in the fall would supply an opportunity for preparatory work, it is felt that this departure would be warranted.

An incident of this season's course that was of considerable interest was the trial of a hand cream separator supplied by a dairyman. The dairyman had not been able to make the separator do satisfactory work even with a new bowl supplied by the manufacturers of the machine.

The separator was subjected to tests that embraced: Separating at different temperatures; separating at high, medium and low speeds; separating at rich and poor cream adjustment and separating at full and reduced capacity. In the main the results obtained justified the conclusion of the dairyman that the machine would not do satisfactory work. It would seem again necessary to repeat our advice that dairymen purchase hand cream separators only on condition that they do satisfactory work.

Echoes from the 1911-12 N. S. A. C. Session.

The 1911-12 session at the Nova Scotia Agricultural College closed on Friday, April 12th. The session has been by far the most successful in the history of the institution, the attendaace in the regular course having been 80 in comparison with 65 the previous year, and the Short Course 342 in comparison with 230 the previous year. The examination results have not yet been published, but on the concluding day two Cups, awarded for proficiency in Live Stock Judging, were presented. The Cup presented by the Hon. G. H. Murray, Premier of Nova Scotia, for the best all round judging of live stock, was won by H. S. Cunningham, of Tatamagouche, Colchester County, a Senior student, with Vernon Durling, of Lawrencetown, Annapolis County, a very close second. The Cup presented by the Prince Edward Island Short Course students of 1911, for the best judging of seeds, was awarded to Ora C. Hicks, of Petitcodiac, N. B.

In order to accomodate the increasing number of students at the College, considerable additions will be made to the institution during the ensuing summer. An addition will be added to the main building, which will increase its capacity about two-thirds. A separate Horticultural building and green houses will be erected during the summer.

It is extremely satisfactory to note the progress that has been made at this Agricultural College of the East, not so much because of the institution itself, but because it is indicative of the new interest in Maritime Agriculture, which spells a new life in these Eastern Provinces of Canada.

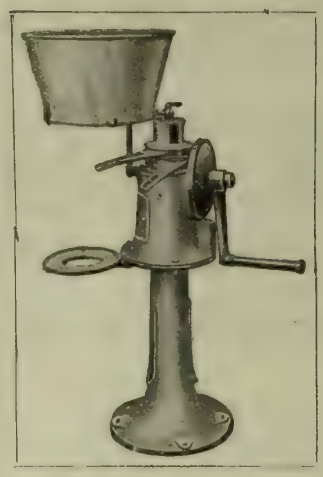
The small farm that produces up to the limit is better than the large farm that yields only half a crop.

The up-to-date farmer is always busy laying his plans ahead, no matter whether it is summer or winter coming.

The social life of the community may well center round the district school.

Condiments that stimulate egg production are very much like anything that stimulates a human being. After the immediate results wear off the bird is in the worst shape than before being fed.

THE PREMIER CREAM SEPARATOR



Satisfaction guaranteed to every purchaser. Thousands of satisfied users speak in highest praise of the

"Premier"

The machine that appeals to you at sight

Be sure you look into the merits of the **"Premier"** before you buy a Cream Separator. Will be sent to your farm and demonstrated free of charge. Just write us. We are the makers and guarantors.

Address:

The Premier Cream Separator Company

659-661 King St. West, Toronto, Ont.

199 Princess St., Winnipeg, Man. 147 Prince Wm. St., St. John, N. B.

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THE "CITY AND SUBURBAN" CARDEN COLLECTION

Price $1.00. Free by Mail

$1.00 Contains 17 Distinct Varieties of Vegetables

Beet—Blood Turnip, 1 pkt.
Beans—Dwarf, yellow wax Pod, 1-2 pint.
Cabbage—Early Jersy Wakefield, 1 pkt.
Carrot—Scarlet Horn, 1 pkt.
Corn—Early Sugar, 1-2 pt.
Cucumber—Long Green, 1 pkt.
Lettuce—Cos. 1 pkt.
Lettuce—Nonpareil, 1 pkt.
Onion—Yellow Danvers, 1 pkt. Mammoth Silver King, 1 pkt.
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Peas—(None of which require staking) American Wonder, 1-2 pt.; Strategem, 1-2 pt.
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FARMERS' VEGETABLE COLLECTION

Price 75 cents

75cts Contains 1 ounce Beet, 1 pound Beans, 1 ounce Carrot, 1 pound Sweet Corn, 1 packet Cucumber, 1 packet Lettuce, 1 packet Watermelon, 1 packet Citron, 1 ounce Onion, 1 packet Parsnip, 1 packet Radish.

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13 Packets for 50c.

50cts. **Beans**-Simmers Giant Wax.
Beet — Blood Turnip.
Carrot—Scarlet intermediate.
Corn, Sweet—Cory.
Cucumber—White Spine.
Cabbage—Vandergaw.
Celery—White Plume.
Lettuce—Simmers' Nonpareil.
Onion—Large Yellow Danvers.
Parsnip — Improved Hollow Crowned.
Parsley—Champion Moss Curled.
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Radish—Olive Scarlet.
Flower Seeds and Packet mixed Annual.

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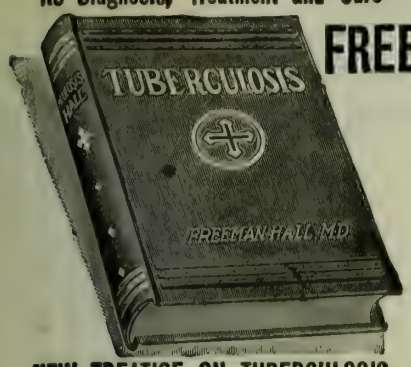
Its Diagnosis, Treatment and Cure



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NEW TREATISE ON TUBERCULOSIS

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This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you. Even if you are in the advanced stage of the disease and feel there is no hope, it will instruct you how others, with its aid, cured themselves after all remedies tried had failed, and they believed their case hopeless.

Write at once to The Yonkerman Co., 1709 Rose St., Kalamazoo, Mich., and they will gladly send you the book by return mail Free and also a generous supply of the New Treatment absolutely Free, for they want you to have this wonderful remedy before it is too late. Don't wait—write to-day. It may mean the saving of your life.

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Girls, Here is Your Chance to Obtain FREE a Handsome Bisque DOLL Do you want to receive *Free* a beautiful doll? We have them for you. Our large handsome doll will sit down, fold its arms, turn its head, shut its eyes and go to sleep like a real baby, the best kind of a doll, 18 inches tall, with long curly hair, real eye lashes, handsome turning Bisque head, full jointed body, pearly teeth, very stylishly dressed, fancy underwear, with hat, shoes, stockings, etc., dressed completely from head to shoes, *free* to you for selling only 15 packages of our famous Marvel Bluing at only 10c per package. We send a beautiful finished Turquoise Brooch to give to every customer who, buys a package from you. This makes them sell quickly

Return the $1.50 when sold and we will promptly send you this handsome doll. Write to-day Address Dept 77

MARVEL BLUING CO., TORONTO, ONTARIO, CANADA

The All Canadian Route to Montreal.

Via the Intercolonial Railway Maritime Express is the only All Canadian Route to Quebec and Montreal from the Maritime Provinces. The Maritime Express is generally admitted by experienced travellers to be the most comfortable train in America. This is especially true in regard to the dining and sleeping car service. The diners of the I. C. R. are roomy and well ventilated and furnished in the best of taste. The excellent meals are served Table d'hote at a price away below the a la carte rates prevailing on the company owned lines. The sleeping coaches are up to date in every particular, and the smoothness of the road bed makes the long journey easy and pleasant. Being popular with a class of travellers who are generally found to be the acme o' good company the through journey is never found dull, and even during the winter months there is much of scenic interest in the day's ride through the Province of Quebec. Montreal is reached at the convenient hour of 6.30 p.m. and connections are made at Bonaventure Union Station with the through trains of the Grand Trunk Railway for Toronto, Buffalo, Detroit, Chicago, and other points in Western Canada and the United States.

The Worthy Son of a Worthy Sire.

On another page of this issue will be found a cut of the Jersey Bull, Foxhall St. John 'O Dreamwold owned by Messrs. Josselyn & Young, Silver Falls, N. B.

Foxhall St. John 'O Dreamwold is a grandson of the famous Flying Fox, the first Jersey bull on record to sell at public auction for the snug sum of $7,500. Following are some of Flying Fox's achievements in breeding and showring circles.

Flying Fox No. 61441 was imported as the 1899 first prize winner over the Island of Jersey. He was sold at auction in 1902 for $7,500 to T. W. Lawson, of Boston, Mass., in whose possession he remained until he died on December 6th, 1909, in his 12tn year.

He sired the great bull "Oxford Lad" P. 3123 H. C., winner of the first prize at St. Saviors in 1902 and sweepstakes at St. Saviors and Growille and State prize over the Island in 1903, and sold at public auction for $3,300.

He also sired Stockwell, 3550 H. C. Stockwell sold at public auction for $11,500. He sired Brookhill Fox, 65303, also, champion winner in England as, a yearling, and leader of all the imported bulls at the World's Fair in 1904.

Fox's Flower 'o D, the greatest cow in America to-day, was sired by Flying Fox.

His get has won many firsts all over the United States and a number of his daughters have already made great tests.

His get won first and champion honors in 1902 and 1903 at the Royal shows, on the Island of Jersey and England and at Toronto, also at Kentucky, Minnesota, Wisconsin, West Virginia, Maine, Massachusetts, Illinois and Missouri State Fairs. At the last World's Fair in bull and progeny class of 23 entries, Flying Fox's get won 2nd, 3rd and 4th and at the great Brockton Fair in 1911 his get won 1st, 2nd and 3rd. At the same Fair his get won the Jersey special for four cows, in milk, bred by ex. hibitor and the same get won 1st at the great National Dairy Show at Chicago in 1911.

Fox's get has done more than that of any other bull by winning 1st at the Dairy shows East and West in the same year, winning at the Brockton Fair, in 1910, $669.00 out of $1000.00, in hot competition.

In 1911 his owners won at the Brockton Fair $639.00, which is more than any other exhibitor did, winning all herds. Out of 120 head shown at Brockton 95 per cent were descendants of Fox's descendants.

At the National Dairy Show in 1911 the same per cent. were of Fox blood. Champion Flying Fox is also the grand sire of the famous bull Noble of Oakland, P. 3909 H. C., that sold for $15,000 on Decoration Day, 1911. He is also the grand sire of Gamboy's Night, 95698 A. J. C. C., that sold at the same sale for $6,700.

He also sired the famous Flying Fox's Foxhall 61435 A. J. C. C., that was picked out by the Jersey Cattle Club to be used on the cows in the Dairy test at the great St. Louis Fair in 1904. Flying Fox's Foxhall is the sire of the famous bull Foxhall St. John 'O Dreamwold, whose dam is Golden Bess of St. John, winner of the Parish prize in 1899 and winner of 1st prize at St. Peters show in August 1900. Golden Bess also won 1st with her progeny at the great St. Louis Fair. T. W. Lawson paid $1600 for her at public auction in 1902. She is a magnificent dairy cow with large beautiful udder and well placed teats. Last year she gave over 10,240 lbs. milk average 5.4 per cent. butter fat. She dropped a beautiful bull calf in December 1911 and is now in her sixteenth year.—P. H. Robinson.

An I H C Manure Spreader a Necessity on Every Farm

IF you expect to continue farming and raise a paying crop every good year, you must arrange to return to the soil the plant food taken from it by growing crops. Neglect is bound to decrease the productivity of your farm, and, in the end, to ruin it. When a farm is once run down it takes years of slow, careful upbuilding to bring it back to its original fertility.

If you attempt to fertilize by spreading manure with a fork, you fertilize unevenly and waste fully half the manure. When you use an I H C manure spreader properly, the fertility of your soil remains at a constant standard, while its physical condition improves from year to year, assuring bumper crops in good years, and the best possible stand when weather conditions are unfavorable.

I H C Manure Spreaders Corn King and Cloverleaf

will spread manure as it should be spread; in an even coat all over the field, light or heavy as may be needed, and pulverized so that the plant food elements in it combine with the soil.

An I H C spreader has many mechanical advantages. The apron moves on steel rollers running on steel tracks. This construction reduces draft and prevents the apron from slipping under the load. The apron feed mechanism and beater gears are provided with shields which protect them from sleet, snow, and manure. A strong, durable feed moves the apron steadily toward the beater at any desired rate of speed. This steady movement insures even manure spreading whether the spreader is going up hill or down

Compare the I H C apron feed mechanism with that of any other manure spreader and see how much stronger and more positive it is. I H C spreaders are so constructed in every detail that they do their work positively, with the least effort on the part of driver or horses.

I H C spreaders are made in different styles and sizes, for use in orchards, vineyards and gardens, on small and large farms. The I H C local agent will show you the machine best adapted to your needs. See him for catalogues and full information, or, write nearest branch house

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I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc, make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A.

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TRADE MARK REG.

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Makes Houses Snug and Warm

"Sovereign" Sheathing Felt compared with ordinary building paper is like a woollen blanket compared with an ordinary cotton sheet.

"Sovereign" Sheathing Felt is made partly of WOOL, saturated and coated with the same tasteless, odorless gum that gives **Ru-ber-oid Roofing** its recognized superiority. It does more than break the wind—it acts like a blanket in the wall, and prevents the heat from leaking out in winter or filtering in in summer. As a result it makes a substantial saving in your winter coal bills and adds to your summer comfort.

"Sovereign" Sheathing Felt is waterproof—will not mould, rot, dry out nor crack, and is strongly fire-resisting.

Get a sample of "Sovereign" from the nearest Ru-ber-oid Dealer, or write us for sample and Booklet.

THE STANDARD PAINT CO. OF CANADA, LIMITED

MONTREAL. WINNIPEG. VANCOUVER. 91

N. B. F. & D. A. County Vice Presidents' Reports.

(Continued from page 479).

The oat crop gave a good average yield of good quality.

Buckwheat was a fair average crop, but not extensively sown.

The potato crop was about one-half the average crop, owing to rot and wet weather.

Turnips were an average crop.

Other root crops were good.

The apple crop was good.

In regard to horses, we are in need of a good general purpose horse for farm and road work.

Our cattle could also be improved by importation of some good large stock, more especially the beef type. —Eben Ferguson.

ST. JOHN COUNTY.

I hereby beg to submit my report of the conditions in ST. JOHN, COUNTY, regarding Agriculture, Live Stock, etc., for the year 1911.

After a moderately cold winter, spring opened fairly early and seeding began about April 25 th. The weather was excellent for seeding, but much too dry for grain and grass to make much headway, and as a result Stock were later being put on pasture than for some years.

Hay was a good crop, but much below 1910. Roots of all kinds, potatoes and small vegetables were much above the average.

Through the efforts of our Agricultural Society for the City and County of St. John, a quantity of Alfalfa Seed was procured and a large number of the members have sowed and grown Alfalfa in St. John, in 1911, with very encouraging results. While we had a splendid catch it depends on how the plant survives in the winter whether it can be grown successfully or not.

Our St. John City and County Agricultural Society held its annual Fair on the Moose Path Trotting Park on Sept. 25th' and it was one of the most successful yet held by the society. Some fine herds of Ayrshires and Jersey Cattle came out in competition; no beef cattle were shown. Three prizes were given in each section and in many cases decisions were given on fine points. Horses were also out in large numbers and of very good quality. A feature of the Horse Classes being in the driving section when some beautiful turnouts were in audience.

Hogs also made a fine showing, Pure Bred Yorkshires predominating. A very regrettable feature of the Fair was the absence of any kind of Sheep, this is the first time Sheep were not shown at a St.John Fair.

Henry Glendinning of Ontario placed the awards in all the Live Stock Classes and gave fairly good satisfaction. After having judged the Live Stock in Fredericton and having attended most of the Big Exhibitions in the Maritime Provinces, Mr. Glendinning declared the stock he judged at St. John Association Fair were as good and in some cases superior to those he had seen at the large exhibitions in the Maritime Provinces.

The Dairy Products were judged by Mr. L. C. Daigle and were pronounced as excellent. Poultry also made a fine showing. St. John County can boast of some of the best Poultry in the Maritime Provinces. Fruit was also a very interesting feature and the specimens of Apples shown, proved beyond a doubt that St. John County is admirably adapted for orcharding.

Another interesting feature of our Fair was the Domestic Science Department. Some very fine exhibits of cooking preserving and fancy work were here displayed. This is a very interesting department of our exhibitions and the ladies deserve credit for making it a huge success, and also for the skilful exhibits that were to be seen in this department.

On the whole our Fair was a grand success, and I feel assured if each Agricultural Society in New Brunswick would hold Fall Fairs it would stimulate an interest among the farmers of the district and surrounding country and should have every encouragement from the Provincial Department of Agriculture. I may add that although many new Societies have been formed during the past few years in New Brunswick, the grants to those Societies are so small as to render it almost impossible for much progress to be made in the upbuilding or improving of Live Stock, especially Dairy Cattle and Sheep in those districts where the Societies are established and as a result the farmers do not see anything to arouse their enthusiasum as suould be the case.

I would suggest that the Farmer's and Dairymen's Association use their best efforts to impress upon the Departmeut of Agriculture the importance of making a special grant every year to the Socities in districts, where the dairy cattle and sheep need to be lifted up to a level that would make them return some profit to the farmer who depends upon them for his living. This grant to be used exclusively for purchasing good Pure Bred Stock.

Encouragement is what farmers need the most, and there is nothing I know of that will encourage a farmer more than to see his stock improving and becoming more productive and every year giving him larger returns for his labor. There are too many farmers throughout New Brunswick who labor year after year trying to make a living by working hard feeding and milking from five to fifteen or twenty cows that are hardly paying for their feed let alone returning a profit for his labor, where if by some generous assistance on the part of the Government and a little enthusiasum on his own part the farmer should in two to four years hence be making more butter, producing more milk and as a result making a good profit which he is unable to make under present conditions, and from half the number of cows he is keeping at the present time. There are many other branches of live stock, Horses for instance, that need improving upon, but none that in my mind need attention so much as do Dairy Cattle and Sheep in this Province.

There is no doubt that we have some of the finest Herds of Ayrshires, Jerseys and Holstein Cattle in New Brunswick that can be found anywhere in Canada, but, they are confined to only certain districts in certain counties and how easy it is to tell when passing through those districts that good stock is being kept.

You will note the beautiful green fields, with their splendid crops of waving grass and grain, turnips and corn which is evidence that the cow is there to keep up the fertility of the land.

The enthusiastic farmer has his buildings neat and clean outside and in. The paint and whitewash brush has not been spared and the buildings and fields and beautiful herds and flocks as they graze on the pasture, show every indication that they are paying their owner for his labor and a good interest on his investment.

Success in farming depends on the fertility of the land being kept up.

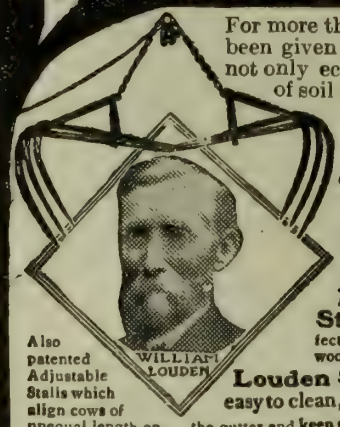
The lands must produce more crops, and I am firmly of the opinion that the only way to do this is to get the farms well stocked with the kind of stock best suited to the district in which any certain branch of farming may be carried on, and those crops consumed by the stock kept on the farm as far as is practicable.

Too many farms in New Brunswick depend too much on commercial fertilizer to get a crop from their land, but this is too expensive and many of our New Brunswick farmers cannot afford to purchase those high priced fertilizers and have a profit from their crops. All this is not necessary when we keep our farms well stocked with a good class of live stock.

Too much butter and cheese, beef, mutton and eggs are being imported into New Brunswick every year. This is important in order that the wants of the people may be supplied; but why should not New Brunswick supply her own needs in those necessities?

There is no province in Canada better adapted for supplying her own needs in hose necessities than New Bruni wick,

Louden Perfect Barn Equipments STOP WASTE



For more than 45 years our best thought and energies have been given to the problem of stopping waste on the farm—not only economy of time and labor, but also conservation of soil fertility.

Our first patented device was a crude wooden hay carrier produced in 1867. From this beginning there has been developed and perfected

The Great Louden Line of Barn Tools the most perfect, efficient, and economical ever devised—KNOWN AND USED ALL OVER THE WORLD.

Louden Flexible Tubular Steel Cow Stanchions keep the cows lined up but allow perfect freedom of movement and comfort. Can be hung on homemade wooden frames.

Also patented Adjustable Stalls which align cows of unequal length on pens, self-cleaning steel mangers, etc.

Louden Sanitary Steel Stalls are made of tubular steel, easy to clean, keep the barn light, perfectly ventilated and sanitary. the gutter and keep them in line; patented adjustable stanchion holders; bull and calf

Louden Feed and Litter Carriers of galvanized sheet steel, running on overhead tracks. Reduce the time and labor of chore work one-half to three-fourths.

The LOUDEN LINE includes also, Louden Hay Tools; Louden's Bird Proof Barn Door Hangers; and all fittings and accessories for completely equipping barns of every size.

Let them make you money by making your cows give more and richer milk, and by saving time and labor—every hired hand saved, means $400.00 or more per year, which is 8% interest on $5000.00. And they will last longer and give better service than any other Barn Tools made.

Patents—All Louden Tools are built under original patents covering all essential features. We guarantee our tools to be free of infringement on any patents owned by others. We guarantee to hold each and every purchaser of LOUDEN goods safe from all harm or damage from infringement claims.

Send sketch of your barn plan and we shall advise you what equipment you need. We shall also tell you what the cost will be. Send for our Catalogue "Everything for the Barn". Write to-day. See the Louden line of Barn Tools at your dealers.

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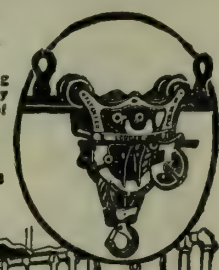
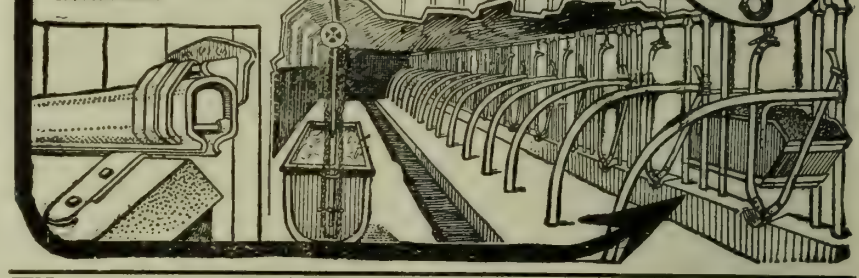
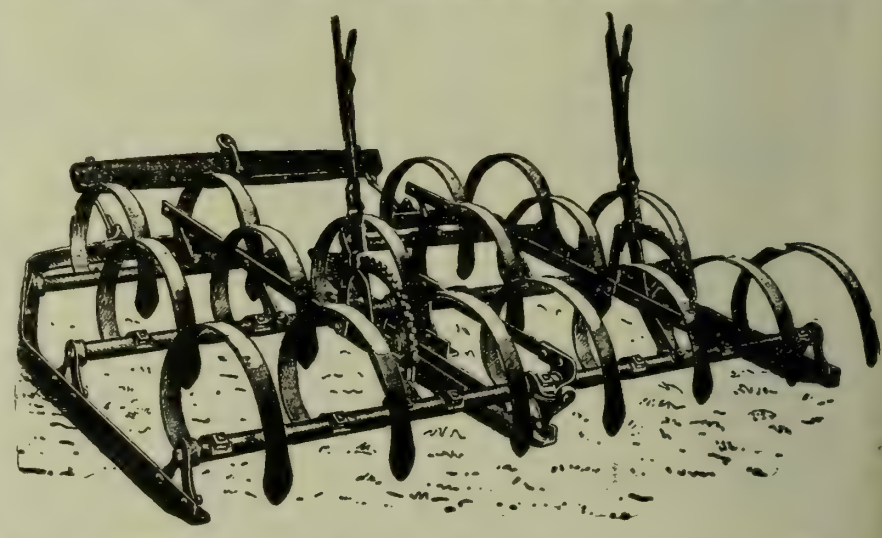






HARROWS The above cut shows a harrow which has proven itself absolutely to be the best working Spring Tooth Harrow on the market to-day. It is built of the highest grade material throughout. It will hold steadier to its work and do more effective work and deeper when desired than any other. With the levers the depth can be regulated instantly while in work, thus easing the draft on the team at first and getting deeper cultivation without increasing the draft at the final scrape.

Every farmer who needs a harrow will look after his own interest well by buying a **BAILEY-UNDERWOOD LEVER.**

Made in sizes 9 and 11 Tooth, Single Section. 15 and 17 Tooth, Double Section.

BAILEY-UNDERWOOD CO., Limited. New Glasgow, N. S.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

and still we hear of New Brunswick im porting those necessities with which she should supply her own people, from as far away as Austrslia and New Zealand.

What will New Brunswick do in the matter of food stuffs when the population increases as we expect it to increase in the next five or ten years?

The farmer should wake up and the Farmers and Dairymen's Association will have to wake up and get after the Provincial Department of Agriculture to give there utmost assistance in advancing the farming industry in New Brunswick as quickly as possible.

Within five or seven years St. John will have almost have doubled in population. Fredericton, Moncton, Woodstock, Chatham and all those other cities and towns in New Brunswick will increase in population accordingly. What is New Brunswick going to do to meet the demands made on her for Dairy and Farm products for this increased population?

I would suggest that an Agricultural College and Demonstration Farm be established in New Brunswick. I feel convinced that when such a College and Farm for demonstrating just what can be accomplished in farming when practical methods are applied that our farmers will become practical. I believe many would attend such a College if we had one in New Brunswick that will not go to Truro while some of our young men will travel to St. Anne DeBelleveu to acquire a practical knowledge of farming.

I would suggest that the Farmer's & Dairymen's Association appoint a commitee to wait on the Government and urge them to establish an Agricultural College and Experimental Farm in New Brunswick,

I may say that I would not advise a farmer to wait until an Agricultural College has been established in order to acquire a knowledge of farming, There is another source through which a farmer can become quite practical in his profession. I refer to the reading and putting into practice of what is put before the farmers and stockmen in the columns of our Agricultural Papers.

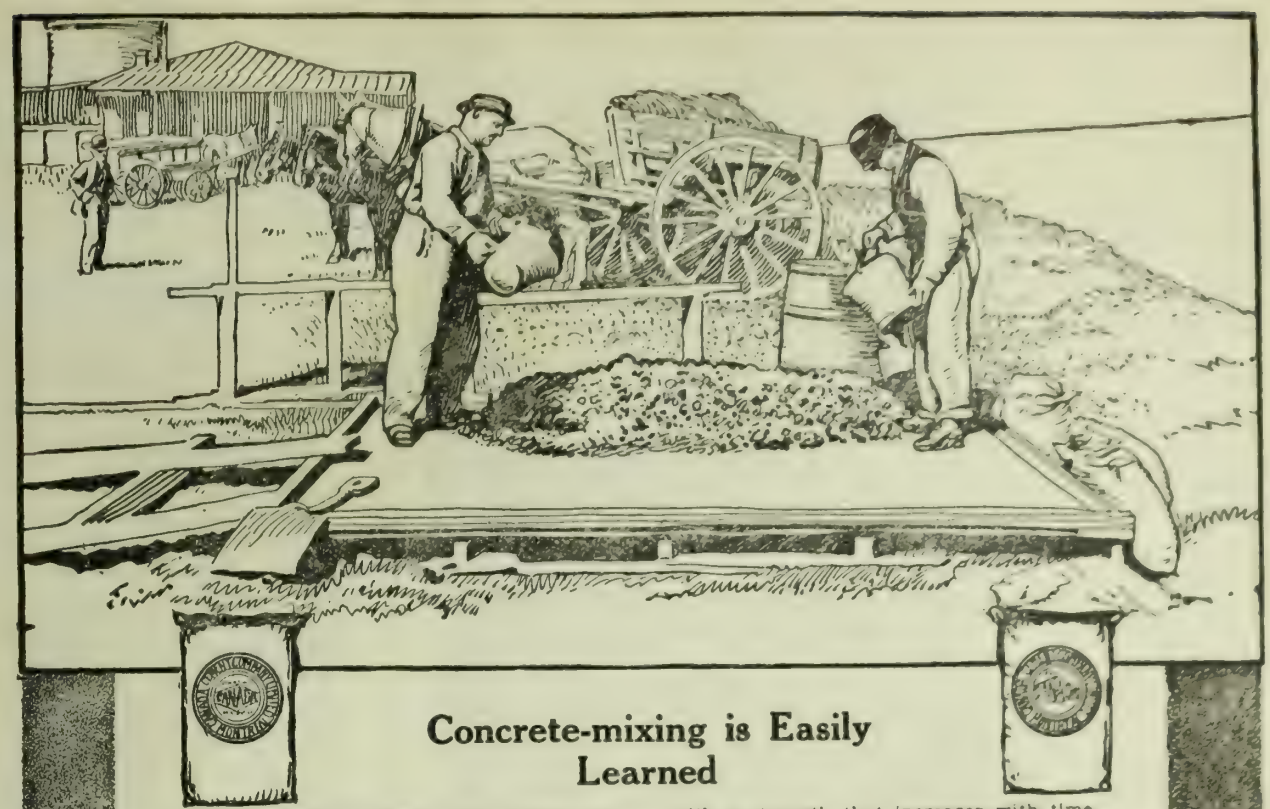
Every farmer should be a subscriber to some good farm paper and by concientiously reading and putting into practice what is put forth in the columns of any of the leading agricultural journals, he will gradually become practical in his methods even before he can realize it. And his evenings may be spent to good advantage if instead of reading some worthless novels or daily papers, he would sit by the fire and educate himself to be practical in nearly every branch of farm work as it is advocated in those good Farm Journals.

I feel if some of my suggestions would be carried out that Agriculture and Live Stock would soon show a marked improvement. Farmers will learn to be more practical and New Brunswick will become what she was destined to be, second to no other Province in Canada—John P. Barrett, East St. John. N. B.

SUNBURY COUNTY.

I cannot help feeling a certain amount of pleasure in presenting you the report for the County of Sunbury. While it is the oldest and at one time the largest County in the Province, it has been so carved up that with the exception of St. John it is the smallest in area and is the smallest in population; but Gentlemen, it is within the boundaries of this little County in the parishes of Maugerville and Sheffield that one of the first English settlements was established.

While in attendance at the Congress, held in this City a few days ago, I could hardly keep my seat while delegates from different sections arose and in turn of eulogy recommended their several localities as the one place most desirable. Now Mr. President and Gentlemen I am going to have my innings. In our fair County we have some of the very best intervale farms in the Province, which are not only unsurpassed for the raising of hay and all kinds of vegetables,



Concrete-mixing is Easily Learned

IT is no more difficult than mixing bran mash, once the simple instructions have been read.

The materials—sand, crushed rock or gravel and cement—each play a separate part. The rock provides the bulk of volume at very low cost. The sand fills in all crevices between the pieces of rock or gravel. The cement, mixed with water, forms a "bond," in other words a rocky "glue," that binds the other materials firmly together with a strength that increases with time.

Concrete is really artificial rock, more firmly bound together than natural rock, which often has cracks, veins, fissures and other weaknesses.

Any farmer can learn how to mix Concrete and to apply it to the hundreds of uses to which it is fitted.

But in order to be absolutely sure that his proportions are correct and that his materials are properly suited to the purpose, he should send for the book,

"WHAT THE FARMER CAN DO WITH CONCRETE,"

and read the careful directions for mixing Concrete for all purposes. It also describes in detail hundreds of ways in which Concrete may be used to make the farm more comfortable, more convenient, more profitable and more valuable.

Just send us your name and address—in a letter or on a postal—and the book will be sent to you by return mail free. Address

Canada Cement Company, Ltd., 22-32 National Bank Building, Montreal.

SEND ME YOUR BOOK.

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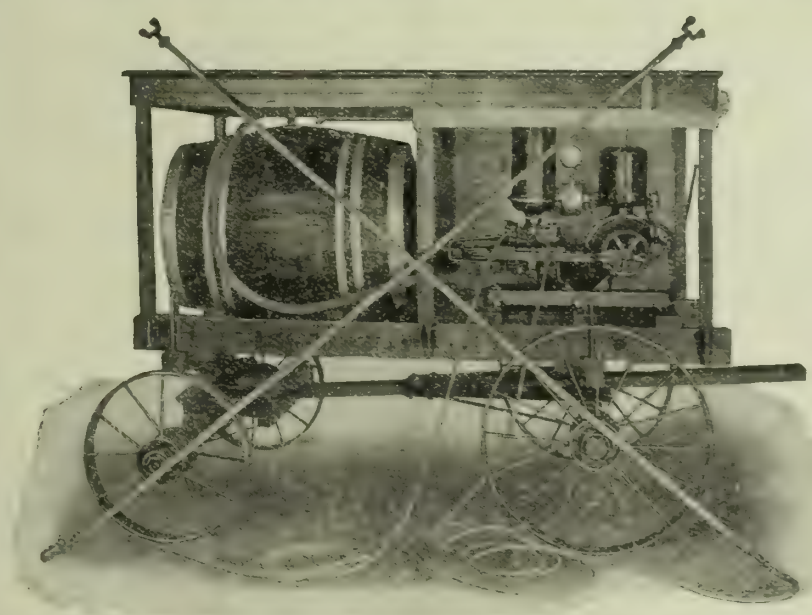
"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity. It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

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Port Williams, N. S.

Catalogue Sent on Application.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

You will look a good while before you find a better medicine for coughs and colds than Chamberlain's Cough Remedy. It not only gives relief—it cures. Try it when you have a cough or cold, and you are certain to be pleased with the prompt cure which

but cannot be beaten in most respects for market gardening, and some of our intervale farms have excellent orchards which are doing splendidly when taken proper care of. Now right here I will give a few of the reasons for the great fertility of our soil. In the first place our soil is all what we call made land, consisting of the annual deposit from the river St. John. Some present may question this, but I think I can give ample proof for my ascertion from the fact, that in digging a well on my father's farm, we came to a deposit of rushes at a depth of over twenty feet, which when uncovered looked as natural as if they had only been growing the year before. Of course they disappeared almost as soon as they were exposed to the air.

Another source of fertility is the annual overflow which still covers the lower portion of our farms during the early Spring, and leaves a deposit which enriches the soil very materially.

Some present may ask: "Why is your whole County intervale?" Not by any means. We have some most excellent upland farms. I think the equal of any in the Province, which are eminently fitted for the raising of potatoes and all kinds of grain; also for the growing of apples; and Gentlemen let me tell you right here that I do not think it will be many years before the St. John River Valley Fruit Farms will be as noted as the Annapolis Valley ones are at present.

As to the crop report for the present year, I would say that with the two exceptions of buckwheat and potatoes, our crops were about average. Buckwheat being away below and potatoes far above, for taking 60 barrels as an average yield per acre, in some instances they went as high as 125 and in one case a farmer told me his whole crop was yielding at the rate of 150 barrels. Now I will take 100 per cent. as representing a full crop and will give you the averages as nearly as I could ascertain and although they may not be strictly accurate, I think you will find them fairly so.

Potatoes	100	per	cent.
Turnips	90	"	"
Carrots	85	"	"
Beets	90	"	"
Mangels	90	"	"
Parsnips	90	"	"
Hay	90	"	"
Corn (sweet)	100	"	"
Wheat			
Barley	95	"	"
Oats	80	"	"
Buckwheat	25	"	"
Cucumbers (for market)	100	"	"
Cucumbers (for pickles) (low average due to bad seed furnished by factory).	50	"	"
Onions	90	"	"
Tomatoes	90	"	"
And other garden truck about	90	"	"

—Ashley Harrison.

VICTORIA COUNTY.

The general character of the past season has been very favorable for doing farm work. The last part of April the snow was all off the ground.

The first part of May the farmers commenced to put in their crop.

The hay crop was early and 80 per cent. of an average crop, but housed in a good condition. Berries were plentiful in this upper county, more so than they have been for a good many seasons.

Grains, of all kinds, yielded about average crops. Potatoes turned out from 80 to 100 bbls. of good quality per acre.

There are four Agricultural Societies in Victoria County, which have formed a seed fair association and will hold a seed exhibition this Spring, in the town of Perth, on the 4th day of April, for the purpose of securing good seed, and also to encourage the farmers in the selection of good seed.

The apple crop was about an average.

I would suggest that the Farmers' and Dairymen's Association urge upon the local Government the neccessity of establishing a cheap money rate, to assist in the colonisation of the Crown Lands.—Carl O. Hansen.

YORK COUNTY.

In drawing up this short report on the condition of this County from the agricultural standpoint, it has been brought to my notice that there is a need of some regular correspondence between the more progressive farmers in different localities in regard to the overcoming of climatic conditions by artificial means, the return from their crops, and their different experiments in farming and stock raising along scientific lines. For lack of this, my report must be more or less of a very local nature, and the smaller the locality, the less valuable are the observations however accurate they may be.

Generally speaking the farmers have had a fair return for their labours this past season. Owing to an early drought the grain crop, especially the buckwheat, has not been up to the average in this County, but the market has been strong and the crop on the whole has been profitable.

Handling, as I do a good deal of oats for sale, I have noticed that western oats can not compete with ours in open market, owing to the noxious weed seeds and dirt in almost every sack imported. Many parts of this County grow excellent wheat, but it is of little value to the farmer in nearly every instance, because there is no mill to grind it. In the Stanley—Nashwaak district I have seen considerable excellent wheat cracked for feed this past year on this account, and the farmers in that locality should endeavour to obtain the government subsidy and have a mill erected at once.

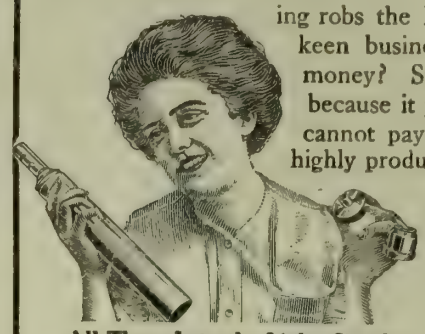
The root crop has been slightly below the average the past year as has also the potato crop, but with the latter this was more than compensated for by the excellent market, potatoes in many places selling from $1.30 to $1.50 per bbl. from the field.

Many farmers in this County were not in a position to reap the large reward which might have been theirs from the phenominal apple production this last year. On account of lack of scientific growing, packing and marketing of our apples, we were not able to compete in the market with the growers in Nova Scotia and Ontario who use more up-to-date methods. I sincerely hope the farmers in York County will give this interesting and lucrative branch of their work more careful attention in the future and confidently predict that many sections in this County will be found to be second to none in Canada as apple producing localities.

The hay crop this past season has been well above the average, and in conclusion I wish to point out one more instance where I believe the farmers in York County allow money which should be theirs, slip through their fingers. This past season I have bought and shipped upwards of one hundred carloads of hay, paying $9.00 and $9.50 per ton for the same. This is only a small fraction of the hay exported from the County. At the same time we are importing carload after carload of beef at a high price. I believe our hay is worth more than $9.00 per ton as a beef producer. Why can we not feed this hay at a good profit? With the Valley Road building in the near future, the demand for beef will be great while there is practically none available in this County.—Jas. G. Douglass.

WHERE MONEY IS MADE

Finest homes, biggest barns, heaviest crops are found on dairy farms. Dairy farming improves the land. Wheat or similar crops without dairying robs the land. Why not follow the lead of keen business farmers who are making most money? Such men use highly productive land because it pays them profits which inferior land cannot pay, and they use and recommend the highly productive



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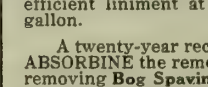
for similar good reasons. Tubulars have twice the skimming force of others, skim twice as clean, pay profits no other can pay.

The widely known T. Eaton Estate, here shown, near Georgetown, Ont., is but one instance out of many too numerous to mention. Dairy Tubulars are used both on this farm and at Mrs. Eaton's summer home.

No disks in dairy Tubulars. Easy to clean. Wear a lifetime. Guaranteed forever by the oldest separator concern on this continent. One-quarter to twice as much butter as setting milk in pans or cans. Tubulars produce enough more every year over next best separator to pay a big part of the price of the Tubular.



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This means that ABSORBINE applied to an open sore or wound, not only makes it aseptically clean, but **kills the germs** and causes a healthy healing. This is why ABSORBINE is so successful in **Poll Evil, Fistula, Quittor, Wire Cuts,** etc. No danger of infection or proud flesh formations where ABSORBINE is used.

Especially if your horse is a valuable one it is necessary that you use ABSORBINE, as you surely cannot afford to experiment with blisters, "hit-or-miss" or toxic liniments. That is one reason why trainers and breeders of high-grade stock use ABSORBINE exclusively.

The discutient and resolvent properties of ABSORBINE are positive, which accounts for the promptness and certainty with which this liniment permanently removes soft and calloused bunches wherever they may be located.

ABSORBINE is very penetrating and soothing, consequently **stops lameness** promptly and **allays pain.**

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MR. W. F. YOUNG SEPT. 14, 1911.

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Dear Sir,—We recently made an exhaustive test of Absorbine Jr. to determine its efficiency for killing germs. We made numerous tests to determine the dilution, the length of time required to kill disease-producing germs, and we find that your Absorbine Jr. in a dilution of 25 p.c. kills the staphylococcus aureus, the common pus-producing germ, in six minutes; that a 10 p.c. solution kills the bacillus coli, an organism similiar to typhoid bacillus, in three minutes, and that a 10 p.c. solution also kills diptheria germs in four minutes.

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THE EMERSON LABORATORY,

(Signed) Herbert C. Emerson.

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W. F. YOUNG, P. D. F., 124 Temple St., Springfield, Mass.

The Canadian Farmer—His Past, Present and Future.

(Continued from page 483).

Brunswick to form themselves into a combine to regulate the prices of all farm produce. They should have Provincial and County organizers, and business meetings held in every Parish at least once a month. Hitherto the larger part of the profits have gone into the pockets of the middlemen. We want that rule reversed, and in the future we must have the profit between the producer, and the consumer, even if we have to eliminate the middleman altogether. The production of meats, poultry, eggs, vegetables, fruit, dairy products, grain and hay mean very hard work and heavy expense for the farmer and his profits in this Province are small, in some things he is producing, often at a loss. For instance, the price of potatoes in this market is usually about $1.00 per bbl., this winter, owing to a scarcity the price has gone up to $2.50. The former price is a ruinous one as they cannot be raised for that figure except at a loss. The latter figures mark a new

Mr. Lewis Smith

The new President of the New Brunswick Farmers and Dairymens' Association.

era in the price of potatoes, as they have seldom or never reached that price in this market before, and considering the labor, and cost of production, it is a price that should be maintained. Butter is very scarce in the St. Stephen market at the present time. Storekeepers have not half enough to supply their customers. The reason for this condition is that the price of butter has not advanced with the price of feed for cows. Cows must be well fed to produce butter in the winter. If the price of butter is 25 cents per lb. and the cost of production is 30 cents, it does not need a very brilliant mathematician to forecast the result. With the increased cost of living in every department, there must be arranged for the farmer a new scale of prices, that will enable him to produce the food the world must have, at a profit to himself that will enable him to retain the position of honour and independence, he has worked so hard to win.

Much of the past and present success of the farmer is due to the faithful co-operation of his wife and daughters. Many a man would have become discouraged and have given up in despair if it had not been for the encouragement and sympathy of his wife, as much to her as to the farmer himself is the credit due to the wonderful advancement made in agriculture during the past years, and as an Empire builder she will not be found wanting when this country becomes a great nation.

THE FUTURE.

What has the future in store for us? Just this, we are going to be represented in Parliament. Where there is one farmer there now, there will be ten and from that to twenty, until he is at last predominant in the Legislatures of these Provinces. And will he stop there? Not by any means. There will also be a majority of farmers in the Federal Parliament at Ottawa. How are we to accomplish all this? I will tell you in confidence and in all earnestness, that this result can be brought about within a very short time, and in only one way. Listen! Organize all over this great country of ours, unite as one man. Form a new party called, The People's Party, and put in the field only farmers as candidates for election in rural constituences, vote for them to a man, and any time after that when the Federal Parliament meets there will be the most notable assemblage of farmers ever seen on Parliament Hill or elsewhere. The Premier a farmer, at least one-half of the Cabinet Ministers farmers, and a majority of the House the same. When this is accomplished, prosperity will reign from ocean to ocean in which all classes will participate as it will be a government of, and for the people. We will have the highways widened, levelled up, and graded, over which motor cars and horse vehicles may go to and fro with all ease. The whole face of nature will be changed by the roads as level and hard as a race track. There will be beautiful farms, and buildings of modern construction, magnificent flocks and herds of pure-bred stock, and poultry. All modern conveniences will be in the farmers' home. The telephone lines will be owned by the government, or prices controlled by a government commission. Money will be more plentiful and interest correspondingly low. Modern farm machinery will be less cumbersome and more effective. Electric power will be used where available. The water powers that are now running to waste will be harnessed and used to furnish electric power to run the machinery of whole communities miles away and also to furnish all farm buildings with electric lights. The farmer of the future is destined to be the man of the century. He will be sought after in civil, political, and social life, and he will be regarded as what he really is, and what all the past years of toil have led up to. The builder of this great Empire, Canada.

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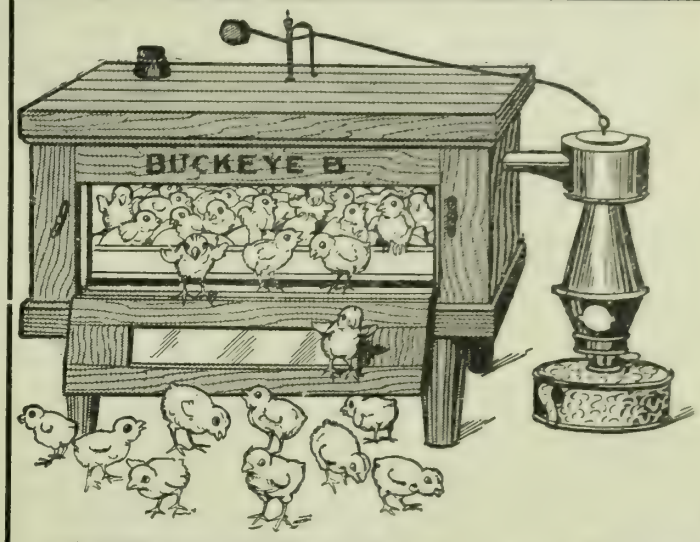

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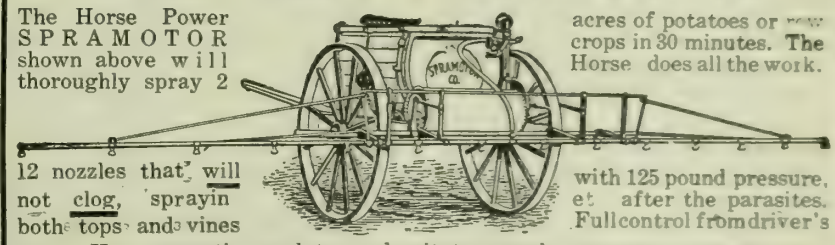
THE PEST PARALYSER

The Horse Power SPRAMOTOR shown above will thoroughly spray 2 acres of potatoes or row crops in 30 minutes. The Horse does all the work.



12 nozzles that will not clog, sprayin both tops and vines with 125 pound pressure, et after the parasites. Fullcontrol fromdriver's seat. Has automatic regulator and agitator nozzle protector, pressure relief, 12 gal. air-pressure tank, draining, air and controlling cocks. Equally efficient on row crops or orchards. Made for 1 or 2 horses or hand. Awarded gold medals at National Horticultural Con ress. Write for free treatise on crop diseases. AGENTS WANTED.

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KNOCKS SPOTS OFF ANYTHING!!!

First spraying just before the buds burst use 4 gals. NIAGARA LIME-SULPHUR to 40 gals. spray barrel. This will rid trees of Oyster Shell bark louse, aphis eggs and other objectionable pests, if put on in April. Clean trees mean sound fruit.

Spraying at the proper time will perhaps mean hundreds of dollars profit when you come to sell your fruit.

Spraying is an Insurance, differing from an Insurance Policy onpersonal property, inasmuch that on buildings a loss has to happen before the insurer recovers. Spraying with NIAGARA LIME-SULPHUR and SWIFT'S ARSENATE OF LEAD protects your fruit crop against destruction from the dreaded Black Spot and ravages of insects.

Place your order at once, our factory is now running. A one cent postal card will give you our Spray Calender telling how to use our Spray to the best advantage.

Niagara Spray Co. of Nova Scotia Limited,

KENTVILLE, Nova Scotia.

Victoria County Seed Fair.

Victoria County has again shown her progression by organizing a Seed Grower's Asociation, and on April 4th the first fair was held in Dionne's Sample Rooms, Perth, and was a decided success. There were over one hundred exhibits, a large number considering the short time the farmers had to prepare for it, as the Association was only organized Feb. 24th 1912.

S. J. Moore, Maritime Seed Inspector, was the judge and pronounced the samples of seed esxcellent in quality, especially Wheat, Oats and Beans. The exhibit of potatoes was large both in quantity and quality, most of the exhibitors putting size ahead of quality. This was due to inexperience, as scarcely any of the farmers around here had ever seen a seed fair before, and did not realize that it was potatoes fit for seed that was wanted. We hope to profit by the experience gained in this our first lesson on seed selection.

The following are the prize winners:—

Wheat, Red Fife, 1, Amos Smith; 2, David Curry; 3. Donald Innes; 4, J. W. Stevenson.

Wheat, White Fife, 1, Robert Porter; 2, Donald Innes; 3, David Curry; 4, Leo Miller.

Wheat, White Russian, 1, C. E. Pickett; 2, David Curry; 3, Alex Philip; 4, John Turner.

Oats, Banner, 1, David Curry; 2, J. W. Stevenson; 3, Donald Innes; 4, John Turner.

Oats, White Russian, 1, Alex Philip; 2, J. A. Graham; 3, Carl G. Hansen.

Oats, Any Variety, 1, Donald Innes; 2, J. W. Stevenson; 3, David Curry; 4, Arch Smith.

Oats, Black, 1, J. W. Stevenson; 2, Donald Innes; 3, David Curry.

Barley, 2 rowed, 1, Donald Innes; 2, Robert Henderson.

Barley, 6 rowed, 1, Donald Innes; 2, Alex Philip.

Buckwheat, Rough, 1, Amos Smith; 2, Donald Innes; 3, Robert Henderson: 4, John Turner.

Peas, Large White, 1, Alex Philip; 2, J. W. Stevenson; 3, David Curry; 4, Douald Innes.

Peas, Small, 1, J. W. Stevenson; 2, Donald Innes; 3, David Curry.

Beans, Yellow Eye, 1, Robert Porter; 2, J. W. Stevenson; 3, David Curry; 4, Donald Innes.

Beans, Any Variety, 1, J. W. Stevenson 2, Arch Smith; 3, David Curry.

Timothy Seed, 1, Carl G. Hansen.

Potatoes, Irish Cob., 1, Elijah Sisson; 2, Robert Henderson; 3, Carl G. Hansen; 4, Arch Smith.

Potatoes, Mountains, 1, T. H. Manyer; 2, Donald Innes; 3, E. A. Howlett; 4, Willie Sisson.

Potatoes, Carman, 1, John Turner; 2, J. W. Stevenson; 3, F. E. Hendersou.

Potatoes, White, Any Variety, 1, Chris Rasmussen; 2, T. H. Manyer; 3, Carl O. Hansen; 4, Carl G. Hansen.

Potatoes, Red, Any Variety, 1, Donald Innes; 2, Amos Smith; 3, Carl O. Hansen; 4, David Curry.

F. E. Henderson Sec. Treas.

Preventive Steps Regarding the Brown-Tail.

George F. O' Halloran, deputy minister of agriculture, has issued a circular giving notice of the regulations prepared in view of the alarming increase of the brown tail moth, which provide rigid penalties in case of failure to report and to take preventive measures.

The regulation under "The Destructive Insect and Pest Act" follows: "Any inspector entering any land nursery or other premises where there is reason to believe that any of the insects, pests or diseases hereinafter specified, and such instructions shall give instructions for the treatment or destruction of any tree, bush, crop or other vegetation or vegetable matter or the containers thereof, which may be found or suspected to be infested with any of the insects, pests or diseases hereinafter specified, and such instructions shall be carried out by the owner or lessee of the infected or suspected vegetation, vegetable matter or containers thereof, and such remedial treatment shall be carried out and continued untill the insect, pest or disease shall be deemed by the inspector to be exterminated."

Under this regulation it will be necessary for all owners of trees upon which nests of the brown tail moth occur, to remove such nests and burn them and, in the case of heavily infested trees and vegetation, to spray such trees or vegetation in strict accordance with the instructions given by the departments inspector's.

With regard to penalty, section 8 of the act says:

"Every person who contravenes any provision of this act, or any made thereunder, shall be liable, upon summary conviction, to a fine not exceeding $100 or to imprisonment for a term not exceeding six months, or to both fine and imprisonment."

Grow Your Own Dairy Feed.

Editor Maritime Farmer;

We are trying to be progressive in our farming methods and have purchased a grinder from Beaver Bros. Co. Springfield, Ohio which grinds the sheaf as it comes from the binder. We mix this ground grain and straw with ensilage and pulped turnips with a few pounds of cotton seed meal to balance. We feed this mixture twice a day and we find that it gives us good returns. Our aim is to grow all our own grain, oats, barley and peas, mixed in the ratio of one bushel oats, one peck barley and one gallon peas which we let ripen and instead of threshing we grind and feed as described. We call this the poor man's feed. Instead of trying to raise hay, spread all the manure you can spare on the oat field and you will get A. 1 crops that with my system, will make fine rations for your dairy cows and you will not have to buy so much heavy feed.

I trust the Maritime Farmer will continue to prosper in its good work. —J. D. Fraser, Pictou, N. S.

KING COLE TEA
More zest in your tea-cup!
More smack in its delicious enjoyment!
At last, expensive study of flavor-blending has perfected a fullness a richness, a smoothness of flavor that was once thought impossible.
Why it was thought impossible one sip of a cup of King Cole Tea will tell you it is so much nicer so far more satisfying in the grateful fullness of its flavor than any tea you ever tasted.
King Cole Tea is flavor-fuller.
YOU'LL LIKE THE FLAVOR.

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The Domo Separators are of the highest quality, well-built, and durable. They are close skimmers, turn easy, handsomely finished and guarateed Prices cut in two.

We gladly send a machine to you on free trial, FREIGHT PREPAID, and if you are not perfectly satisfied, return it to us at our expense. This liberal offer enables you to prove our statements, and that's what we mean, TEST IT AT OUR EXPENSE. We take ALL the risk. Can we offer anything more fair?

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FREE-FARM ACCOUNT BOOK

Bickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. **64 pages, for ink or pencil.** Not a cheap affair. Its quality is in keeping with **BICKMORE'S GALL CURE,** a soothing, healing salve, the old time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. Bickmore's Gall Cure heals and cures **Harness and Saddle Galls; Rope Burn, Cuts, Scratches, Grease Heel, etc.** You don't have to lay the horse off. **Bickmore's cures while the horse works.** Great thing for sore teats in cows. The work-horse trademark on every box. None genuine without it. Look for it when you go to buy and do not take a substitute. Farm account book is ready. No obligation. Send today.

WINGATE CHEMICAL CO., Canadian Distr's, 810 Notre Dame St. W., Montreal, Can.

Seed Oats For Sale

SELECT SEPARATED

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Maritime Province Farmers sowing our seed save twice over the cost.

Stocks in Great Demand

Order at once to ensure supply

Write for further information TO

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Summerside, *P. E. I.*

Eggs For Hatching.

Three pens mated up for spring trade. Columbian Wyandottes; S. C. Rhode Island Reds; Barred P. Rocks, Mammoth Pekin Ducks. Write for prices.

Stock for sale after June 1st.

BROOKSIDE POULTRY YARDS,
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Twenty-one Prizes with Twenty-Seven Exhibits.

Eggs from Prize Winning Brown and White Leghorns, Black and White Minorcas, and White Rocks. $1.25 per setting of 13. Peerless Incubators, easy terms of payment.

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EGGS ! EGGS ! EGGS !

From prize winning stock. Buff Orpingtons and S. C. Mottled Anconas. Eggs $1.50 per 15.

DEEP CREEK P. Y.
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FOR SALE

Young Bershire Pigs for delivery after April 1st, both sexes from large mature sows. All registered stock. Correspondence solicited.

My Barred P. Rocks won first prize for mating pen at Charlotte Co. Exhibition last fall. Eggs for hatching from these fine birds, and a good hatch guaranteed if properly cared for. Price of eggs on application.

W. S. POOLE,
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FOR SALE

Two Pure Bred Ayrshire Heifers, good milkers, three years old in June. Also one Pure bred Ayrshire Bull, four months old.

Apply to
HOWARD McKENDY,
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Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all Dealers.

FLORICULTURE.

H. A. S., writes:—Will you kindly give me information, through the Maritime Farmer of next month re what sort of soil and light is necessary for successful culture of Pansies and Mignonette. Please tell me also what care a Rubber Plant needs. Every year, so far, our Pansies have died off in August. The stems of the flowers were very short and they soon died. Do they need much sun or do they grow better in the shade? Does the Lily of the Valley require sunshine? What is the best fertilizer to use on Rose bushes?

Pansies require a light soil and a partially shaded location. They should not, however, be placed directly under large trees where they would be liable to receive the drip from damp foliage; this especially applies to the coast, where the fog makes the conditions such that little besides grass will grow under dense trees. Beds on the north side of buildings or fences are preferable and the soil should be enriched each season with rotted manure. Mignonettes, on the other hand, require plenty of sunlight and should never be planted in a very shady place. The Lily of the Valley likes shade and moisture and will do well under trees if well fertilized. Well rotted or composted manure is best for all kinds of plants including Roses. When this is not available, use liquid cow manure, applying once a week.

Do not use chemical manure, such as superphosphate on Roses or tender garden plants.

The difficulty with correspondant's Pansies is probably poor and dry soil and neglect in removing the seed pods from plants; as soon as a bloom fades it should be cut off. Pansies mature quickly and if allowed to seed freely, they lose their vitality by August, and succumb to dry conditions, much sooner than the harder wooded plants. Planting quite thickly in the bed also prolongs the season of growth, if the soil is fertile.

The Rubber Plant requires a light, rich soil, with good drainage, plenty of light but no sunshine, frequent washing of foliage both upper and under sides of leaves and a fairly even temperature. The soil should be kept moist; but not soaked with water and great care taken that no water ever stands in the jardineire or saucer, about the bottom of the pot.

Repot Palms, Rubber Plants and Ferns that are pot-bound at once, using plenty of charcoal, broken pots, etc., in the bottom of the pot to assist in good drainage, and packing the new soil firmly about the old ball of roots with a stick.

Cut back old Geraniums, Fuchsias, etc., so that they will not be straggly. Geraniums, especially, will stand a severe pruning.

Plant Verbenas, Asters and Lobelia seed in small flat boxes or saucers for early plants.

It is not necessary to put glass over seed boxes at this season or the year, but if used, it should be removed as soon as the first plants appear.

Transplant Annuals from the seed boxes into shallow or small pots as soon as the character leaves are fully developed.

Big Ben

**To sleep late's pleasant, now and then,
Make it Sunday morn—says Big Ben**

Big Ben is an alarm clock that's on the job every minute of the day. He *rings* on time, he *runs* on time, he *stays* on time.

He *weighs* three times as much as the average alarm clock, he *rings* three times as loud, he *lasts* three times as long.

He has a great big dial you can easily read in the *dim morning light*—a cheerful, deep toned voice that will wake you on your *sleepiest mornings* — large, strong winding keys that are a *pleasure to wind*—selective alarm calls that ring *just when you want* and either way you want, steadily for *five* minutes or intermittently for *ten*.

He's punctual, lasting, handsome and the best *insurance* against oversleep that's ever been heard of. His work doesn't end with the morning call, he's a good reliable time keeper for *all day* use and he's good looking enough for any surroundings.

5,000 Canadian dealers have already adopted him. His price is $3.00 anywhere — A community of clockmakers stands back of him. *Westclox, La Salle, Illinois* — If you cannot find him at your dealer's, a money order sent to them will bring him to you duty charges prepaid.

FREE—MAGNIFICENT PHONOGRAPH—FREE

Here is the most stupendous offer ever made by any reliable firm. We will give away absolutely without one cent of cost, 1,000 of these magnificent Phonographs, or Talking Machines, complete with your choice out of hundreds of the newest and most popular records.

This is the chance of a lifetime **An absolutely honest offer**

These grand phonographs are not toys, but genuine talking machines, manufactured and guaranteed by one of the largest European makers of high grade Phonographs. It talks, sings, plays orchestra, instrumental, or band music, tells funny stories, and, in fact, **can do everything you would expect of a $50 machine.** It uses a regular cylinder record, of which we send you a large list to choose from. It winds up and is run by a regular clockwork motor, has a special governor to regulate and control speed, nickel plated sound producer fitted with perpetual needle. It is so entirely simple and easy to operate that any child can play it. It is full size, newest Lyra shape, beautifully enamelled and finished throughout, and fitted with a bright metal horn. You can put music, entertainment, and constant pleasure for everybody into your home, and you don't need to throw away your money by paying $40.00 to $50.00 for a talking machine, because you can get this one absolutely **FREE** for only a few minutes easy work.

Now all we ask you to do is to just send us your name and address, and let us send you, postage paid, and without one cent in advance, only 6 boxes of the famous Dr. Edson's Life Building Blood Tonic and Nerve Pills to distribute among your friends at our special introduction offer of only 25c. a box. They are the greatest remedy on earth for weak and impure conditions of the blood, nervousness, dyspepsia, stomach and kidney trouble, and a great Tonic and Life Builder. With them we will send you, also a sample of Dr. Edson's Harmless Headache Tablets and 3 boxes of Edson's Little Wonder Stomach and Liver Pills, making a total of only 14 boxes in all, and you will sell them all in a few minutes because every purchaser of a trial box of these famous remedies can receive free from us, a grand present of fine silverware or gold finished cuff links or ring. When you have sold the 14 boxes, return us the money, only $3.50, and this grand phonograph and one record of your choice, together with an opportunity to get dozens of new records free, will be forwarded to you at once.

REMEMBER. We are bound to secure a national distribution for these grand remedies, no matter how much it costs us, and when we say we will give you this grand phonograph complete for selling only 14 boxes at 25c., we will do so. Do not miss this wonderful opportunity, but write to-day to

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Gates' Life of Man BITTERS

is made of the fresh Roots, Herbs, Buds, Barks and Plants.

THE PEOPLES' MEDICINE

Expressly to cure disease, and in chronic cases the INVIGORATING SYRUP is used in connection to regulate the bowels. Everyone should take a few Bottles

SPRING and FALL

to purify the blood.

The cheapest and best on the market, and has been in use in Nova Scotia for over 70 years.

EMPIRE LINIMENT

NONE BETTER.

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A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, inclnding the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

$10 takes them. Money refunded if not as represented. Address

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TAMLIN'S
ENGLISH
NONPAREIL

Hot Water Incubator, holder of Worlds championship in hatching. Awarded 53 Gold Medals. Used by the Royal Families of England, and 95 per cent of the Governments of the World. Twenty years ahead of every other make. Thermometer registers on outside of Egg drawer. Lamp burns thirty days with one filling, self-regulating. Finished like a piano. Will last forty years. Made in London, England. Different from common makes. Canadian customers joyful with results. If you send 5c. in postage for mailing, we will send you FREE our beautiful Illustrated Catalogue 1912 as well as a neat little book on Poultry diseases and their cure.

Freight prepaid on Incubators to any station east of B. C. SEND TODAY TO

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Rocks! Rocks! Rocks!

Eggs for hatching from splendid purebred utility stock. Barred, Buff and White Rocks. I am not in the show business, but in the business for utility, that's what you need. $2.00 for 15 eggs.

J. B. DAGGETT,
Centerville, N. B.

Rural Vs. Urban Life.

Editor Maritime Farmer:—

In these days when we hear so much of the "back to the land" movement, very naturally we are interested in both sides of the question, and the reasons back of the agitation Not only are people of the present day taking a greater interest in the life out of doors, and developing a fondness for a simple and more rational mode of living than is found in the average city but what is more important, they are beginning to look at the question from a business standpoint, and are coming to realize that an agricultural pursuit offers just as good opportunity for a living, and even for the making of money, as any other branch of business. In our complex system of civilization, life becomes one great struggle for existence—and the survival of the fittest. The competitive spirit enters too much into everything. We strive for things we do not always want, merly because others have them. We do not when to stop and be satisfied. A man is not necessarily lacking in ambition because he ceases to strive for that which would give him no pleasure to possess, nor any joy in the getting. The most desirable thing in life is happiness, and happiness means contentment. How many men in our cities today are really contented with their lot ? The rich may be, but the average man working for a salary (like ourselves)is usually unsatisfied, simply because he has not certain things possessed by his more fortunate neighbors. The majority of us live beyond our means : we may not think we do, but it is true nevertheless,for any man, depending solely upon his salary, who does not put by a little each year for the proverbial "rainy day," is in reality going behind.

We worry too much (most of us because we have to) The ever increasing cost of living worries us : our poor health, caused by indoor life, high living and late hours, worries. Our life is too strenuous.

What about the farmer?. Take those of the poorer class who do not make money, they still make a good comfortable living—how many city men make any more than that . Take the average farmer : he owns a comfortable home, has the best of food—and lots of it, works hard with little real worry, lives a natural, healthy, outdoor life, is his own boss and can take a day off when he feels like it (can we do so, even if our own boss, can we afford to neglect our business for a day's pleasure)? He may not handle much actual cash but he has the things which you and I have to buy with our money, and he gets them cheaper and better.

Farming today is not the narrow, primitive, pioneer existence it was a hundred years ago ; the farmer has progressed, just as we have. The prosperous ones enjoy all the comforts and conveniences of modern times, they live in good houses, furnace heated, fitted with water and bath ; most of them have telephones, and some automobiles, and they send their children to college. The successful farmer of today knows that there is just as much room for brains as brawn, in his business, and he can use his own brains to employ men with more of the latter, and show a good profit from the transaction.

Did you ever stop to compare the artificial, hurry-and-worry life of the city man, cooped up in a steam-heated office eight or ten hours each day, and two weeks' holiday a year; with the life of a farmer, who gets up in

YOUR CROPS

can get more nitrogen out of one single sack of

Nitrate of Soda

than out of a two-horse wagon load of manure. The Nitrogen in Chilean Nitrate of Soda is 100% available and is *immediately* so the day you apply it! It produces

More powerful growth and healthier, bigger plants. Easy to handle, clean, cheap, odorless, free from fillers.

Write to us for valuable free literature on the crops that mean a living to you. A post card will bring it to you.

Dr. William S. Myers Director of Chilean Propaganda **17 Madison Ave., New York**

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5 WONDERFUL Presents

Consisting of TEN PIECES

FREE TO GIRLS

The GREATEST Offer Ever Made

HOW TO GET ALL FIVE PRESENTS, FREE

JUST send us your name and address and you will receive by return of mail only twelve (12) lovely red and gold boxes of Dr. Edson's Famous New Skin Carbolic Salve, which we want you to introduce for us, at only twenty-five cents per box. It is the greatest ointment in the world for burns, cuts, scalds, bruises and all skin diseases, and you will sell it very quickly because with every box we will send you a lovely gold finished engraved Brooch, to give **FREE** to every purchaser. You are sure to sell them all in a few minutes. Return our money, only $3.00 when sold and we will promptly ship you **All Five Magnificent Presents (the whole ten pieces)** exactly as represented. We arrange to stand payment of all delivery charges.

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1. **Big Paris Beauty Doll, nearly 16 inches tall** beautifully dressed with picture hat fancy dress, shoes, stockings, lace-trimmed underwear, etc., real sleeping eyes, curly hair and jointed arms, legs and head, truly a grand doll.
2. **Magnificent Real Brown Imported German Reed Doll Carriage,** big and handsome with real enamelled steel wheels and axles, bent wood handles and big enough for a whole doll family.
3. **Lovely Silk Finished Parasol for the Doll Carriage,** can open and shut like a real baby parasol. It will protect dolly from the sun or rain and gives a very handsome appearance to the lovely doll carriage.
4. **This Great Little Five Piece Fairy Kitchen Set,** the loveliest little pastry and baking set you have ever seen.
5. **Handsome Gold-Laid Jewelled Ring** set with a sparkling imitation gem.

We are spending thousands of dollars to introduce this famous product. You take no risk--if you cannot sell the goods you simply return them to us.

NATIONAL SALES CO., LTD.
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"WILLOW FARM" FOR SALE.

"Willow Farm" is situated two miles from the centre of the town of Amherst, which is a growing manufacturing town of over nine thousand population, and one of the best markets in Canada. There is a good public school within forty rods of the house.

The farm consists of one hundred and twenty three acres, forty three acres of marsh and eighty of upland, sixty five of which are under circulation.

The upland is in a high state of cultivation as a large stock of cattle have always been kept on the place and for several years a short rotation has been followed. The soil varies some but is mostly a good loam quite free from stone and easily worked. The pastures are well watered by springs and brooks.

The house is 28x38 feet, two stories with ell 16x20 with good cellar, heated by furnace. Barn 50x80 feet with basement stable which will accomodate forty cattle and six horses, also root cellar holding two thousand bushels. Carriage and impliment shed 26x36 feet and other out buildings all in first-class repair.

The fencing is nearly all of woven wire and in good order,

A wood lot of 70 acres, three miles from the farm will be included in the sale.

A retail milk trade of about one hnndred and twenty quarts a day will be sold with the farm if desired.

This is one of the finest live stock and dairy farms in Cumberland County ; a beautiful home and a splendid opportunity for the right man. Apply to

C. HOWARD BLACK, Owner,
Amherst, Nova Scotia.

Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

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We are buyers and receivers of Farm Produce viz:

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Quality Goods Only Wanted

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JOHN HOPKINS

St. John, New Branswick.

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STRAWBERRY PLANTS
That Are Great Yielders

We grow Glen Mary, Sample, Wm. Belt, Senator Dunlap, and other leading varieties of Strawberry Plants. Red, Yellow and Black Raspberry, Blackberry and all Small Fruit at LOWEST PRICES. For LARGE CROPS and QUICK RETURNS plant our NORTHERN GROWN STOCK.

150 Strawberry plants (assorted) or 74 Raspberry plants (assorted) postpaid for $1.00.

Bees and Bee-keepers' Supplies

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New Season Costumes
From Maker to Wearer

FASHION Catalogue, beautifully illustrated, sent free to any lady reader who sends post card request naming The Maritime Farmer. The idea is to make you acquainted with our mail order business, and show you how to secure a stylish, up-to-date new season costume, tailored to your measure, at Manufacturer's price. This business has been established over 25 years—located in the one premises for a quarter of a century. METROPOLITAN MANUFACTURING CO Limited, Toronto, Can

MUMFORD BROS.
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Personal attention given to sales of u tter, Eggs, Hogs, Beef, Poultry, Fruit. Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
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Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits. Simple home treatment. 25 years' success.

Testimonials from all parts of the world. Over 1,000 in one year.

TRENCH'S REMEDIES, LIMITED
107 St. James' Chambers, Toronto.

"My little son had a very severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was as well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all Dealers.

the morning feeling strong and vigorous, eats a square meal while we are yet asleep, works all day for himself in the open air surrounded by all that is beautiful and fresh and bright in Nature, who quits work tired but in good spirits, and who goes to rest "weary and content and undishonored." Except for a two weeks' vacation, the average city man sees very little of the country and the woods and God's lovely out-of-doors. On hot summer nights he sits by an open window looking into someone's back yard, trying to get a little rest and enjoyment, although often times the heat is then most unendurable, and the clang of tramcar gongs and other street noises make enjoyment a mockery.

The farmer sits on his verandah, drinking in the cool night breeze, which comes to him laden with the perfume of wild flowers, and as his gaze wanders across the green fields to the distant sunset, he is filled with a sense of peace and quiet and contentment that we in the cities know not of. City workers are beginning to think of these things to-day more than ever in the past, and in a very few years we shall see our rural districts growing in population instead of decreasing.

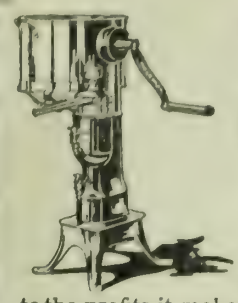
Our Agricultural Colleges are doing a splendid work in promoting an interest in farming; and provide, practically free of charge, courses in every branch of agriculture, both scientific and practical, so that not only those engaged in these pursuits may acquire additional knowledge along their own particular line, but anyone who desires to take up agriculture, may, with the courses provided and practical experience gained during the summer, qualify himself to enter upon a business which is not only profitable, but offers an ideal life.—"City," Halifax, N. S.

Potato Canker.

The scarcity of potatoes in Canada this year and the consequent importation of tubers may have a serious effect on the health of the consumers and also on the future of potato growing in Canada. The trouble is the disease which exists in potatoes from Gregt Britain, Ireland and other European countries.

A bulletin issued by H. T. Gussow, Dominion botanist, at the experimental farm, explains how potato canker has found its way across the Atlantic into Newfoundland with potatoes imported from Europe. Potato canker, he pointed out, is a disease at present unknown in Canada. It is one of the most serious diseases affecting not only the farm lands on which potatoes are grown, but the disease is also decidedly injurious to the health of the consumer of affected potatoes. Boiling does not destroy the injurious properties.

The disease is characterized by nodular excresences which may often be larger than the tuber itself. These cankers affect the eyes of the potatoes and are very small in the early stages. Any tubers found with smaller or larger outgrowth rising from where the eyes are situated should under no consideration be used for seed or table purposes. Farmers and consumers should be exceedingly careful in using potatoes that may have been imported from Great Britain or the continent of Europe. Suspicious looking tubers should be destroyed by fire and not be thrown on the ground or the disease, if present, will establish itself permanently in the soil.



The Right Price To Pay For a Cream Separator

WHAT is the right price to pay for a cream separator? The price of the best, of course. The first cost of the best separator is so small, compared to the profits it makes—that you ought not to hesitate about paying for it. And the difference between an I H C and the next best is so marked, that you ought not to hesitate in deciding.

I H C Cream Separators Dairymaid and Bluebell

have made records on thousands of farms. They are famous everywhere for durability, close skimming, light running and easy-to-clean advantages. They are built for hard, twice-a-day service and many years of it. They have milk and dust-proof gears which are easily accessible; a patented dirt-arrester which removes the finest particles of dirt before the milk is separated; frame and moving parts protected from wear by phosphor bronze bushings; large shafts, bushings and bearings; also many other features which you will be interested to know about.

Call on the I H C Dealer

I H C Cream Harvesters are made in two styles—Dairymaid, chain drive, and Bluebell, gear drive—each in four sizes. The I H C local agent will give you catalogue and tell you all the facts, or, write the nearest branch house for catalogues and any special information you desire.

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International Harvester Company of America
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At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

Glenview Poultry Yards

BARRED PLYMOUTH ROCKS

Cockerel Matings — **Grove Hill Strain**

Three pens of the best blood of the famous "Crusader" line headed by three splendid cockerels direct from Grove Hill.

Pullet Matings, Grove Hill & Latham Strains

Four pens of show hens and pullets including many first prize winners at Amherst, Moncton, Fredericton and St. John.

White Wyandottes — **Regal Strain**

Two pens of the very finest "Regals" headed by First Prize Moncton males and including the birds that won all the firsts at two shows in 1911; First pen at Moncton, etc.

S. C. Rhode Island Reds — **Tompkins Strain**

Two pens headed by first prize cocks at the last Amherst and Moncton shows. Females include First Pen at Moncton and many other winners.

S. C. Brown Leghorns — **Grove Hill Strain**

Three pens of cockerel matings and one pullet mating. Fifteen out of twenty firsts in five years at Amherst; thirteen out of sixteen at three Moncton shows; and similar winnings wherever shown, should be sufficient recommendation of the quality of these Leghorns.

Eggs from all the above matings $2.00 per 15 straight

Address: Walter McMonagle & Son, Sussex, N. B.

Indigestion in Farm Animals.

Editor Maritime Farmer:—

I consider that fully 75 per cent. of all sickness in farm animals is caused by digestive trouble, most of which are easily preventible. In this article, I will endeavour to give a few suggestions by the way of prevention, which is so much better than cure. We are all aware that running naturally on pasture, farm animals rarely suffer from sickness of any kind; stable them and they are liable to all manner of diseases.

With horned cattle, indigestion, impaction and other forms of "stomach trouble," are always caused by faulty feeding, usually by sudden and violent changes in feed. As I am not a veterinary authority, I will not attempt to explain the action of different foods on the digestive tract, but the "observing" cattleman will see indications of this trouble early enough to prevent any serious illness.

Acute indigestion will often kill an animal quite suddenly unless relieved, and many cattle are found dead at the barn in the morning that were apparently all right the night before. The formation of gas in the first stomach has been so rapid and the pressure on the lungs so great that the animal has been simply shocked to death.

I know there are cases of this kind that seem to be hard luck, but an observing man, one who has trained himself to notice the condition of the animals under his charge, every time he passes them, (without even thinking of it), will usually notice some signs of trouble in time to remedy it. Everybody handling stock should be able to distinguish the grunt of contentment of a well filled stomach from the grunt of pain in an overloaded one, even at a distance from the cows, and it is this intelligent observing characteristic in some men that make them such successful stockmen.

Every farmer or owner of cattle should keep a supply of simple remedies "always on hand," such as Epsom salts, ginger, soda, etc., and as quickly as possible after any symptoms of indigestion are observed give (a fairly large cow, on a full stomach) 2 to 3 lbs. salts, five table-spoonfulls each ginger and soda, with plenty warm water, (I have often given a gallon). Then blanket warmly. Do everything with the idea of getting the stomach warmed up.

All veterinary works, that I ever saw or Veterinary Doctor, either, give entirely too small a dose of medicine for impaction in cattle, "We will give her this much first, and see in the morning," is no good; in the morning she is often dead, or a harder proposition to treat. Anyone who has ever seen the first stomach of a large cow opened out, will know what chance one lb. salts and a quart of water, would have in starting that load.

I have repeatedly seen cows given this treatment, and warm applications, chewing the cud in three hours. "After treatment" is important, and we must feed lightly on soft mashes for a few days, warming the water, and watch the cow carefully for some time. It is better to feed some conditioner for a few weeks to strengthen the walls of the stomach, before bringing her on to full feed.

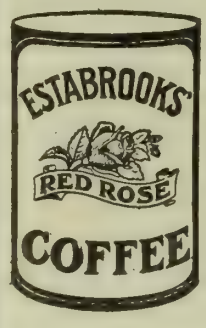
Where animals are properly fed on good, "well cured" feed, including turnips, trouble of this kind is seldom met, but if we would have "good luck" with stock , be on the lookout and act promptly and give medicine according to the size of the animal, and the weight of the load you wish to start, and in the case of a strong animal don't be afraid to give plenty at first.

Infaction of the mamyplies or third part of the stomach is not such a common ailment, and is usually found in cattle out of condition that have had a violent change of feed, or an over dose of some dry indigestible food. Give the same treatment, and if a passage of the bowels does not result, give 50 drops croton oil in linseed. I remember a case when I was a boy, that impressed me with the fact that a cow's stomach, can not only handle rough food, but can also, often stand very rough usage. One of our cows came home in the evening badly bloated and almost as soon as we noticed her, staggered and fell. Being alone at the time, and having seen cows tapped before, I drove my Jacknife into her stomach without seeming to let off much gas. Seeing the cow was going to suffocate, if not given relief, I secured a butcher-knife and made an opening large enough to put my hand in between the hip and first rib. This let the wind out of her in a hurry. I then gave salts, but did nothing to the wound. Next morning the medicine had operated, the cow was resting easily, with the air entering and leaving her stomach with every breath, and this cow lived, to rear calves again, although it was nearly three months before the opening closed up. This taught me that with a cow, where there is life, there is lots of hope.

Young calves are much more subject to indigestion than older cattle, and when being raised and fed from the pail, require very careful feeding. Our plan is, to feed the calf its mother's milk until it has fleshed up strong enough to be considered a fair veal, whether this takes one or four weeks. It is useless to change the calf from whole to skim milk unless it has started to put on flesh and every man must use his own judgment in this respect, as no general rule will apply to all calves; only I would

Perfect Coffee
Every Time

Unlike common coffees, RED ROSE has the same rare flavor when it reaches your table as it had when it left the roaster. For it is sold only in air-tight tins, hence none of its strength or flavor is lost.



Crushed (not ground) So Brews Clear

Our new process crushes this coffee into grains of uniform size and takes away the chaff which makes most coffees bitter. Thus Red Rose Coffee is as easily made as Red Rose Tea, and pours clear without any "settling." For a "full-bodied," bright, brisk coffee we commend

Red Rose Coffee

238

THE Keeley Cure

First in 1880 Foremost Ever Since

DRUNKENNESS

Is a Disease---And We Can Cure It

Most men who drink to excess do so because they cannot help it; they are controlled by a craving which is practically irresistable. This is a diseased condition but can be, and is, promptly relieved.

How ? By taking the **Keeley Treatment** at a **Keeley Institute,** the only place to get it and the only treatment which cures alcoholic and drug inebriety.

The **"Keeley Cure"** removes the craving for liquor and drugs and leaves the man master of himself. The system is rational, it embodies no suffering or sickness, no absured or preposterous claims are made; the hypodermic method of treatment is constantly used, which, according to all reputable physicians, is safe, painless, prompt and efficient.

The "**Keeley Cure**" does not nauseate a patient and no attempt is made to cure inebriates by creating a disgust for liquor. A treatment depending on nauseants or emetics for a cure can never be anything but a failure because the patient will soon learn that it is not the liquor which nauseates him but that he has been made the victim of a trick : the diseased condition not being relieved the patient naturally goes back to liquor.

The diseased conditions produced by from five to thirty years constant or periodical use of liquor cannot be cured by a few days of nausea and emesis. Such methods are irrational, brutal, and sometimes permanently injurious.

The "**Keeley Cure**" has restored over 400,000 men and women who were addicted to liquor and drugs; it is the pioneer in this work and has many imitators, but no rival or competitors as far as results are concerned.

If you have need to take treatment for the Liquor or Drug addiction, investigate **The Keeley Cure**, a treatment that is known the world around, and which is recognised by the public and the medical profession as the only successful treatment for these addictions. Look up some of our former patients, whom you will find in every community, They are healthy, happy and prosperous; many of them will tell you that they would not be living today if it had not been for the **Keeley Treatment.**

We have special accomodation for ladies, where they can be entirely exclusive, and can be treated as privately as in their homes.

Printed matter and particulars by mail in sealed plain envelope.

All letters promptly answered and treated as strictly confidential.

The Keeley Institute

T. B. MORRISSEY. Manager.

151 Congress St., Portland, Me. Munjoy Hill

The Nearest Institute to the Maritime Provinces.

rather, with ordinary strong calves, to start adding some skim milk at 10 days and continue for five or six weeks feeding half and half, than to feed new milk for three weeks than to break off too suddenly.

It is most important also, to teach the calf to eat some dry meal, as early as possible. We can then feed a smaller quantity of skim milk, thus lessening the chances of the calf scouring. The meal strengthens them and brings them along faster.

With large breeds the young calves are often not fed nearly enough dry feed. Growth is very rapid and we must continually increase, as it is surprising the amount of pulped turnips and hay three months old calves will consume. We very seldom find it necessary to give the calves any medicine for indigestion; the feeder always takes careful notice to see if any are getting off their feed or starting to scour, in which case, simply give smaller amounts of skim milk for a feed or two is all they require. Success with calves as well as all other kinds of farm animals is only obtained by eternal vigilance.—Walter M. Lea, P. E. I.

Foxhall St. John 'o Dreamwold.

Owned by Josselyn & Young, Silver Falls, N. B. See Page 499.

How I Conquered Fruit Pit.

Editor Maritime Farmer:—

While reading, in your issue of January 30th, a description of Fruit Pit or Baldwin Spot, it called to my memory an experiment I tried to cure what I thought was apple scab or black spot that proved successful. I thought probably it might work the same for Fruit Pit or Baldwin Spot. Or that I may have mistaken it for apple scab.

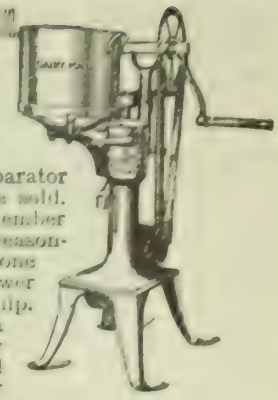
I had a tree about 60 years old, an excellent seedling and a good bearer, that had been standing in sod for 15 or 20 years. It was usually manured on alternate years with barn-yard manure and it developed what I thought was apple scab so bad that the fruit was virtually useless. So, after reading all the arguments in favour of spraying as a remedy and noticing the opinion or experience of a western scientist, who stated that spraying was more effectual the 2nd year than the first. I concluded that to try for a permanent cure by spraying was like using liniment for rheumatism and that as rheumatism was caused by an over charge of acid in the blood, apple scab was caused by the exhaustion of some certain element in the soil, and as spraying proved more beneficial the 2nd year than the first it must be the beneficial results of the ingredients of the spray washing to the soil. So I procured 5 lbs. of Blue Vitroil, 1 lb. of sulphur and in early spring I scattered one-half of each quantity around the tree, just as the frost was coming out of the ground, covering a space as far as the limbs extended which was probably 15 feet on each side of the tree. I waited until blossom buds were beginning to show a little red then I spread the balance and while the tree was wet with dew I threw dry hard wood ashes all over the foliage and limbs, which I repeated again after the fruit was well formed and waited result. To my great joy there was not a spot to be found on a single apple nor has there been ever since, as I have now picked 5 crops of perfectly clean apples.

Now, sir, if this stirs the curiosity of some, so-called, scientist or fruit grower to try it and it proves as beneficial as it did with me I will feel well repayed for writing.—J. T. Hetherington, Queens Co., N. B.

Springhill Prince.

Owned by Jas. Barrett & Sons, East St. John, N. B.

The Best Cream Separator is the Cheapest in the End



THE cost of manufacturing a cream separator determines the price at which it may be sold. Therefore, when selecting a separator, remember that the machines which are offered at an unreasonably low price can be offered at that price for one reason only—they are built to sell at prices lower than the cost of good material or workmanship.

Such separators are costly at any price. Only a good separator is cheap; not because of a low first cost, but because it will last for years and save enough butterfat from the milk of four or five cows every year to pay for itself. The best workmanship and material that money can buy are used in making

I H C Cream Harvesters Dairymaid and Bluebell

You will find an I H C the cheapest separator you can buy, because it will do better work and last longer than any other separator.

Go to the nearest I H C dealer who handles these separators and see how carefully they are made. You will find that they have phosphor bronze bushings—that the gears are spiral cut—are entirely protected from grit and milk, and at the same time are easily accessible.

The neck bearing is trouble-proof. The patented dirt-arrester chamber removes impurities before separation begins. These separators are made in four sizes. Ask the I H C local agent to show you one, and give you a catalogue, or, write the nearest branch house for catalogue and any other information desired.

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International Harvester Company of America
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At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U. S. A.

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The Maritime Pub. Co., Ltd.,
SUSSEX, - NEW BRUNSWICK.

Do it Now.

When a man aint got a spray pump
and is feeling kinder down,
And the pesky little insects won't
leave his crops alone,
It's a great thing, oh my brethren,
for a feller just to say
"Send and get a 'Perfect' spray
pump, and apply a coat of spray."

It makes a man feel queerish when
the season's work is through,
And the tatties are all blighted and
the apples wormy too.
Then order up a "Perfect" and do it
right away,
And spray the fruit and tatties and
save them while you may.

You'll never find another that does
the work so well,
From strainer up to handle, the
outfit works just swell,
It has good agitation, and a real re-
lief valve too,
It throws a spray that's "Perfect"
and what more could it do?
Manufactured by R. B. WESTHAV-
ER, Mahone Bay, N. S.

Ocean Limited Early on Route.

SUMMER TIME CHANGE ON INTERCOLONIAL RAILWAY JUNE 2.

The summer change of time on the Intercolonial Railway will go into effect on June 2nd, when the famous Ocean Limited will be p,aced on the route between Montreal, St. John, N. B. and Halifax, N. S. with connections for and from the Sydneys and Prince Edward Island in anticipation of an early rush of summer travel. The time schedule is expected to be practically the same as last year, which means that the "Limited" will leave Montreal at 7.30 p.m. reaching Levis at midnight, and giving through passengers the opportunity of seeing the famed Matapedia Valley during the earlier hours of the morning and a view of the Restigouche River and the blue waters of the Baie des Chaleurs. The beautiful valley of Wentworth, N. S. will be seen in the more mellowing light of early eventide, and the train will reach Truro at 8.00 o'clock connecting with the through night express for the Sydneys and arriving at Halifax at 10.00 p.m.

The Maritime Express under the summer schedule will leave Montreal at 8.15 a.m. and through passengers will have the daylight journey through Quebec, and a view of the majestic St. Lawrence as it widens in its course to the sea. Making connection at Moncton with morning express for St. John the Maritime continuing eastward will reach Halifax at 13.30.

The Ocean Limited will leave Halifax westbound at 8.00 a.m. and the Maritime Express will leave as usual at 15.10 thus there will be a through week day service by two trains equal to the best on the continent.

The Third Annual Maritime Horse Show

(Continued from page 471).

herst Hotel for the best Grade Heavy Draught Four-in-Hand was won by R. P. P. Fraser's well matched quartette.

GENERAL PURPOSE HORSES.

were out in strong numbers. In the class for singles no fewer than fifteen horses appeared before the judge. Spurgeon Gammon's horse Splinder carried off the palm with Stuart Etter's Tom a close second and I. I. Peel's Billy and J. Russel Embree's Frank in third and fourth places.

Six teams appeared in the double section of the General Purpose class. J. Russel Embree had the first prize winner, C. W. Fawcett captured the second prize and R. P. P. Fraser took away the third.

AGRICULTURAL.

Clydesdale breeding predominated in the Grade Heavy Draught classes. It was here that the true value of the Heavy Draught Pure-Bred sire was more in evidence than in any other class.

The aged mare or gelding class was led by Fowler Bros.' Minnie and Major by Prince of Annick, Gammon & Wier captured the third and fourth prizes and further down the list were seven other good horses that would make a creditable show at any fair.

W. P. Keilor's King, Forrest Bros.' Prince, and Doll and E. W. Embree's Bess in a class of five entries captured the prizes in their respective order in the four-year-old Agricultural class.

The three-year-old class had nine entries. T. W. Keilor's Sue and C. M. Shipley's Topsy both by McFarlane Bros.' Vanderbilt stood in for first and second monies. E. H. Forrest's Rex, a Percheron bred colt captured the third prize while Maud, a filly Vanderbilt, owned by E. W. Embree was successful in securing the fourth prize.

There were four two-year-olds in the Agricultural class. Ronald Rutherford's Sandy headed the list and J. O. Trueman's Harry and Rose took the remaining two prizes.

Geo. M. Holmes' Rose and Nellie Gray owned by Elbert Black had no competition in the yearling class and were awarded prizes as they stand.

The matched teams of this class numbered ten. Fowler Bros., R. P. P. Fraser and C. W. Fawcett were the prize winners.

Fowler Bros.' Minnie captured the diploma for best Agricultural animal, any age.

PONIES.

J. T. Chapman, Amherst, N. S. had the only pony at the show.

HAULING COMPETITION.

In the hauling competition for single horses there were only two entries. An Amherst Foundry horse moved the heaviest load. I. Allen's horse was the next best.

Three teams appeared in the section for doubles and were awarded prizes as follows:— 1, W. F. Beatty; 2, Stuart Etter; 3, Albert Lowther.

The 1912 Show is over. It was a great improvement over the shows of preceding years. Its influences will be far reaching and more interest will be taken in the breeding of good horses throughout the Maritime Provinces. To our farmers, in general we would say, carefully guard against breeding to unsound sires; follow an ideal type in breeding and ere many years have elapsed you will have teams of which you and your boys will feel justly proud. You will find that there is money in breeding the right kind of horses.

The Currie Horse Collar

We make all sizes, shapes and styles to order and can make a collar to fit any horse. You no doubt have trouble by your horse being galled; why not use a collar that has always given satisfaction? Our collar has been a leader for twenty years and has proved to be the most practical collar ever put on the market. Sold by most reliable dealers in Eastern Canada.

Ask your harness man for it. If he does not handle it send to

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Specialist in the manufacture of Horse Collars.

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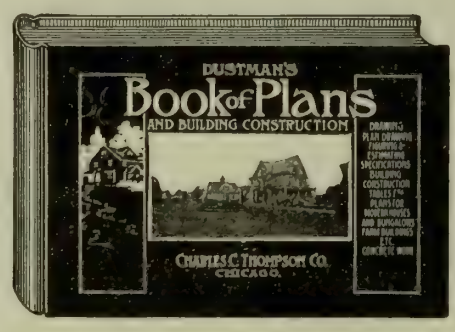
Dustman's Book of Plans



—AND—

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Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

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This book will be sent, together with a year's subscription to The Maritime Farmer, to any person upon receipt of $2.00. That is if you are already a subscriber and will send us two dollars we will send you the book and give you credit for one year's subscripton. If you are not already a subscriber and want the book, you may obtain it and The Maritime Farmer for $2.00. These books cannot be purchased anywhere for less than $2.00 each and they are a bargain at the price.

THE MARITIME FARMER,

ST. JOHN, - N. B.

The Antigonish County Seed Fair.

Considering that last season was not a very favorable one in Nova Scotia, the exhibit of seeds in Celtic Hall Antigonish, N. S. was remarkably good. The number of entries received by the Secretary of the Fair was in excess of those received last year, the state of the roads prevented a few of the prospective exhibitors from coming iuto town,

The judging was done by Mr. Moore of the Seed Branch, Dep't of Agriculture, Ottawa, assisted by Mr. Alward of New Brunswick. In wheat and oats first honors went to Mr. Robert Chrisholm of Briley Brook. The exhibits in the wheat sections were excellent, Mr. Chrisholm and a few other farmers have for the last few years been selecting their seed according to the methods of the Dominion Seed Growers' Association, and the improvement in the quality of seed produced by them is marked, Mr. Chrisholm has this year already taken several first prizes with his grain, botn at the Amherst Fair in December, and at the January Provincial Seed Fair at Truro. We think it would be well for some few farmers in every district in the Country to take up work in this line, not simply because they would raise the standard of the seed in the country, but because the prices paid for such good seed are attractive. The oats, although not quite so good as the wheat, were, on the whole, good samples, and the different varieties of potatoes were pronounced of excellent quality. In hay seed we are yet somewhat backward. The first prize exhibit was good clean seed, but the others, although they were good seed, contained too many weed seeds. The ox-eye daisy, red sorrel and spurry were far too abundaut in them. The exhibits of this section, while showing the possibility of raising good hay seed in the Country, show want of care in their selection, a defect quite easily remedied and which should receive better attention next summer. The Broadfoot cup for white Russian wheat and Banner Oats was won this year for the second time, by Mr. Ronald Chisholm.

White Russian Wheat, 1, Ronald Chisholm, Briley Brook; 2, Alex McPherson, Cloverdale; 3, Thos. Hogan, Harbor; 4, Taylor Bros., Antigonish.

Red Fife Wheat, 1, Alex C. Chisholm, North Grant: 2, W. Grant, Heatherton; 3, John C. Chisholm, South River.

Wheat, White Fife, 1, Wm. McDonald, St. Josephs.

Best exhibit White Russian Wheat and Banner Oats, 1, Ronald Chisholm.

Township Oats, 1, D. C. McNeil; Ronald Chisholm; John C. McIntosh; Wm McDonald; J. W. Grant; John C. Chisholm; John A McDonald; D. J. McDonald; 2, Andrew Boyle; and H.Smith; 3, Raylor Bros. and J. P. Grant; 4, Rod. Chisholm.

Tartar King Oats, 1, Thos. Hogan. 2, John P. Grant, Harbor; 3, D. J. Grant, Harbor.

Banner Oats, 1, Ronald Chisholm; 2, John A. McDonald, Maryvale; 3, J, W. Grant.

Oats, 20th Century, 1, Andrew Boyle; 2,Wm. McDonald.

Sensation Oats, 1, Rod. Chisholm, Lr. South River; 2, Duncan Frasier, Lr. South River; 3, Frank Dunn, Lr. South River.

Oats, Black, 1, Andrew Boyle, Dan J. McDonald, South Lockhaler.

Oats, A. O. V., 1, John Chisholm, Beech Hill; 2, John McConnell, Antigonish; 4, Frank Dunn.

Barley, 2 rowed, 1, Moses Somers, Briley Brook; 2, John C. Chisholm.

Barley, 6 rowed, 1, Frank Dunn.

Buckwheat, 1, Heberth Smith, Clydesdale; 2, Isabella Chisholm, Clydesdale; 3, Alex McPherson.

Timothy Seed, 1, James Somers, Briley Brook; 2, Taylor Bros.; 3, Mrs. John McNeil, Cloverville.

Peas, 1, Isabella Chisholm; 2, J. W. Grant.

Horse Beans, 1, Isabella Chrisholm; 2, Thos. J. Grant, Asylum.

Beans, Colored, 1, Isabella Chisholm; 2, Thos. J. Grant; 3, Thos. J. Grant.

Beans, White, 1, Thos. J. Grant.

Beans, Yellow Eyed, 1, Moses Somers; 2,Isabella Chisholm; 3, H .Smith.

Collection Garden Vegetable Seeds, 1, Isabella Chisholm.

Potatoes, Green Mountains, 1, Taylor Bros.; 2, Roderick H. Chisholm-S. S. Harbor; 3, A. C. Chisholm.

Potatoes, McIntyre, 1, D. J. Grant; 2, Thos. McInnis; 3, A. C. Chisholm.

Potatoes, Carmen, 1, James Somers; 2, Taylor Bros.; 3, Thos. McInnis.

Potatoes, Deer's Standard, 1, Wm. Chisholm, Harbor; 2, H. Smith; 3, Frank Dunn.

Potatoes, A. O. White Variety' 1, Dan Cameron, Fairmont.

Potatoes, Irish Cobbler, 1, Taylor Bros.

Potatoes, Early Rose, 1, Alex Chisholm, Ashdale; 2, John McConnell; 3, Wm. McDonald.

Potatoes, A. O. Early Variety, 2, Taylor Bros.

Potatoes, Beauty of Hebron, 1, John C. McIntosh; 2, Taylor Bros.; 3, H. Smith.

Potatoes, Dakota Red, 2, Thos. McInnis; 3, Thos. J. Grant.

Potatoes, A. O. Late Red Variety, I, Alex Chisholm; 2, Isabeila Chisholm; 3, Thos. J. Grant.

Potatoes, A. O. V. Dark Skinned, 1, Duncan Fraser; 2, Thos. McInnis; 3, Duncan Fraser.

Potatoes, A. O. V. Late, 1, John McConnell; 2, Thos. McInnis; 3, Thos. McInnis, Antigonish.

Dairymaid of Pinehurst, Makes Another Remarkable Record.

We have had in the past many instances illustrating the great capabilities of the Guernsey cow as a dairy animal. In fact, it may probably be truthfully said that it is due to her own efforts in this line that she has won the high esteem which she has among the progressive dairymen of the country. We are glad indeed to record here another chapter in the work of one of these dairy queens.

Dairymaid of Pinehurst 24656 was bred by Mrs. E. W. Strawbridge, Moorestown, N. J., and was dropped April 26, 1906. She well deserbes from her inheritance, as well as her individuality, the distinction which has fallen to her. Her dam, Dairymaid of Elm Place, 14197, Adv. R. 19, had an advanced Register record of 12176.90 pounds milk, 668.36 pounds butter fat. Her maternal grandmother, Dolly's Ada 9289, was said to be a great cow, and reported as having a record of 17 lbs. 1 oz. but-

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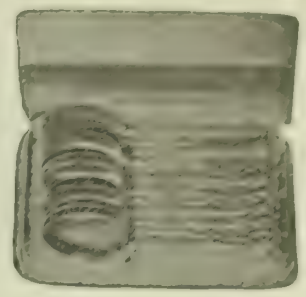
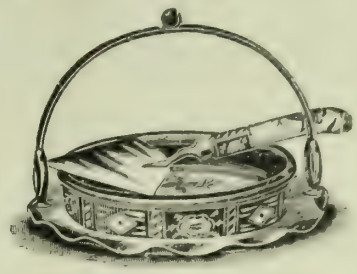
It shows hundreds of beautiful illustrations of articles in Sterling Silver, Silver Plates, Cut Glass, Bronzes, Clocks, etc.



74723. One half dozen 'Troy Pattern,' finest Silver Plate Tea Spoons in White Moreen Satin Lined Case $2 00

A Few Suggestions:



7558
Fine Silver Plate on Hard Metal, Butter Dish and Trowl, Crown Derby ,Pattern China.....$3 00

7564.
Fine Silver Plated Pierced Fern Dish, diameter 7 inches.....$3 25
7564A. Same, smaller, diameter 4 1-2 inches.....$2 00

7524.
Pie Dish, Pierced Silver Plated Holder, with Pottery Lining, diameter including handles 11 inches, diameter inside handles, 9 in....$3 50

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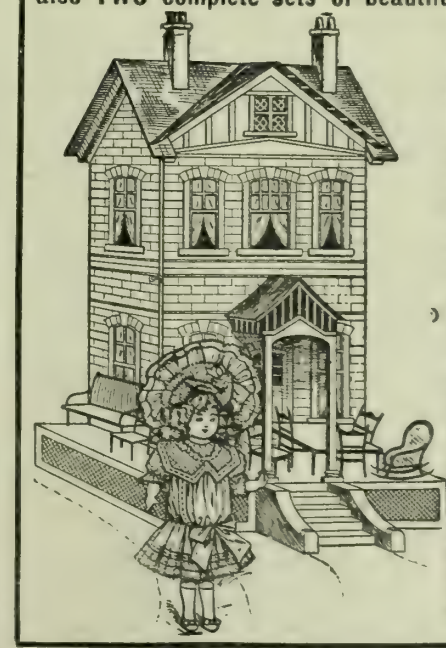
FREE THIS MAGNIFICENT DOLL'S HOUSE AND HANDSOME IMPORTED DOLL

also TWO complete sets of beautiful furniture for the house and this lovely gold-finished jewelled ring



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the inside is beautifully papered throughout, and every window has curtains. IT IS FURNISHED COMPLETE with the loviest furniture you have ever seen—two complete sets, including sofas chairs, tables, beds, bureaus, wash-stands, etc.

THE HANDSOME DOLL WE GIVE YOU WITH THE HOUSE is a little beauty. Fully jointed so that she can sit down, turn her head, move her arms and legs, and she is dressed with fine underwear, shoes, stockings, etc., complete from hat to shoes.

Girls, if you want to secure ABSOLUTELY FREE this handsome doll house, lovely doll, the two sets of furniture and the beautiful jewelled ring, send us your name and address at once and agree to sell only 25 of our delicious perfumes at 10c. a box each. They come in six lovely odors, rose, carnation, lily of the valley, violet, lilac and heliotrope, and with each package we send a beautiful piece of gold plated jewellery to give free to your customers. This means that you sell like hot cakes. When sold, return us the money, only $2.50, and we will promptly send you all 5 handsome presents carefully packed, exactly as represented. We arrange to stand payment of all charges right to your door with free goods covering same. DON'T DELAY, write us to day and in a few days you can have the magnificent house and all the beautiful presents. Address— NATIONAL SALES CO., Ltd. TORONTO, ONT.
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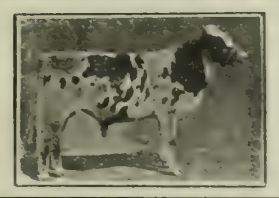

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Breeders of High-Class Holstein-Friesian Cattle and Large English Berkshire Pigs. Just now we can offer a few good Bull Calves and a Heifer or two. We have some extra good young Berkshire pigs of both sexes ready to ship the last of May, out of one of the very best sows we ever owned and sired by an imported boar of excellent quality.

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Champions of Canada. **Champion of World.**

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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FOR SALE—World's Wonder Seed Potatoes—per burhel $1.75. W. A. SMITH, Woodward Cove, Grand Manan. N. B.

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WANTED.—By the last April, married man to work on farm for 1 year. Apply to MORRIS SCOVIL, Gagetown. N. B.

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GOLDEN WYANDOTTES, the busy open laced kind, Prize winners. Eggs, $2.00 for 15, $3.00 for 30. PETER WILSON, Cobden, Ont.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

FOR SALE OR EXCHANGE—4 Light Brahma pullets and cockerel, weight 10 pounds. Apply to C. GODFREY WATKINS, Church Street, Cornwallis, Kings Co., N. S.

FINE PROPOSITION.—To a first class farmer with grown family, or two partners to run established farm near St. John. R. G. MURRAY, St. John, N. B.

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FOR SALE—Choice, large English Berkshire pigs from importod stock. Farrowed March 3rd, 1912. Correspondence solicited. Price reasonable. S. L. T. McMACKIN, Havelock, N. B.

Registered Ohio Improved Chester White Pigs. Five dollars at five weeks. Pairs furnished, not akin. Dam sired by Toronto and London first-prize boar. WALTER S. COGSWELL, Centreville, N. B.

FOR SALE—Four Ayrshire Bulls fit for service from eleven to twenty months old. Spring calves Two Holstein bulls eleven months. Yorkshire pigs farrowed Feburary 26th. JOHN A. HUGHES Petitcodiac, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

BERRY BOXES.—$4.50 per 1000 in the flat. In lots of 8000 or more $4.00 per 1000. Tacks free, Forms for making berry boxes on 75c each. Crates and crate shooks supplied. Apply to O. PERCY ARNOLD, Sussex, N. B.

COLUMBIAN WYANDOTTES, one of the best breeds as shown by actual results; Cockerels from my stock last year dressed 51-2 pounds in September. Hens, big blocky birds, heavy producers, large rich brown eggs. First pen is headed by second cock Fredericton 1911. Eggs $1 and $2 per 15. C. PERRY FOOTE, Kentville, Nova Scotia.

Dates to be Remembered

St. John Exhibition, September 2—7, 1912.

Halifax Exhibition, September 11—19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

ter before the days of the Babcock test in Advanced Register work.

Dairymaid's sire, Glenwood Boy of Haddon 4605, Adv. R. 8, belongs to the great Glenwood family, being a son of Glenwood Girl 2d 9108, and by Pat of Haddon 3919, Adv. R. 1, having four daughters in the Advanced Register.

HER FIRST RECORD.

Dairymaid of Pinehurst calved when 22 months of age, and immediately commenced her work in the Advanced Register. During this period she was milked twice a day, and yet we find her official year's record to be 7913.50 lbs. milk, and 405.51 lbs. butter fat. In this she exceeded her requirements by over 1900 lbs. milk and 155 lbs. butter fat. In addition we find that while starting her record 61 days less than two years old, she carried her second calf six months of this lactation period. Handicapped as she was by being so young, and she was a small heifer, and also by the tax on her of carrying the second calf during this lactation period, the record stands out as the most remarkable of the three she has made. It certainly warranted the conclusion that she was destined to be a great cow. At the time of this record it was the world's record of all breeds for so young a heifer and under these conditions.

AS A THREE YEAR OLD.

She next calved May 17, 1909, when she was 3 years and 11 days old, and started her year's work the first of June with the following results: 14562.4 lbs. milk, 860.26 lbs. butter fat. In this record she again exceeded her requirements, producing over 7100 lbs. milk and 510 lbs. butter fat more than was required. During this record she carried her calf two months. For eight months she was milked four times a day and for four months but three times. It was during this record that Dairymaid became a very prominent figure in that she was the winner of the Iowa State Dairy Cow Contest.

The Iowa Dairy Cow Contest has attracted a great deal of attention. It is doubtful if there has been anything in recent years that has awakened a greater interest in the dairy cow, and done more to emphasize the value of high-class, well-bred animals over the scrubs. The object was to determine the best dairy cow in the state and to give a practical illustration of the difference between a good and poor cow. The contest was won by Dairymaid, owned by Mr. W. W. Marsh of Waterloo, Iowa, who also owns the two Guernsey cows, Jedetta of Pinehurst 17434, Adv. R. 502, year's record of 15109.10 lbs. milk, 778.80 lbs. butter fat; and Glencoes Bo-Peep 18602, Adv. R. 1075 year's record, 13121.70 lbs. milk, 622.61 lbs. butter fat, who stood with Dairymaid as the three cows producing the largest amount of butter fat in the year.

HER THIRD RECORD.

We again find her calving Dec. 29 1910. She commenced her year's work Jan. 1, 1911, when she was 4 years, 255 days old, with the following results:

1911	Milk	Butter Fat	
Jan.	1803.60 lbs.	4.58 p.c.	82.60 lbs.
Feb.	1787.20	4.85	86.68
Mar.	1789.10	4.96	88.74
April	1610.90	5.20	83.77
May	1697.10	4.98	84.52
June	1438.20	5.11	73.49
July	1369.30	5.36	73.39
Aug.	1312.40	5.01	65.75
Sept.	1158.80	5.96	69.06
Oct.	1188.10	6.30	74.85
Nov.	1090.30	6.39	69.67
Dec.	1040.30	5.59	58.15
Ttoal	17285.30	Av. 5.27 p.c.	910.67 lbs.

During this period she exceeded her requirements by over 7700 lbs. milk and 562 lbs. butter fat, or to the

Does It Pay

to serve low-grade oatmeal to the children, when Quaker Oats costs one-half cent per dish?

Quaker Oats is made from just the rich, plump grains—the finely flavored oats.

We get but ten pounds from a bushel.

That cream of the oats, when prepared by our process, forms the finest oat food in existence.

The exquisite flavor has won millions to it.

In this daily dish—this premier food—don't you think that the grade is important?

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c } Except in Extreme West
Regular size for city trade, 10c }

The Quaker Oats Company

PETERBOROUGH, ONT.

Look for the Quaker trademark on every package.

$15.95

AND UPWARD

SENT ON TRIAL. FULLY GUARANTEED.

—AMERICAN— SEPARATOR

A brand new, well made, easy running, easily cleaned, perfect skimming separator for **$15.95.** Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. **Thousands in use** giving splendid satisfaction. Different from this picture, which illustrates our large capacity machines. The bowl is a **sanitary marvel** and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices on all sizes and generous **terms of trial** will astonish you. Our **twenty-year guarantee** protects you on every American Separator. **Shipments made promptly from WINNIPEG, MAN., ST. JOHN, N. B. and TORONTO, ONT.** Whether your dairy is large or small get our great offer and handsome free catalog. **ADDRESS,**

AMERICAN SEPARATOR CO., BOX 1212, BAINBRIDGE, N. Y.

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THE SIEMON COMPANY LIMITED

Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of the largest businesses of its kind in the world.

The Company do their own financing, and pay **interest twice a year,** on 1st of June and December, and allow the investor to withdraw his money at end of one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features,** and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

NATIONAL SECURITIES CORPORATION, LIMITED

Confederation Life Building, Toronto, Canada.

Suits to Your Measure

From Maker to Man

ONE of the oldest established houses in Canada—25 years in the same store—offers you an exceptional opportunity to obtain by mail a high-class suit or overcoat, made from high-grade materials and tailored to your measure. Price special to those who answer this advertisement in order that our goods may be introduced into new localities. Handsome illustrated catalogue and all particulars how to order by mail if you mention The Maritime Farmer. METROPOLITAN MANUFACTURING CO., Limited. Toronto. Can.

Annapolis Valley Fruit Farm

$3050 Income Last Year

220 acres on salt water; splendid boating, fishing and bathing; 5 minutes walk to P. O. and boat landing; 8-room painted house, running water; large barn; orchard producing 400 barrels apples in season; cuts 30 tons hay besides large acreage used for crops, wood and timber at more than $1000; pasture for 40 head; extreme age of owner necessitates quick sale; price only $3200, part cash, easy etrms; write for set of pictures, full detaiis and traveling instructions. Apply to THE MARITIME FARMER, St. John, N. B.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S

ELMWOOD STOCK FARM.

Holstein Friesian attle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Eggs For Hatching.

From prize winning, Rose Comb R. I. Reds, $2.00 per 15, Single comb, $1.50 per 15. Single Comb Brown Leghorns, both matings, $1.50 per 15. Write for mating list.

W. H. HENRY,
Shubenacadie, N. S.

SINGLE COMB RHODE ISLAND REDS EXCLUSIVELY

A pen of birds of the same strain as my first pen was entered in an egg laying contest last year. The pen made a record of 217 eggs each for the year, which proves quality is not incompatible with highest utility. Eggs from two pens bred for winter layers, $1.50 for 15 eggs. One pen of birds of extra quality headed by a cock from Lester Tompkins direct, $3.00 for 15 eggs. A few Grey African geese eggs, $1.00 each. Try the Red-Bird for happiness.

SARAH E. MOSES SMITH,
Woodwards Cove, Grand Manan.

Eggs For Hatching.

Barred Rocks, White Rocks, White Wyandottes, Rhode Island Reds, White Leghorns and Brown Leghorns. Choicest matings in Eastern Canada, 20 year experience in mating poultry for best results. A few good Cockerels left for sale. Address

SUSSEX VALE POULTRY YARDS,
Box 39. Sussex, N. B.

B. P. Rocks & S. C. B. Orpingtons

Eggs for hatching (choice foundatian stock). I have a limited quantity of these eggs for hatching. Price $1.00 for 15. Orders filled in rotation. Book early and secure choice stock.

W. KENNETH McLEOD, Port Elgin, N.B

Incubator Bargain.

One 200 Peerless Incubator, used one hatch, will sell at a bargain. Also 7 hens, 2 pullets, 1 cockerel, S. C White Leghorns, fine stock and great layers. The lot for $12.00. Cockerel won 1st at Amherst Winter Fair. Would consider exchange for Barred Rocks, laying strain.

ORCHARD HILL FARM,
Brown's Flats, N. B.

For rheumatism you will find nothing better than Chamberlain's Liniment. Try it and see how quickly it gives relief. For sale by all Dealers.

greatest extent of any of her three records. We find she was again carrying her calf during the record for two months. During this time she was fed the following:

21 lbs. grain daily of the following mixture: 8 lbs. bran, 10 lbs. ground oats, and 1.5 lbs. each gluten and oil meal; 4 lbs. beet pulp, 20 lbs. mangels, 10 lbs. ensilage, alfalfa and mixed hay.

23 lbs. grain daily of the following mixture: 8 lbs. bran, 12 lbs. ground oats, and 1.5 lbs. each gluten and oil meal; 8 lbs. beet pulp, 25 lbs. mangels, 30 lbs. ensilage, alfalfa and mixed hay.

14 lbs. grain daily of the following mixture: 8 lbs. bran, 3 lbs. ground oats, and 1.5 lbs. each gluten and oil meal; 8 lbs. beet pulp, 25 lbs. mangels, 30 lbs. ensilage, 5 lbs. alfalfa hay, 5 lbs. mixed hay.

21 lbs. grain daily same mixture as given in January, 6 lbs. beet pulp, 30 lbs. ensilage, alfalfa, and mixed hay.

21 lbs. grain daily same mixture as given in January, 4 lbs. beet pulp, 25 lbs. roots, 30 lbs. ensilage, green alfalfa and pasture.

21 lbs. grain daily same mixture as given in January, 4 lbs. beet pulp, green oats and peas, green alfalfa and pasture.

19 lbs. grain daily same mixture as given in January, 4 lbs. beet pulp, green oats and peas, green alfalfa and pasture.

1st to 15th, and 20th to 31st, 17 lbs. grain daily of the following mixture: 6 lbs. bran, 8 lbs. ground oats, 1.5 lbs. each gluten and oil meal; 4 lbs. beet pulp, 30 lbs. corn husks, green oats and peas, and green alfalfa. 17th and 18th, 2 lbs. bran and 4 lbs. ground oats. 19th, 2 lbs. bran, and 1 lb. each gluten and oil meal.

14 lbs. grain daily of the following mixture: 5 lbs. bran, 6 lbs. ground oats, 1.5 lbs. each glutten and oil meal; 4 lbs. beet pulp, 30 lbs. corn husks daily up to the 17th, after the 17th, 20 lbs. mangels, pasture.

21 lbs. grain daily same mixture as given in January, 25 lbs. mangels, green alfalfa, and clover hay.

21 lbs. grain daily same mixture as given in January, 30 lbs. roots, 20 lbs. ensilage, clover and alfalfa hay.

13 lbs. grain daily of the following mixture: 8 lbs. bran, 2 lbs. ground oats, 1.5 lbs. each glutten and oil meal; after the 19th, 3 lbs. daily pea meal, 30 lbs. roots, 20 lbs. ensilage, alfalfa hay.

THREE CONSECUTIVE YEARS' WORK.

We find that the above work shows an average for the three consecutive lactation periods of 13253.7 lbs. milk and 725.48 lbs. butter fat. Surely this is a lasting advertisement of the staying qualities of this cow and of the Guernsey breed. In this connection might be mentioned several other Guernseys which have also repeatedly increased their former records:

Selma of Pinehurst 14521, Adv. R. 325, with four yearly records, the average of the four being 10402.22 lbs. milk and 641.89 lbs. butter fat; Dolly Dimple 19144, Adv. R. 628, average for three years 17092.14 lbs. milk and 828.36 lbs. butter fat; Modena 11779, Adv. R. 67, average for three years 12705.00 lbs. milk and 665.08 lbs. butter fat; Dolly Bloom 12770, Adv. R. 40, average for three years, 12937.97 lbs. milk and 634.67 lbs. butter fat.

A WONDERFUL COW.

When one analyzes the work of this cow, they cannot but be impressed by her remarkable ability. In every instance she has not only made more than good her requirements,, but in each of her three year's records her gain has been greater than that of her preceding milking periods. It plainly demonstrates that cows making large records not only do come back but are able to exceed their previous work.—Guernsey Breeders' Journal.

See cut on page 422.

"Eastlake" Steel Shingles

will save you money

Just ask yourself this question Mr. Farmer, "Is my barn roof lightning proof—is it fireproof?

It's not a cheerful sight to see your barn—full to overflowing with the season's crop—wiped out by lightning or a spark from the threshing engine.

All because of faulty roofing.

A fireproof roof is the only **sure** protection for your crops, your livestock and implements.

"Eastlake" Steel Shingles are absolutely **lightning-proof, fire-proof, storm-proof and vermin-proof**—the best and safest roofing for all buildings.

"Eastlake" Metallic Shingles are made of the finest galvanized steel—are easiest and quickest to lay—save labor and expense.

"Eastlake" Shingles cost less than a wooden roof equipped with lightning rods.

"Eastlake" Shingles make the best roofing for you, Mr. Farmer.

Roofs covered with **"Eastlakes"** a quarter of a century ago are in perfect condition to-day. This is the best guarantee for you.

Send for our illustrated booklet, **"Eastlake Metallic Shingles."** Write to-day—just your name and address.

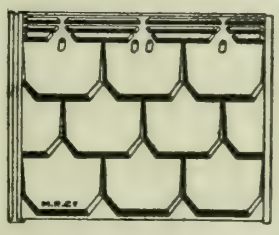
We also manufacture Corrugated Iron, House and Barn Siding, Metallic Ceilings, Cornices, Eavetrough, Conductor Pipe, Ventilators, etc.

SAFETY

By

The Philosopher of Metallic Town

THE "EASTLAKE" STEEL SHINGLE



THE METALLIC ROOFING CO. Limited

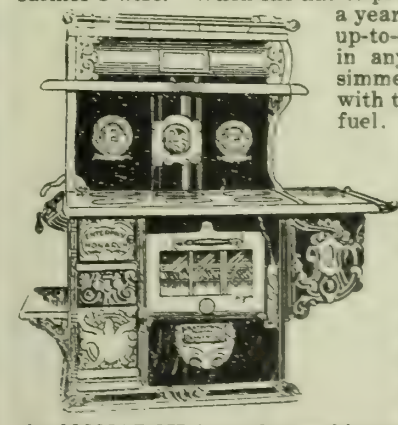
MANUFACTURERS

1187 King Street West TORONTO

BRANCH FACTORY: WINNIPEG AGENTS IN PRINCIPAL CITIES

No Sane Farmer

will try to run his farm on a paying basis without proper implements and appliances for doing good work, and it should be the same with the farmer's wife. When she has to prepare three meals a day for 365 days a year, she should have in her kitchen an up-to-date range on which she can depend in any emergency, for broiling, baking, simmering or boiling to the best advantage with the smallest possible consumption of fuel.



THE ENTERPRISE MONARCH STEEL RANGE

will do all this, and in addition it is specially adapted for farm work as it has a large fire box for wood burning and large copper reservoir giving ample supply of hot water. Then the MONARCH is so thoroughly constructed that it is not necessary to send to town every few months for repairs.

Ask your wife if she does not want a MONARCH. It may add years to her life by lessening labour and saving time.

The ENTERPRISE FOUNDRY CO.,

Manufacturers **Sackville, N. B.**

WOMAN'S MOST SUCCESSFUL MEDICINE

Known All Over The World —Known Only For The Good It Has Done.

We know of no other medicine which has been so successful in relieving the suffering of women, or received so many genuine testimonials, as has Lydia E. Pinkham's Vegetable Compound.

In nearly every community you will find women who have been restored to health by this famous medicine. Almost every woman you meet knows of the great good it has been doing among suffering women for the past 30 years.

Fox Creek, N. B.—"I have always had pains in the abdomen and a weakness there and often after meals a soreness in my stomach. Lydia E. Pinkham's VegetableCompound has done me much good. I am stronger, digestion is better and I can work with ambition. I have encouraged many mothers of families to take it as it is the best remedy in the world. You can publish this in the papers."—Mrs. WILLIAM S. BOURQUE, Fox Creek, N. B.

In the Pinkham Laboratory at Lynn, Mass., are files containing hundreds of thousands of letters from women seeking health, in which many openly state over their own signatures that they have regained their health by taking Lydia E. Pinkham's Vegetable Compound, many of whom state that it has saved them from surgical operations.

FREE
Here is Your Chance to Obtain FREE a High-grade RING
Our Magnificent Genuine 14K Solid Gold Shell Rings are in the very latest solid gold patterns. We absolutely guarantee these beautiful rings to give satisfaction, and you will be surprised at their great beauty for the small amount of work you have to do to obtain them.
Just send us your name and address and we will send you postpaid 15 packages of our Marvel Bluing to sell at only 10c per package. We send a beautiful gold finished Turquoise Brooch to give to every customer who buys a package from you. When sold send us the money, only $1.50, and we will send you absolutely free, one of these beautiful gold shell rings. Address Dept. 125
MARVEL BLUING CO., Toronto, Ontario

Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

Guernseys.

In the Maritime Farmer of March 12, 1912, I notice a good description of Guernsey cattle. We have kept pure-bred Guernsey cattle for a number of years and at the present time have about twenty-five head of pure-bred and fifteen head of Grade cattle.

The only record I ever kept, was of one cow, Bella of Eastview for one year, 1908. I bought this cow from J. Rigg Brow, when three months old for seventy-five dollars. She tests about 5.4. Now the year the record was kept of this cow she did not get any more feed and no more attention than the other cows and we had about ten milking at the time. The cows were taken care of by hired men altogether.

Bella of Eastview calved in December and again the next November, making seven weeks dry out of the year.

The following is the amount she earned at the creamery from December 13, 1907 to December 13, 1908.

Dec.	.....372.....	.....16.10.....	.....$ 5.86
Jan.	.....901.....	.....39.64.....	..... 11.29
Feb.	.....640.....	.....30.72.....	..... 9.06
Mar.	.....585.....	.....29.25.....	..... 8.77
Apr.	.....664.....	.....35.85.....	..... 11.65
May	.....583.....	.....29.15.....	..... 7.29
June	.....597.....	.....29.85.....	..... 7.17
July	.....640.....	.....33.28.....	..... 7.65
Aug.	.....458.....	.....23.81.....	..... 6.19
Sep.	.....320.....	.....20.40.....	..... 5.49
Oct.	Dry		
Nov.	.....558.....	.....26.22.....	..... 6.81
Dec.	.....310.....	.....15.63.....	..... 4.74
			91.97

The bull calf she had in November sold for $60.00, when six months old, making a total of $151.97 for the year. I think if this cow had been fed up and forced she could almost have doubled the amount of milk.

I have recently purchased from Conn., U. S. A., a fine bull calf named Canada's Jethro Bass. He is sired by Jethro Bass, No. 11366, whose dam is Dolly Bloom (record 17297.5 lbs. milk, 836.2 lbs. fat). Dolly Bloom is dam of the World's Champion three-year-old heifer of All breeds—Dolly Dimple.

Mrs. L. D. Corbett, of this place, has two nice grade Guernseys. In the year 1911 she kept a record of her milk which amounted to $143.46. These cows dropped calves during that time.—T. D. Blaikie, Great Village, N. S.

Low Grade Nitrate.

Several cases of low grade Nitrate have in the past appeared on the market, and I am writing you to suggest that you advise correspondents to purchase Nitrate from trustworthy dealers only. One adulterant is Common Salt, and sometimes Salt Cake has been used. Both are worthless as fertilizers and contain no plant food. It is preferable to purchase Nitrate in original bags which now contain about two hundred pounds.

As far as the Chilian Producers of Nitrate are concerned, however, the greatest care is taken, and samples are drawn by Inspectors from all cargoes before they leave the Ports of Chili, and heavy fines would be imposed upon any Producers who attempted to export low grade Nitrate. Salt Cake residue made as a by-product in the manufacture of Nitric Acid has also been used to adulterate Nitrate, and in certain cases has been sold as Niter-Cake. This name tends to give it a false value. It is also worthless as plant food. On our part, we have done all that is possible to maintain a high standard, and that our policy will be the same in the future you may be fully assured, and I hope that you will be able to co-operate with us in helping to prevent sales of low grade Nitrate, which we would greatly deplore.—William S. Myers.

A Sign of the Times

PEOPLE are becoming very careful about what they eat and drink—

The preference for goods in sealed packages —especially in food stuffs—**is now quite definite** and becoming more so every day.

We must frankly admit that there are **sound reasons** for this preference. Food stuffs **cannot** be exposed to varying atmospheric conditions without **losing** both strength and flavor.

Tea—of all articles of everyday diet (excepting coffee, perhaps) needs protection most, and best merchants have been quick to appreciate the fact. So much is this the case that the selling of loose Tea in bulk will soon be a thing of the past.

RED ROSE TEA reaches you with all its virginal flavor, strength and purity—

—It is sealed in air-tight packages—dust and damp-proof—

RED ROSE is a blend of the best Indian and Ceylon Teas.

—The former assures generous strength and richness—the latter **that** coaxing, delicate flavor, Qualities for which Red Rose Tea is famed.

Ask your Grocer for the 40c. package of Red Rose and you'll get **better** Tea—Tea that spends farther—for the same money.

You want "Good" Tea—well,

"Red Rose Tea is Good Tea"

210

The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.

One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

Advertise in The Maritime Farmer.

Presentation to Dr. Rutherford.

A fitting tribute, on the occasion of his retirement from office, was made recently to Dr. J. G. Rutherford, when the members of his Staff of the Health of Animals and Live Stock Branches, in token of their regard and esteem, presented him with a beautifully illuminated address and purse of gold. The presentation was of a very informal nature and was made in Dr. Rutherford's office, in the presence of the staff of the Inside Service and of a few other officers whose duties had called them to Ottawa for the day. The address, artistically illuminated by the Rev. Mr. Bousfield and bound in green vellum, fittingly referred to Dr. Rutherford's important and honourable service to the Dominion during his ten years' tenure of office, and cordially and gratefully acknowledged the value, to the members of his staff, of their association with him in the direction of work at once difficult, delicate and yet vital to the interests of the country and which called for the exercise of administrative and executive ability of the highest order.

Dr. Rutherford is a born administrator and there is no doubt that recognition of and admiration for his splendid talents, as displayed in the prosecution of whatever he undertook, impelled such a fine expression of appreciation as exhibited in the splendid gift of $1200.00 in gold which accompanied the address. Contributions were sent from officers stationed in every province of the Dominion and, as well, from an inspector who forwarded his subscription from his headquarters in the Yukon Territory. Two hundred and fifty names have been inscribed in the margin of the address as contributors to the testimonial and, in their own way, attest the fact that the retiring Veterinary Director General and Live Stock Commissioner in his future career will be followed by the cordial respect and good will of his former staff.

Wintering Bees in Charlotte Co., N. B.

Editor Maritime Farmer:—

My fifteen years experience in wintering bees outside and also by the cellared method has convinced me that good colonies wintered on their summer stand if properly packed are much stronger and better prepared to gather the surplus honey when it comes.

I will tell how I pack my hives for wintering in a future issue.

I have found my cellared bees noisy and spotting their hives badly so I set them out for a cleansing flight. The following day I moved them back again and to-day they are very quiet and have every indication of coming out again, about April 15th, in good condition. I predict a loss of thirty per cent. of colonies before May 1st, this year. This, I attribute not to our long cold winter but to the inexperience of the beekeepers who do not know what to do or when to do the right thing.—R. L. Todd, Charlotte Co., N. B.

P. E. I. Jerseys For Charlotte Co.

Robt. L. Todd, of Milltown, N. B., has purchased from Frank Glydon & Son, Margate, P. E. I., the registered Jersey Cow, Mary Orin 2nd and the six months old Jersey Calf, Miss Thelma. They were shipped to their new owner by rail a few weeks ago.

BEAVER FLOUR

You can't judge quality by size—and this applies to bread as well as to men.

YOU may have an idea because western wheat flour makes a big loaf of bread, that the quality is in keeping with the size. The largest men have not accomplished the greatest deeds.

Size is the only feature that can commend western wheat flour to any cook. And the good cook quickly discovers that quantity without quality is not worth buying.

"BEAVER" FLOUR GIVES BOTH QUALITY AND QUANTITY, because it is a blended flour. It is mostly the choicest Ontario fall wheat with sufficient Manitoba spring wheat to equalize the strength.

In "Beaver" Flour, you get the famous pastry-making qualities of Ontario wheat—you get the fine texture, the evenness and the delicious flavor of Ontario wheat—you get the nutriment of Ontario wheat—with the "strength" of Manitoba wheat which makes the dough "stand up" in the oven.

One of the big conveniences of "Beaver" Flour is the fact that it is equally good for bread and pastry—and best for both.

"Beaver" Flour is superior to any western wheat flour for any and all kinds of baking, and is the cheapest flour you can use because the most economical.

DEALERS—write us for prices on Feed, Coarse Grains and Cereals.

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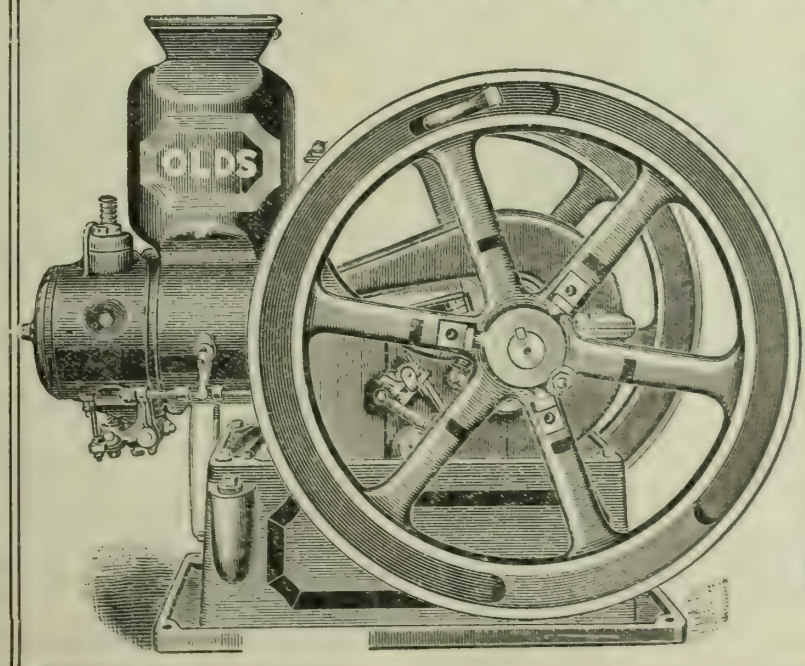
THE T. H. TAYLOR CO., Limited, - - CHATHAM, Ont.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

BRONCHITIS

Was So Choked Up She Could Hardly Breathe.

Bronchitis is an acute inflammation of the mucus membrane lining the air tubes of the lungs, and should never be neglected, for if it is very often the disease becomes chronic, and then it is only a short step to consumption.

On the first sign of bronchitis Dr. Wood's Norway Pine Syrup should be taken, and thus prevent it becoming chronic.

Mr. John D. MacDonald, College Grant, N.S., writes:—"My little girl, seven years old, caught a bad cold which developed into bronchitis. She was so choked up she could hardly breathe. Reading about your wonderful medicine, Dr. Wood's Norway Pine Syrup, I decided to try a bottle, and with such good results that I got another which completely cured her. I cannot say too much in its praise, and would not be without it in the house."

Dr. Wood's Norway Pine Syrup is put up in a yellow wrapper; three pine trees the trade mark; price, 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont. will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Oyster Scale Bark Lice.

G. F. W., Amherst, N. S.:—I am forwarding you a twig from one of my apple trees. These trees were apparently healthy until within the last year. Please let me know what the trouble is and how to overcome it?

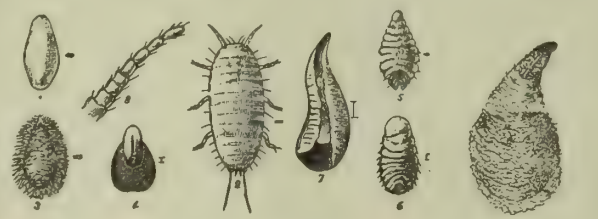
Ans.—The apple tree twig submitted is badly infested with oyster scale bark lice. The Oyster-Shell Bark Louse (Mytilaspis Ulmi) ranks next to the San Jose Scale, the enemy of fruit trees. It is found everywhere throughout the provinces and inflicts an immense amount of damage on apple and other fruit trees; it is especially abundant in old and neglected orchards. Fortunately it is single-brooded and therefore does not increase very rapidly. It may be readily identified by its peculiar shape, which resembles that of an oyster shell, and may usually be found in large numbers, sometimes completely encrushing the bark of twigs and branches; occasionally individuals ever make their abode on the fruit. During the winter the insect is in the egg stage, and protected by the old scales; about the end of May and beginning of June, the yellow lice are hatched out and wander about for a short time, looking for a suitable place where they may attach themselves to the bark. This is done by inserting the beak into the tissue, and there the creature soon becomes covered with a scale and remains for the rest of its life sucking the sap of the tree. Twice in the season the insect sheds its skin and assumes a larger one, leaving the cast-off portion still attached to the new. In autumn the adult female lays her eggs and dies.

Remedies:—Good results may be obtained by a thorough wash with lime (one pound and a half quickly slaked to a gallon of water) applied after the leaves fall in the autumn and again before the buds open in the spring. When the lice are first hatched out and are running onthe limbs, (during the latter part of May or first of June) they may be destroyed with kerosene emulsion which is made as follows:

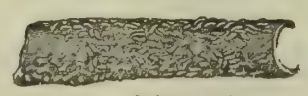
Kerosene.....	2 gallons
Rain Water.....	1 gallon
Soap.....	1 pound

Boil the soap in water till all is dissolved; then, while boiling hot, turn it into the kerosene and churn the mixture constantly and forcibly for five minutes, when it will be of a smooth creamery nature. Before applying to your trees dilute this emulsion by adding twenty-seven gallons of water, or in other words dilute with nine times its own volume of water and apply as a spray.

If you white-wash your trees now and follow with the kerosene emulsion spray when the lice hatch out in summer we believe you can rid your trees completely of this troublesome pest.



Oyster-shell Bark-louse. A Scale, greatly enlarged.



Scales on a twig.

Dairy Instructor for Nova Scotia.

Mr. W. A. MacKay, who, for the past three years has been in charge of the Scotsburn Creamery, Pictou Co., N. S. and has made such a splendid success of it, has been appointed Dairy Instructor for the Province of Nova Scotia, with headquarters at Truro, N. S. During the coming summer his services will be available in any sections where Creameries are now established, or in sections where it is purposed to establish Creameries. Mr. MacKay has had a long and successful experience in butter and cheese making and in the management of Factories and we believe that this appointment will be highly appreciated by all those who are interested in the development of these Factories in Nova Scotia. Should any in the province be interested in securing Mr. MacKay's services at an early date, they should at once correspond with M. Cumming, Secretary for Agriculture, Truro, N. S.

For New Vitality Send Me The FREE COUPON

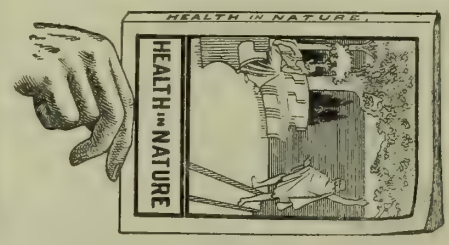
There is to.day no excuse for any man remaining weak. The vital, manly man is admired by all men as well as all women; there is an influence about him no one can resist; he knows no fear; he knows no weakness; he knows no result of debility. It is this same VITALITY which carries our young soldiers to war without thought of death. Vitality, reader, is what you MUST have if you would enjoy a life of health, strength and manly vigor. I can give you this same life and vitality; if I can do for you what I am doing for thousands of others I can put the vigor of youth into your blood and nerves; I can make you feel young again and keep you feeling young; I can drive away all dibility, weakness and despondency. You will laugh at trouble, you will tackle obstacles with the vim to win, just as all other hearty vital men may do. I don't ask you to use drugs. I ask no change in your present mode of living; just cease all dissipation and then use my HEALTH BELT. All else will come. My Health Belt with suspensory attachment is the greatest nature cure and VITALITY supply that the world has ever known or probably ever will know. Nothing is taken for granted: you feel better immediately, at once, from the first time used. Worn all night, while you sleep, it pours a great stream of Vitality and energy into your weakened system: it is a wonder-working giant of power; made as I now make it, I am getting results of which no man ever dreamed. Just think, over ten thousand men applied to me during the month of February. I am now sending great shipments of my Health Belt to every part of the civilized world. There is a reason, I am curing; I am giving men back their lost strength. It makes you feel ambitious, full of vim; you awaken mornings sparkling with bright, clear-eyed, clear-brained health; the weakness has all disappeared from your back; you are "just feeling fine." Special attachments to my Health Belt cure rheumatism, kidney, liver and stomach trouble.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man, young or old, who would be strong in manly vigor. It is a word of hope, a carefully written, interesting booklet, which should be in everyone's possession. Therefore, send to-day. If in or near the city, call at my office.

DR. M. F. SANDEN CO. 140 Yonge St., TORONTO, ONT.

Dear Sirs:—Please forward me your Book, as advertised, free.



NAME.....

.....

ADDRESS.....

.....

The Liniment that is 101 Years Old

Quick relief for hurts, aches and pains. Every household should keep on hand the old, reliable

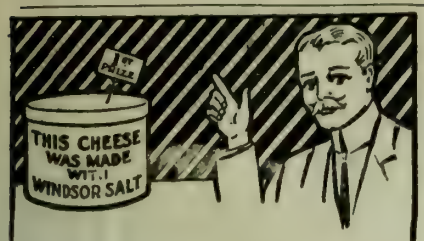
JOHNSON'S ANODYNE LINIMENT

For over 100 years it has had no equal. Use inwardly for Colds, Bowel Disorders, Cholera Morbus, etc.

25c and 50c Bottles

I. S. JOHNSON & CO. Boston, Mass.

Parsons' Pills Tone the System and Regulate the Bowels



NOTHING in cheese making is more important than salting the curd.

The flavor—even color—smoothness—keeping quality and market price—all depend on the way the curd is salted, and on the salt used.

WINDSOR CHEESE SALT

Makes Prize Cheese

It gives a smooth, rich flavor to the cheese—dissolves slowly—stays in the curd—and makes the cheese keep as good cheese should.

Windsor Cheese Salt is cheapest in the end because it goes further. 73C

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

MEADOW BROOK STOCK FARM
Chatham, N. B.

Clydesdales, Hackneys, Shorthorns, Berkshires. Look over our winners at late Amherst Horse Show and you will be convinced that we have the stock. Send your Pure Bred Mares to be Bred.

J. B. SNOWBALL COMPANY, Limited,
JOHN BENNETT Proprietors.
Superintendent.

DAIRY—SHORTHORNS.

FOR SALE—4 Bulls, colors, dark red or roan, ages from 7 months to two years. The head of this herd is an imported bull from Cumberland Co., England, and was the best calf from one of the best herds in the country. Inspection and enquiry dairy solicited. Address W. T. WOOD,
Highfield Farm. Sackville, N. B.

What New Brunswick has to Offer the Immigrant.

(Continued from page 458).

well and ably represented in our Province. Magnificent Churches in our cities and towns with those of more modest pretentions in our rural districts everywhere abound, and with the large staff of earnest and faithful Clergy, we are fortunate to have in our midst and the earnest workers among the Layety, the immigrant need not fear of his being unable to find a Church home among us, where he can worship his God according to the leadings of his own particular faith.

In brief we have referred to the advantages New Brunswick has to offer the immigrants. For a brief minute let me specialize some of them. So far as records are available we have abundant proof of the health-giving properties of our climate conditions. A very large percentage of our people live to a good old age, particularly those who live on the land are blest with vigor of mind and body. These facts apply from the earliest settlement of the Province until the present day.

If you ask for proof, let me refer you to the splendid march of the gallant 104th Regiment in the War of 1812, raised in New Brunswick, which left St. John on the 11th day of February and on the 27th day of the same month crossed the St. Lawrence on the ice and entered Quebec 1000 strong, accomplishing a march of 435 miles in midwinter in 16 days, without the loss of a man,—equal to 27 1-5 miles per day. This march of the 104th, accomplished by men in midwinter on snow-shoes, poorly fed and insufficiently clad, is a matter of record and will go down through the centuries as a wonderful feat of endurance made to defend Canadian homes from a foreign invader. What a splendid tribute the late Duke of Wellington paid the officers and men who performed that wonderful march when he said that it was the only accomplishment of a British officer that he envied.

As to the conditions of general agriculture, let me say that, from the St. Croix to Edmundston and following the valley of the St. John and its tributary rivers and streams, there lies a country of great wealth in agricultural resources. The Valley of the St. John is among the first portions of the Province settled and while the whole Province was known as the County of Sunbury in Nova Scotia, with Halifax as its capital. There in the Parishes of Sheffield and Maugerville, the first pioneers of New Brunswick (outside of those settlers around the Harbour of St. John) began their work of wrestling from Mother Earth a living for themselves and families. The rich alluvial soil produced abundantly, inspiring hope and courage among them, and supplying their daily wants.

On the Eastern and Northern sides of the Province, splendid conditions exist, extending from the Tantramar River to the Metapedia, the Westmorland marshes on that river, the marshes on the Memramcook and those on the Petitcodiac are not only very extensive, but very productive as well. All along the Coast of the "Straits of Northumberland" are fertile lands, especially on the Cocane, Buctouche, Miramichi and Restigouche Rivers.

In fact, for the number of square miles of land New Brunswick possesses, there are less unfruitful acres than is supposed. All the northern part of the Province has an exceptionally good soil. Taken altogether we should be proud of our heritage and strive not only to keep our own sons and daughters on the Home Land, but increase and place upon the land awaiting settlers, the best type of immigrants that it is possible to secure.

Every I H C Wagon is Inspected Four Times

HOW do you buy a wagon? Do you wait till you need one and then take the first that's offered you, or do you find out in advance which wagon will give you best service, and buy that one? Why not get as much as you can for your money? Buy the wagon that will stand up for the longest time and be easiest on your horses. That wagon is an I H C wagon. Here is why: Each I H C wagon is thoroughly inspected. I H C wagons—

Petrolia **Chatham**

have just one standard—the highest. The lumber used is selected from large purchases. Every stick of this lumber is carefully inspected. Another inspection is made when the parts are ready for assembling. This inspection assures perfect shaping and ironing.

The third inspection, when the wagon is ready for the paint shop, covers all the points of superior construction for which I H C wagons are famous. Bearings are tested, every bolt and rivet is gone over, the pitch and gather of the wheels are verified. When this inspection is finished, the wagon is up to standard everywhere, good enough to be stamped with the I H C trademark.

The final inspection is made when the wagon is ready for delivery. Four inspections to make sure that you get everything you pay for.

All these inspections are for your benefit, so that any farmer who owns one can say with truth, "My I H C wagon is perfectly satisfactory." The I H C local agent will show you the wagon best suited to your needs. He will supply you with literature, or, we will send it if you write. Address—

EASTERN BRANCH HOUSES
INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)

Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

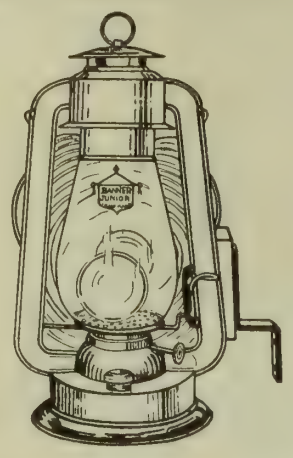
I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 25 cents a week, or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 WINDSOR, Ont.



BANNER "BUGGY" LANTERN

Is on the side of the vehicle and lights the road.

WHITE AHEAD.

RED BEHIND.

Drive in Safety!

ONTARIO LANTERN & LAMP CO.,

Limited, Hamilton, Ontario.

Our winter students are now leaving us. Others are taking their places. So we are ever changing; new faces, new features in our work, new conditions to provide for in the business world. Thus our work goes on in increasing volume, the increase for the last two years being much greater than ever before.

No better time for entering than just now.

Our catalogue for the asking.

S. KERR, Principal.

THE ST. JOHN Business COLLEGE. S KERR & SON.

To whom it may concern: This is to certify that I have used MINARD'S LINIMENT myself as well as prescribed it in my practice where a liniment was required and have never failed to get the desired effect.

C. A. KING, M. Df

WHY HE WAS LATE.

"What made you so late?"

"I met Smithson."

"Well, that is no reason why you should be an hour late getting home to supper."

"I know, but I asked him how he was feeling, and he insisted on telling me about his stomach trouble."

"Did you tell him to take Chamberlain's Tablets?"

"Sure, that is what he needs." Sold by all Dealers.

S. C. Rhode Island Reds Exclusively.

I have made a specialty of this one breed, and keep nothing else. After trying many varieties, we have decided this is the best all round purpose fowl for this climate. For beauty and utility we believe it has no equal.

2 pens bred to lay, and we can guarantee these birds will lay you lots of eggs in the coldest weather. $1.50 setting 15.

1 pen extra fine birds headed by a cock from Lester Tompkins. direct, $3.00 for 15 eggs.

Try the Red-bird for happiness.

SARAH E. MOSES SMITH,
Woodward's Cove, Grand Manan, N. B.

Demonstration Orchard Work in New Brunswick.

(Continued from page 465.)

While the returns from this orchard are very satisfactory indeed, yet it is well to point out that they might have been considerably greater had the bulk of the orchard been planted to higher selling varieties like the McIntosh Red and Fameuse. The owner, Mr. H. L. Steeves, is in the apple growing business to stay, and last spring planted 300 trees and next spring will plant 900 trees, mostly McIntosh Red and Fameuse.

SUMMARY.

SUNBURY COUNTY ORCHARD.

Net profit on 1 2-3 acres..... $93.15
Net profit per acre..... ..... 55.89

Which on a valuation of $450.00 is a return of almost 14 p.c.

YORK COUNTY ORCHARD.

Net profit on 1½ acres..... $133.05
Net profit per acre..... ..... 88.56

Which on a valuation of $150.00 per acre is a return of 59 p.c.

ALBERT COUNTY ORCHARD.

Net profit on 3 acres..... $545.12
Net profit per acre..... ..... 181.70

Which on a valuation of $500.00 per acre is a return of over 36 per cent.

Pulping Roots for Stock.

C. R., Lunenburg Co., N. S.:—I have a Shorthorn cow, 10 years old, that freshened six months ago. She has not come in season since, although she is in fine flesh. Last fall she leaped on one of the other cow's and in doing so slipped and hurt her leg so that she was lame for three months, but she is all right now.

How much salt should a cow have each day? Do pigs need salt? Should roots be pulped for stock?

Ans.—The cow not having come in season is not an uncommon occurrence; but it is difficult to say why, even on careful examination. The generation apparatus is a complicated one and very sensitive, so that slight derangement is sufficient to interfere with its regularity. Many cows behave this way and afterwards become regular. I cannot offer a remedy, not knowing part affected, which may be the ovaries, the follopian tubes or the uterus, any or all of which may recover with the coming of warm weather.

The quantity of salt advisable for a cow is what she will consume of her free will; some cows desiring and requiring more than others. If rock salt be placed where the animal can lick it at will any time, they will partake of it in satisfying quantity and will not injure themselves; but if deprived of it for sometime and allowed to consume a large quantity they may take too much. Men differ in their desire for salt and so do cows; but salt should be supplied as advised, not put in food and thereby compelling the animal to consume the salt or do without the food. The person who advises exact quantities of salt or food for all cows alike does not know much about cows.

If sufficient help is available, it will pay to pulp the turnips, particularly for calves and aged cows whose teeth are not so strong as they used to be. Cows that have good teeth can do their own pulping very well, if farm labor is scarce. For dairy cows we would pulp our turnips to conserve as much as possible of the cows' energy for milk production. Other than in the cases above specified. The turnips may be ecinomically fed whole.

Pigs are the better of salt and if obtainable at all times they will partake of sufficient but not an injurious amount. Pigs as well as other animals have salt in most tissues and hence require it.—. Standish, N. S.

"VANCO" Lime Sulphur Solution

will keep your fruit trees free of Scale, Parasites and Fungi.

It is strong, uniform, clear, efficient—the strongest perfect solution that can be made and far superior in every way to home-made mixtures.

The Canadian Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

"VANCO" Arsenate of Lead

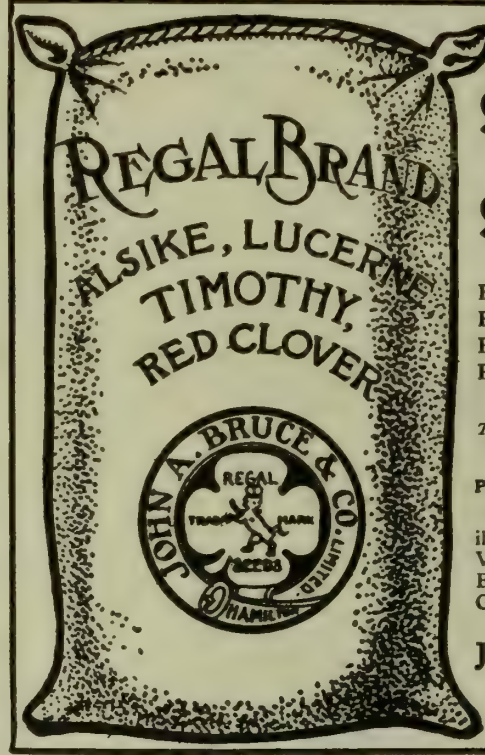
will destroy all leaf-eating insects — never burns — sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Company, was for "Vanco" Lead Arsenate.

"Vanco" Fertilizers—Muriate of Potash — Sulphate of Potash — Acid Phosphate—Nitrate of Soda. We are the only house in Canada selling straight fertilizing chemicals of guaranteed analysis.

Save Freight—by ordering Sprays and Fertilizers together and having us make one shipment of the lot.

Send for the "Vanco" Book—study it—and spray for fall profits.

CHEMICAL LABORATORIES, 148-158 Van Horne St., TORONTO. 44



ESTABLISHED 1850

SEEDS THAT SATISFY

Regal Red Clover,	$15.50	Bushel
Regal Alsike "	$15.00	"
Regal Lucerne "	$13.00	"
Regal Timothy "	$ 9.50	"

Cotton Bags, 25c. each

The above brand is our best grade of Seed and complies with the conditions of the Seed Control Act. Grading No. 1.

Prices for lower grades on application.

FREE—Write for our handsomely illustrated 112 page catalogue of Vegetable, Flower and Farm Seeds, Bulbs, Plants, Poultry Supplies, Garden Implements, etc.

John A. Bruce & Co., Limited
Hamilton, Canada

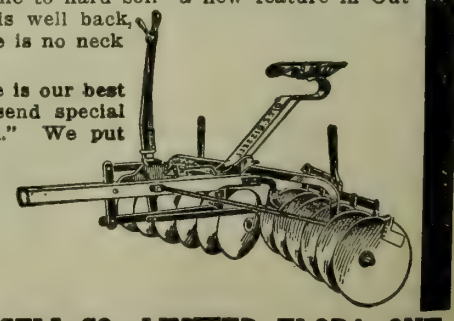
The Pioneer Seed House of Canada.

The "BISSELL" out-throw DISK HARROW

To settle all doubt about which is the BEST OUT-THROW DISK HARROW, we ask you to test the "Bissell" Out Throw in a field competition with other Out Throw Harrows.

The "Bissell" Out Throw has many features that have made the name "Bissell" famous in connection with Disk Harrows. It has plates of the correct shape. One gang is set slightly ahead of the other. The gangs cannot crowd or bump together and cause the Harrow to rock when you come to hard soil—a new feature in Out Throw Harrows. The hitch is well back, the draught is light and there is no neck weight.

The machine in actual use is our best advertisement. No need to send special travellers to sell the "Bissell." We put our name on every Harrow. If you would like to learn more about Disc Harrows, send to Dept M for free booklet of both out-throw and in-throw styles. 58



T. E. BISSELL CO., LIMITED, ELORA, ONT.

Something New in Timepieces.

The alarm clock of today is about thirty-five years old. It is essentially American, being first invented and patented by an American.

It has been but little changed and improved during its life. Perhaps it is slightly lower in ptice and cheaper in construction but otherwise the same old noisy day-starter.

Battered by years of competitive strife,flimsly noisy, unslightly, it has become a short-lived bargain,the constant butt of the cartoonist's joke. But out of Illinois has come a candidate for national favor along this line that is sweeping the country.

This master alarm timepiece—the newest developement in time recording instruments—is known as BIG Ben. It is made by the Western Clock Co. of LaSalle, Illinois. It is a clock of most beautiful appearance, a thin beautiful punctual sleepmeter with a quiet running motor, selective alarm calls, a mellow pleasing voice and a frank open attractive face.

BIG BEN is mounted in a massive dustproof, triple-plated case with large easy winding keys and reinforced suspension points. Farmers whose time means money to them can not afford to rely on a cheap, inaccurate, uncertain alarm clock.

Such well known jewelers as Birks of Montreal, Ottawa, Toronto, Winnipeg and Vancouver, Ryrie Bros. of Toronto, Dingwall and Port & Markle of Winnipeg have already endorsed Big Ben as well as hundreds of other jewelers and watchmakers.

The Western Clock Co. state that Big Ben is sold anywhere in Canada at $3.00. They publish some very interesting literature about Big Ben that would be well worth sending for The address of the Western Clock Company is LaSalle, Illinois.

Erratum.

In Bulletin No. 230 of the Inland Revenue Department, Ottawa,the Chief Analyst of the Department corrects an error in the previous Bulletin No. 227. On page 9 Sample of fertiliser No. 4548, the Bulletin stated in mistake that the sample was deficient in phosphoric acid Mr. A. McGill Chief Analyst in correcting the mistake says,—"The correct Registration Number is 142, and guaranteed phosphoric acid is 7 per cent. We find 8.45 per cent phosphoric acid as reported. This fertilizer, "Special Odourless Potato Phosphte" No.45486 is therefore fully up to guarantee."

Summer Hill Yorkshires.

In the Yorkshire Section of our Breeders' Directory Column in this issue will be found the announcement of J. W. Callbeck & Sons, Summer Hill Dairy and Stock Farm, Summerside P. E. I. The Summer Hill Yorkshire herd is one of the oldest and most successful show herd in the Maritime Provinces. The herd is always shown in good fit, and that the individuals are of good type is shown by the high places they occupy in the list of prize winners.

The Maritime Farmer a Stock Mover.

J.F. Roach. Sunnyside Stock Farm Sussex, N. B. writes:—During the year 1911 I sold 28 head of pure bred Ayrshires and Guernseys. Some of these went to the Province of Quebec and as far in the United States as Laramie, Wyoming. During the three months, January, February and March, 1912 I have sold 13 head for breeding purposes. The only advertising medium I use is the Maritime Farmer. The results as given above speak louder than words can express.

The Paint That Is Easiest To Apply

is surely the paint you ought to buy when there's anything you want to paint. M-L Pure Paint spreads so evenly and easily that it satisfactorily covers more surface than most other paints.

M-L MAPLE LEAF **PURE PAINT**
Best You Can Buy

also leaves the smoothest, glossiest surface—and takes the least paint to do a good job. Wears longest, too. Any surface it covers will not need re-painting for the longest possible time. That's why M-L Pure Paint is by far the most economical paint you can buy. Try it. Note the clear, clean colors and the beautiful gloss it gives. Only purest materials and skilful mixing can make paint like that!

THE exceptional durability of M-L Pure Paint is due to a special ingredient which we alone have learned how to mix with other pure materials to make a paint that is not easily affected by extremes of wear or weather. You get the biggest money's worth in M-L Pure Paints.

Made in 47 colors for all paint uses by Imperial Varnish & Color Co., Limited, Toronto.

USE M-L FLAT WALL COLORS to obtain pleasing and artistic treatment of walls and ceilings. Best for up-to-date stencil decoration—sanitary, washable, durable, very economical. 16 shades. Easily applied. Full directions with can.

712

Messrs. Imperial Varnish & Color Co., Ltd., 6-24 Morse Street, Toronto.

Dear Sirs:—Please send me, free of all charge, full information about M-L Paints and your suggestions for decoration, inside and out.

Decoration Schemes Free—Fill in and Mail This to Us

Name .....

Address .....

MONEY IN POTATOES

You Bet There's Money in Potatoes If Properly Cultivated

Last year, the average selling price all over Canada was 60c. a bushel, against 45c. in 1910. The demand for potatoes is increasing each year; they are used in every home in Canada. Last year, Canada's Potato Crop increased in value OVER SIX MILLION DOLLARS. The demand is getting greater each year, consequently, more potatoes will have to be grown to feed the people of Canada. It is up to you to grow this supply to fill this demand.

Why should you not when the average price in Toronto during the month of February was $1.60 per bag in carload lots and the average cost of production and marketing is 22c. per bushel.

"O.K. Canadian" Potato Cutter, and Planter

These Machines take all the hard work out of the Potato Crop

"O.K. CANADIAN" POTATO CUTTER—for cutting seed potatoes—is the handiest little implement on the farm at planting time—and costs so little that you can't afford to waste time doing the work by hand. It cuts from 5 to 7 bushels an hour — cuts potatoes in uniform, blocky shapes—with eyes on each piece. You can cut only about one bushel an hour by hand.

We also make Cattle Stanchions. Sanitary Stalls and Water Bowls.

"O. K. CANADIAN" POTATO PLANTER is as easy to operate as a horse rake, and it does all the work. It opens the trench—drops the potatoes at any distance you set—puts in the fertilizer if you wish—covers the seed with moist soil—and marks for the next row. All you have to do is to drive the horses and keep the hoppers filled with seed and fertilizer.

It plants from 4 to 6 acres a day—plants round or cut seed—and the special shape of the carrying cuts prevents seed being bruised.

Make up your mind that you are going to make money out of Potatoes. Sit right down—clip out and fill in the coupon—and send it off to us to-day.

CANADIAN POTATO MACHINERY CO., LIMITED.
GALT, ONT.

CUT HERE

CANADIAN POTATO MACHINERY CO., LIMITED, - GALT, Ont.

Please send me free copy of your book—"Money in Potatoes."

NAME.....

ADDRESS.....

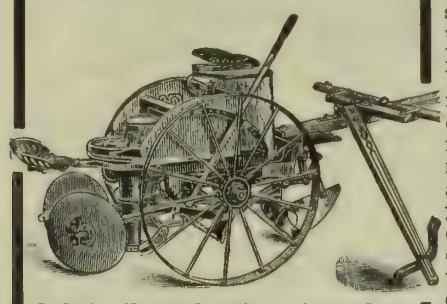
MORE POTATOES PER ACRE

Do you want to increase your potato crop 10 to 57 bushels per acre and thereby increase your profits $5 to $57 per acre?

The Iron Age Planter is the one machine with which an absolutely perfect stand can be obtained. At the Maine Experiment Station the yield where the

IRON AGE

was used was 57 bushels per acre more than where one of the best of the "Picker" machines planted. It makes no misses, no doubles, injures no seed



In Idaho, Herbert Lambing, a former Iowa Agricultural College student, has gained attention by his big crops, due to scientific methods. He writes in part; "The *Iron Age* means just one half my crop this year." Let it secure for you a perfect stand, a bigger yield and more profit. Ask your dealer to show you the Iron Age Planter, with or without fertilizer attachment. Write us for special booklet and Mr. Lambing's complete letter. Both will interest you. This planter is but one tool in our complete line of Iron Age farm and garden implements. You should know them all.

BATEMAN M'F'G CO., Box 2476 Grenloch, N. J.

SOLD BY

C. Fred Fawcett,
Upper Sackville, N. B.

J. E. Clark & Son,
Fredericton, N. B.

THERE IS NO REASON WHY WOMEN SHOULD DREAD CHILDBIRTH NOW. 19

Mothers' Cordial or Herbal Tonic makes childbirth easy and insures safe and rapid recovery. The Cordial is a compound of certain Indian herbs, blended in their proper proportions, and contains no drugs or harmful stimulants.

Mothers' Cordial or Herbal Tonic besides being a blessing to expectant mothers is also a potent remedy for all women in a rundown condition. In addition to its tonic properties it is an excellent blood purifier, and serves to clear the complexion as well as improve general health and good spirits.

Davidson, Feb. 21st, 1912.

Dear Mrs. Currah.

I am writing you for another box of Orange Lily and a box of the Herbal Tonic, inclosing an order for Two Dollars for same. Please forward same to me.

I find an occasional use of the Orange Lily helps me and the Tonic is a good spring builder.

Yours sincerely,
MRS. J. W. A.

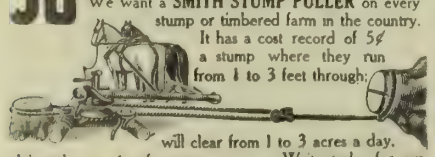
A package of Mothers' Cordial or Herbal Tonic lasts a month. At your Druggist's, or by mail, $1.00 a package, postpaid, or 6 packages for $5.00.

Write for interesting particulars—FREE. 19

Dr. Coonley Medical Co., Windsor, Ont.

30 DAYS FREE TRIAL

We want a SMITH STUMP PULLER on every stump or timbered farm in the country. It has a cost record of 5¢ a stump where they run from 1 to 3 feet through;



will clear from 1 to 3 acres a day, doing the work of twenty men. Write today for our catalogue and FREE TRIAL PROPOSITION

W. SMITH GRUBBER CO. 25 Smith Sta., La Crescent, Minn.

Cow Testing, the Indication of Real Dairying.

(Continued from page 466).

we furnish sulphuric acid and preservative together with all record farmers, and pay any maker at the local factory provided he is thoroughly competent, five cents for each test each month.

May I enlist the cordial co-operation of the officers and members of this association, as well as the active sympathy of every factory owner, every cheese and butter maker to extend this work as rapidly as possible. I have personally mailed scores of circular letters and bulletins which is about as far as we can go till the farmers themselves evince some little interest in what concerns them so closely. No government can legislate good crops or good cows, but this matter of cow testing is most heartily recommended to you, on its merits of simplicity, immediate value and permanency. To any man keeping twenty cows it means an extra income of $400 or $500 per year, besides the intense satisfaction of knowing that none but profitable cows are kept. With but slight effort the dairymen of New Brunswick can easily increase the income from the present number of cows in the province by the substantial sum of two million dollars. Is not this worth having.

Feed Value of Cottonseed.

A reader sends the following questions: At the present price of cottonseed meal, allowing standard value for carbohydrates and fat, what is the cost per pound of protein? Also allowing standard price for phosphoric acid and potash, what is the cost of nitrogen per pound?

The first half of query is difficult to answer, as regards the cost of protein. Let us take the nitrogen question first. Cottonseed meal is worth $35 a ton to-day. The average of some 350 samples showed cottonseed meal to carry 7.16 per cent. nitrogen, 2.97 per cent. phosphoric acid, and .019 per cent. potash. Hence in a ton there are 143.2 pounds nitrogen, 59.4 pounds potash. Phosphoric acid is pounds potash. Phosphoric acid is worth 4 cents a pound, which is $2.37; potash in cottonseed is worth 5 cents a pound, equalling $1.90, or a total value of phosphoric acid and potash of $4.27 in a ton of cottonseed meal. This deducted from the cost of a ton leaves $30.73, which the nitrogen in the meal costs per ton. If there are 143 pounds nitrogen in a ton, then one pound costs 20.7 cents. Note that this is only 0.3 cent from the actual trade value placed by the Connecticut station in its late report.

Now figuring on protein is altogether different, since the value of protein, fat, carbohydrates, etc., depends so much upon their combination, palatability, etc. Books and leading experiment station reports, are without specific figures on value for a pound of fat, of carbohydrates, of protein.

However, the Myrick feeding chart suggests that fat may be worth 2 cents a pound, and carbohydrates 1 cent. Figuring on that basis, note that cottonseed meal runs 40 per cent protein, 20 per cent. carbohydrates, and 198 pounds fat. The carbohydrates would have a money value of $4, the fat $3.96, which gives a total value of $7.90 for carbohydrates and fat. This, deducted from the $35, cost of a ton of meal, leaves $27.10, the amount which the protein in the ton costs. If 800 pounds protein cost $27.10, one pound will cost 3.3 cents.

It is usually figured that the protein in a commodity is 6¼ times the nitrogen. There are abundant figures showing nitrogen is worth 21 cents a pound in cottonseed meal. Hence a pound of protein might be valued at 6¼ of 21, or in the vicinity of 3.3 cents, as it actually figures out above.—N. E. Homestead.

FELL FROM A HAY LOFT

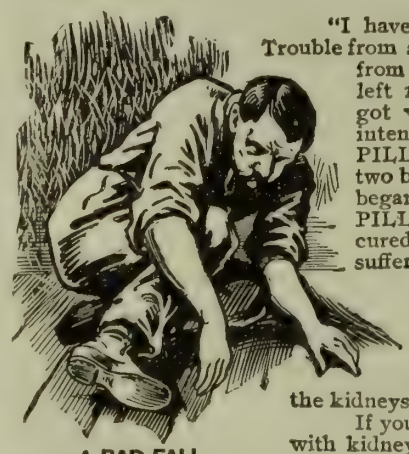
Suffered Tortures With His Kidneys Until He Tried Gin Pills

You might think that Mr. Baker needed a surgeon more than GIN PILLS. But there were no bones broken. His back was strained, which was harder to cure because nothing seemed to do any good. It is the same with a sprained ankle and broken leg. You can set the fracture and it will be well in six weeks—but the sprain may take months to get well.

However, Mr. Baker found the quick way to get relief from the pain—here are his own words.

AULTSVILLE, ONT.

"I have been a great sufferer from Kidney Trouble from an injury to my back caused by falling from a hay loft about six years ago. This left my kidneys weak, so that every cold I got would settle in my kidneys and cause intense suffering. I was advised to try GIN PILLS. I found, to my surprise, after taking two boxes, that the pains were relieved and I began to feel better. I am still taking GIN PILLS and feel sure I will be completely cured. I recommend GIN PILLS to all who suffer from any Kidney Trouble". C. BAKER.



A BAD FALL

You see, the fall had strained the kidneys and they were affected by the slightest chill. GIN PILLS immediately strengthened the kidneys—soothed any irritation and thus enabled the kidneys to overcome the effects of the fall.

If you are having pain in the back—or trouble with kidneys or bladder through accident or overwork—do just as Mr. Baker did—take GIN PILLS. They will help you—cure you—or we will promptly refund your money Buy six boxes at your dealer's. If, after taking them, you feel that Gin Pills have not helped you, return the empty boxes and get your money. We will take your word for it. 50c. a box, 6 for $2.50. Sample box sent free if you write National Drug and Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS regulate the bowels and cure Constipation, Biliousness and Indigestion. 25c. a box. 111

RENNIE'S SEEDS HAVE GOT TO GROW IF YOU GIVE THEM BUT A SHOW
THE FINEST IN THE LAND
WM. RENNIE CO. LIMITED, TORONTO, MONTREAL, WINNIPEG, VANCOUVER

Maritime Farmer Ads. Give Best Results

A Land Settlement Policy for New Brunswick

(Continued from page 459)

order named. The first is the most simple and by far the most economical. It is absolutely safe and in my judgment perfectly feasible. All it requires is a slight amendment of the Dominion Savings Bank Act whereby funds on deposit in any Province can be loaned to the Government of that Province for use in agricultural pursuits only. The Province could pay the Dominion Government say 3½ per cent. on all such loans, and it could again lend the money out, at say 5 per cent. Here would be a margin of 1½ per cent. upon which the Land Settlement Commission could count for a profit in its transactions. If your Provincial Government backed by the united voice of this Convention, took the matter up, I am convinced they could secure a satisfactory arrangement with the Dominion Government.

When I stumbled on this idea, a few years ago, I supposed it was original with me. But I was mistaken, for, on further study, I discovered that this identical proposal had been tried in Germany. It is curious to see how men in different parts of the world, in groping around for ideas, will stumble on the same scheme. In Germany, the Imperial Government has loaned the proceeds of State Insurance, not only to the State Governments of

HOW TO RAISE THE MONEY.

But how can the Province raise the necessary funds? This is the fundamental query of all. My answer is—she can raise it in one of three ways:

FIRST—At the present moment there is on deposit at Saint John in the Dominion Government Savings Bank, the sum of $5,000,000 derived from the savings of the people. The Finance Minister of the Dominion holds this fund as a part of the Consolidated Revenue of the nation, and allows depositors 3 per cent interest. It is largely an unproductive and inactive fund. I would use that fund on the credit of the Province, for agricultural loans. This would require an arrangement by which the Province could borrow annually from the fund the necessary amounts, securing the Federal Government by issue of Provincial bonds or other obligations at say 3½ per cent. on long terms. At the same time the Provincial Government should establish what, for want of a better term, I would call a Land Settlement Commission. The funds received from the savings account of the Dominion Government could then, through the Commission, be loaned out to farmers, fruit growers and other persons engaged in agricultural pursuits. The Commission would consist of three members who would form a body corporate, and manage the business side of the operations.

SECOND—Another method of obtaining the funds would be for the Province to issue its own debentures at, say, 4 per cent. for long terms, and from the proceeds of their sale, would turn over to the Land Settlement Commission such amounts annually as the Lieutenant Governor in Council would approve. The funds so received by the Commission would be lent out again as above described.

THIRD—A third method would be for the Land Settlement Commission itself to issue bonds upon the guarantee of the Province, for such amounts and terms as the Government might approve. The funds so received would be used by the Commission in exactly the same manner.

The methods described appear to me desirable in the the Empire, but also to municipalities and associations engaged in erecting cottages for working men. It has been successful beyond all anticipations. In this very year the same thing has been recommended by the Massachusetts Legislature, whereby certain moneys of Savings Banks deposited with the State Treasurer, may be loaned to the Commission for the erection of working men's cottages. This is the first experiment in the United States. But, as I shall show a little later, the same thing has been tried in the Australian States. There, however, each state has power to grant charters to Savings Banks and the savings of the people are used by an Agricultural Bank for the purposes I have described. In Canada the Federal Government alone can grant a charter to any Bank, and that is the fundamental reason why I have suggested the establishment of a Land Settlement Commission, by which the Province could launch the scheme. But the principle at bottom is the same in both countries, viz: that the savings of the people should be used by the Government of the Province for agricultural development. There a state can do it directly, here it must be done indirectly, by arrangement with the Federal Government.

By the Second and Third methods, the Province could raise the money, but not so economically. You would probably have to pay 4 per cent. on long term debentures and the price of their flotation would be apt to bring up the rate to 4½ per cent. on the money realized. The margin between 4½ per cent. and 5 per cent. would be small, and the chances of profit on the loan operations of the Commission would be reduced. Under these methods it might be necessary to raise the rate on loans from 5 to 5½ per cent. or 6 per cent. But even then capital would be supplied on very cheap and easy terms.

DETAILS OF THE PLAN.

Our Land Settlement Commission or some similar body having been set up and received the funds, would commence operations. Loans would be made say from $100 up to $3000 for agricultural purposes only, at periods say from twenty-five to thirty years. I would prefer the latter period, and commence to collect your first payment at the end of six months. They should manage the business side of the operations and give to the project their entire attention. All political functions would be reserved to the Government, and the two functions must be kept absolutely apart. The loans would be so arranged that a borrower would pay a fixed sum every half year and no less. Part of this amount would consist of interest at 5 per cent. (or whatever rate is established) and part in reduction of principal. As the loan continued, the amount of principal upon which interest is calculated would be reduced by the partial payments every six months, and at the end of the period would be extinguished. For example, if John Smith should borrow $1000 he would have to pay a fixed sum of $32.35 every six months for thirty years, until his loan, with interest at 5 per cent., was fully liquidated. Or if Smith would prefer to pay an even sum of $10 every six months, he could borrow $309.08 and in this manner pay it off in thirty years, with the interest at 5 per cent. The scheme of loans is best illustrated in the Tables "C" and "D", annexed to my Address, and I would urge you to carefully study them when published. They were prepared by Mr. James Liddell in the Foreign Exchange Department of Lee, Higginson, & Co., Boston.

In all cases, loans would be made by separate vote of the Commission and upon approved value. Loans should not exceed 70 per cent. value of agricultural property, and the Commission should have the right to advance a smaller percentage if the character and location of the property required such action. All loans would be secured to the Province, through the Commission, by a first mortgage upon the property, with provisions of foreclosure and sale in case of default by the borrower on any instalment. Every applicant for a loan must state the purpose for which it is required, and if any loan is used contrary to the scope of law, the Commission could cancel it at once and resume the property. Every loan would be made only upon the written report of experienced valuers employed by the Commission, and a small fee would be charged for the valuation. If a borrower failed to pay on time a fine would be imposed before he was reinstated in good standing. Payments may be anticipated, but no credit on interest could be given until the date of half year ensuing. Whether any portion of a loan could be used to buy stock or farming implements is a different problem, but I should be inclined to permit a use of say 25 per cent. of the loan for such purposes. Primarily, the scheme contemplates that the loan must be used for purchase price, erection of buildings or other permanent improvements. If a borrower's farm was free from incumbrances, I would permit a loan for purchase of stock, etc. and take security on the farm itself. A certain amount of discretion must be given to the Commission on matters of this kind, providing the loan was well within the amount allowed on the land. The lands of the Province should be classified, and the terms of a loan would depend on the character and location of the property. Small loans, up to $500 should have a preference, and the aggregate amount granted to any one person on different properties should not exceed $5000. In all cases, no sale or transfer of the property should be

For Sale
Peerless Incubators

1—120 Egg Machine
1—200 " "

Purchased from the makers last Spring 1911—used last season only—good as new, will sell at a greatly reduced price.
My reason for selling is I have gone into retail milk business and require additional room by converting poultry house into cow shed.

WM, COWLING,
Moncton, N. B.

For Sale to Make Room.

Five (5) Trios S. C. Brown Leghorn, 3 Cockerel and 2 Pullets. $4.00 per Trio.
S. C. R. I. Red Cockerels and Pullets. $1.00 and $2.00 each. 5 R. C. R. I. Red Cockerels $2 each.
These must be sold to make room for Breeding Pens.

W. H. HENRY,
Shubenacadie, N. S.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and good dispositions. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

SEA VIEW STOCK FARM
Buctouche, N. S

Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 14 months old.
2 Holstein bulls 5 months old.
1 Holstein Heifer 5 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered, cuts about 25 to 40 tons of hay; lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER R. R. No 2 Amherst P. O. N. S.

Eggs For Hatching.

More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in competition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

Craig Bros., Amherst, N. S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains, imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton, also Male Championship at Halifax and Chatham, and female Championship at Fredericton. One Bull seventeen months old. FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the keenest kind of competition. In Whites 1st Cock, 1st hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

An Advertisement in the Maritime Farmer will sell your surplus stock.

Dr Morse's Indian Root Pills positively cure Constipation and all kindred & resulting troubles. 25¢ a box. 16

MAXWELL'S HIGH SPEED CHAMPION

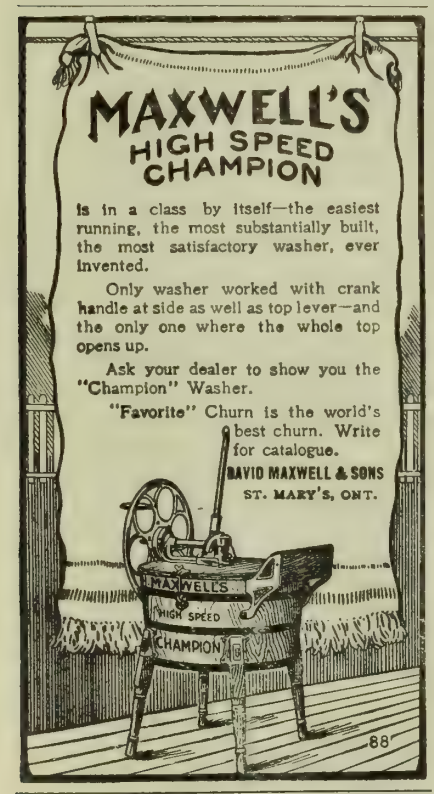
is in a class by itself—the easiest running, the most substantially built, the most satisfactory washer, ever invented.

Only washer worked with crank handle at side as well as top lever—and the only one where the whole top opens up.

Ask your dealer to show you the "Champion" Washer.

"Favorite" Churn is the world's best churn. Write for catalogue.

DAVID MAXWELL & SONS
ST. MARY'S, ONT.



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HAWK BICYCLES

An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump, and Tools **$22.50**

Send for **FREE 1912 Catalogue,** 100 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

RUN IT YOURSELF.

You can quickly learn to run steam engines by studying Young Engineer's Guide. Save the expense of hiring an engineer. Book recently revised to 254 pages. Illustrated. Endorsed by engine manufacturers and leading engineers everywhere. Price postpaid $1.00. Windsor Supply Co., Windsor, Ont.

FREE—Our large catalogue —"Engineers' Bargains."

STAMMERERS

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to 11

THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

permitted without consent of the Commission. The names and accounts of borrowers should not be open for public information. Officials should be prohibited from revealing secrets, just as banks are to-day.

All profits derived from the operations of the Commission should be paid over to the Provincial Secretary, and set aside by him as a fund for the redemption of bonds or other obligations of the Province incurred on the scheme. This fund would be conservatively invested by the Provincial Secretary, until such time as he could arrange for the redemption of obligations to the Federal Government or the public as the case might be.

READY MADE FARMS.

There is another branch of work which the Commission should do. It should be empowered to purchase abandoned farms or other lands, erect suitable farm buildings, thereon, construct necessary roads, and sell them out again to natives or immigrants. The purchaser would of course deposit at least 30 per cent. on the purchase price, and the balance would be taken back in mortgage by the Commission. This mortgage would be paid off in exactly the same way as a loan. To the actual cost of a farm plant, thus created, 10 per cent. should be added for sale. As an experiment but a limited number of these plants should be acquired, until they were sold off. Under this branch of its work, the Commission might allow prospective buyers a chance to work on the buildings, roads or improvements, and credit for the value of their labor could be given on the purchase price. This is an important feature of the work among immigrants, who are not accustomed to the ways of the country. When money is advanced for the erection of buildings, improvements, stock or implements, an account should be opened with a borrower and the loan placed to his credit. But the money should not be paid over until after inspection of buildings, etc. and then only upon instalments. This is necessary for the protection of the Province. Borrowers should also be required to keep their property in good repair, so long as the loan exists thereon. No member of the Commission, nor any official on its staff, should have any interest in lands upon which loans or improvements are made. Loans may be re-adjusted after ten years, and the account started as a fresh loan for the usual period. But it should not be treated as a fresh loan, unless the balance unpaid amounted to at least $300. Under this arrangement borrowers would be relieved of the interest on the original amount of the loan and will pay interest only on the balance of principal unpaid. This would materially lighten the charge.

AMOUNT OF FUNDS REQUIRED.

Another important question is, how much money will it take to start the experiment? I estimate that at least $150,000 per annum should be raised, and in a short time this amount must be augmented. Suppose the loans should average $500, as they probably would, then your capital would be barely sufficient to assist 300 heads of families or 1500 people in all. You must deduct at least $10,000 per annum for operating expenses during the first few years until the repayments back from loans gave the Commission a chance to turn over its funds. In fact the amount of funds allocated to the Commission should be much larger, if you expect to accomplish anything worth while. It is necessary to take this thing up in a bold and courageous spirit.

FRAMEWORK OF LEGISLATION.

It also appears to me that any law enacted by the Legislature to carry out this project should be in two parts. The first part would establish the scheme of advances to Settlers, etc. through a Land Settlement Commission which I have already described. The first operations must be handled in this way, and the details would be supervised by such a Commission. But a second part of the Act should provide that as soon as a charter for an Agricultural Bank was granted to any body of men whose standing was approved by the Provincial Government, the whole system of State advances would be turned over to such a Bank. The Bank should assume all the obligations of the Commission, carry on the details, and the Province would withdraw from the scheme as soon as practicable. Until such time as the liabilities of the Province were discharged, the Government should have a proper representation in the control of the Bank. My view is that an Agricultural Bank is the ultimate goal of this policy. It could then take in the Savings of the people, and raise the necessary funds for advancement to settlers, etc. just as it is done in other countries, and no further government assistance would probably be necessary. But until the Dominion Government was convinced by actual experience that the operations of such a system were successful, I doubt if a charter for an Agricultural Bank could be obtained. In the meantime, it is for the Province through a Land Settlement Commission to inaugurate the policy. Whether this is carried out by a Commission or by an Agricultural Bank, its operations should be conducted in harmony with the Provincial Department of Agriculture. The two branches should cooperate but all political functions, whether in treatment of immigrants or otherwise, should be reserved to the Government. The Commission or the Agricultural Bank should be purely a business institution, to advise, if need be, but resting securely upon the solid basis of property and finance. It cannot be stated too strongly that the success of this project depends mainly upon the application of business principles, and all parties in the Province should unite to give it a fair trial.

ARGUMENTS FOR THE PLAN,

I have endeavored to place before you the conditions of agricultural life in this Province. A remedy has been suggested. I do not pretend that it will remove all difficulties or take the place of energy, ambition and thrift. Nothing will do this. But it is a remedy which, if fully applied over a period of years, will, in my judgment, be a great boon. I claim that something of this kind is absolutely necessary to retain a fair percentage of our native increase in population. This is just as important as procuring immigrants. A young man born on the land in New Brunswick is the best possible citizen for this country. He knows the customs of the people and he understands the conditions of farming much better than any immigrant, however intelligent. The first ambition of a government should be to retain that citizen in the country. It cannot be done without some capital supplied at the critical moment of his career. Let us suppose the case of a farmer who has several sons growing up to manhood. They occupy, we will say, 200 acres of land. It is impossible for all those boys to marry and find a career on their father's farm. Some of them must go elsewhere. In normal cases their capital is small but their ambition is high and their health good. Those boys are the finest asset a nation can possess, and it is just here that the remedy I propose would give relief. Such young men should obtain capital, be encouraged to buy other farms, erect buildings and settle down as citizens. Instead of going to the States or elsewhere to earn money for the purchase of a farm, they should get it here, on the credit of the nation. They should get it, too, on liberal terms, so they would not be burdened with exorbitant rates of interest for half their life. I believe if it were once known that such means were open to our young men, a new spirit would come over the country and the days of pessimism would rapidly recede. You cannot make the wheels go round without capital. How many instances have we seen where young farmers have bought land, but possessed no funds for the erection of a house or barn. If you gave them the capital at the right moment, their careers would be a success. Without it they frequently toil on in debt, and ultimately give up the struggle. The result is another abandoned farm added to the dreary total I have already named. I say, therefore, my proposal is adapted to the wants of the natives whose welfare is of first importance. Then again you must have something to offer the immigrant. The Eastern Provinces cannot, in my judgment, hope to compete with the free homestead (160 acres) of the West, unless they wake up and display some goods. Many of these immigrants possess all the way from $500 to $2000, and it is not human or natural for them to buy a farm here, when they can get one in the West for little or nothing. Here is where our Ready Made Farm should come in. The Land Settlement Commission should have on hand a small number of farms, with suitable buildings for occupancy. The newcomer is not familiar with the cost of construction here, and a ready made home would be a big attraction to him. Especially would it be so, when he could deposit say 30 per cent. of purchase price and borrow the balance from tne Commission on easy terms. No better advertising scheme could be invented.

As soon as the first plants were sold, the demand for others would be certain to increase. You would get

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SEVERAL DOCTORS COULD DO HER NO GOOD. THREE BOXES OF MILBURN'S HEART AND NERVE PILLS COMPLETELY CURED HER.

Miss Mary Lebeau, Edison, Sask., writes:—"I was troubled with heart disease and nervousness for over two years, and was so bad at times I had to sit up at night being unable to breathe, and every little noise would make me shake and shiver. I tried several doctors, but they were unable to do me any good. A neighbor then advised me to try a box of Milburn's Heart and Nerve Pills. As soon as I began to take them I began to feel much better, and by the time I had used the third box I was completely cured. I would advise anybody suffering from heart disease and nervousness to try these pills. They will save quite a bill in doctor's fees."

Milburn's Heart and Nerve Pills cure all heart and nerve troubles by their restorative influence on every organ and tissue of the body.

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Advice to Ladies.

I was sick with Heart trouble and constant headache due to change of life. I called a doctor but failed to improve. I was told to use

GATES' LIFE OF MAN BITTERS AND SYRUP

and they are wonderful with me. It was after the use of the first few bottles my final recovery began, I thank you for the remedies, a few dozen bottles is small in cost compared with physicians bills.

Gratefully yours,
MRS. JOHN FOLEY,
Cornhill, N. B.

your immigrants and under the guidance of the government, I believe they would stay. If such a thing can be done by the Canadian Pacific Railway in the West, why cannot a Land Settlement Commission or Agricultural Bank do it in New Brunswick? Are you going to admit that the constructive genius of your people has deteriorated? I, for one, will never make any such confession. Let the sons and daughters of old England, Scotland, and Ireland come, and we will provide them with an opportunity for life and hope upon the vacant lands of our Province. I know that some of our natives have objections to these immigrants. But please remember that it is only a few years since our forefathers were immigrants. Do not let us be too harsh. If the first generation is not a success, their children may be. The people of Anglo-Saxon stock are wanted here. Let us not repeat the blunders of the neighboring Republic in this respect. If any of you want a lesson in racial stocks, I would urge you to visit cities such as Lawrence and Lowell in New England, and see what kind of people now inhabit these places, once founded and governed by men of Puritan lineage. Look again at the polyglot races of Boston, New York and Chicago. The conception of large classes in these cities is utterly alien to our institutions and government. I say, therefore, you need the men of British blood and exiled Canadians too. You want settlers whose traditions are yours, whose aspirations are yours, and whose instincts are one and the same. And if you want such people, you must enter the competition for their families by offering them something tangible. You must in short make it easier for such people to acquire homes and possess the land with you.

Another question which should be fairly considered is this. Will the project pay or will the Province lose money on it? At the beginning it probably will not yield a profit, but after a period of a few years I am confident it will. The funds can be raised so there should be a margin of at least 1 per cent. between the interest paid by the Government and the rate received from loans. If the Savings deposits of the Dominion Government can be used the margin should be greater. The same margin would also prevail under an Agricultural Bank. In this connection I may point out that the average margin between the yield from investments and interest on deposits in the Savings Bank of Massachusetts, is not over 1 per cent. In that Commonwealth there may be found the most successful system of Savings and Co-operative Banks of the world. Their affairs are supervised by a State Bank Commissioner, and failures are almost unknown, except by defalcation or robbery. Even these cases are rare. But supposing the project does not pay at once, is it not worth while for the Province to bear for a few years the running expenses of an institution that is calculated to yield enormous benefits to her people? While we are discussing the question of profit, let me ask you this. What profit have you received from the millions of dollars in Railway subsidies appropriated in past years? What profit does your government derive from the annual sums granted for great public works? None, absolutely none, except in the general welfare of the people. Indirect benefits no doubt are many and legitimate. But I contend that if you consider this project entirely on the basis of profit, you have not grasped its purpose. If subsidies are good for railways, I hold that a moderate expense for the settlement of human beings in your country is still better. If public works are necessary, so are people to replenish your land and revive a drooping industry. Neither railways, public works, nor any other institution are of any value unless you have a prosperous people to support them.

EXPERIENCES OF OTHER COUNTRIES.

Fortunately, in this matter, my arguments do not rest wholly upon theory. They are based also upon the experiences of other nations in different parts of the world. Let us, therefore, for a moment, consider some of these experiences and their results.

I have already referred to Germany, where the credit of the nation has been used to much greater extent, than is necessary for our project. In addition to the loans of the Imperial Government, the cities and towns of Germany have for many years advanced money to societies and individuals for the construction of working men's dwellings. In 1900 the city of Dusseldorf established a Department to loan money on land and borrowed over $4,000,000 at 4 per cent. to promote the building of dwelling houses. At the same time it instituted a Land Purchase Department, with the loan of $1,250,000 as working capital and proceeded to buy houses directly. In the following year more than 300 applications were received for 140 dwelling houses that had been completed. Dr. Suedekum, a member of the Reichstag, is authority for the statement that out of $238,000,000 received from the working men's insurance over $156,000,000 are loaned out on working men's homes. These efforts to provide healthful homes for workers have been a considerable factor in the reduction of the death rate in Germany from 29 per M in 1871 to 19 per M in 1908.

In France a law was passed in 1910 providing for the acquisition and development of small rural properties through long term individual loans.

Little Denmark has also adopted a law to encourage the acquisition of small rural holdings, and the result has been the creation of a large number of prosperous farmers. By her system of small holdings and co-operation, she has actually changed the current of migration from the cities back to the country, and about 5-6 of her property is owned by small freeholders. Many co-operative societies have been organized for the collection, sale and exportation of produce.

In Brazil the Government authorizes the Savings Deposits in the Banks, to be loaned directly to building companies for the erection of workmen's homes. The houses must be constructed according to Government plans, and they are sold out again to tenants on long terms of credit. This is very generous. But I only advocate this loan of such Savings Banks Deposits on the credit of a Province. If it is safe in Brazil to lend such funds to private companies, why is it not perfectly safe here to lend them to a Provincial Government? To state the question is to answer it.

Turning to England, our mother country, we find many acts of legislation authorizing the borrowing of money on the public credit, for the erection of dwellings among the laboring classes. Power has been given freely to acquire land either by agreement or compulsion, and to loan money to associations and individuals for the erection of dwellings. For such purposes even municipalities have been authorized to borrow from the government or in the open market. Most of this work, of course, has been done in the slum districts of the great cities, but the operations, as a rule, have been conducted with profit and satisfaction. In many instances the action of the government has stimulated private enterprise. Under the Small Holdings Act of 1908, farmers have received over 167,000 acres. The allotment is intended to supplement the earnings of the agricultural laborer or the town artisan, and in June, 1911, there had been organized not less than 162 Small Holdings Societies. The London County Council has recently acquired some 225 acres of land and proposes to erect over 5000 cottages which will house some 42,000 people. While the housing problem in Great Britain has not yet been solved, as a result of these systematic efforts by the State and municipalities a remarkable decrease in crime, disease, and death has followed.

But the best illustration for our purpose may be found in Ireland. There the British Government has not only advanced money to tenants for the purpose of acquiring their farms, in fee simple, but it has also advanced money for the erection of cottages in the country districts. The advances have been made through a Land Commission, very much as I have suggested should be done in New Brunswick, and in many instances the loans are repaid by annual instalments extending over a period of 49 years. That is much more radical than anything which I would suggest. As a result of this policy in Ireland the number of tenant purchasers in 1911 was 198,000 representing advances made to the enormous sum of $331,000,000 and covering an area of 6,000,000 acres. Even the rural councils in Ireland are permitted to obtain advances from the Land Commission out of the Land Purchase funds, and already by one form or another of government credit not less than 34,000 cottages have been constructed in the country districts of Ireland. At the present time over 5000 more are under construction. For the erection of such buildings the enormous sum of $25,000,000 has been sanctioned. There the Government has not sold the cottages, but has rented them at a very small cost, and an agricultural laborer can rent a fairly good house with an acre of land, for $.26 a week. So

far as I am aware, the peasants of Ireland have universally kept up their payments to the Government, and very soon the greater portion of the farmers in Ireland will be the absolute owners of their land in fee simple. The effect upon the country has been extremely encouraging, and Ireland to-day is enjoying a prosperity which she has never known in all her history.

But the experiments to which I call your most careful attention, are those which have been conducted in the great British Dominions of Australia and New Zealand. Notwithstanding the natural wealth of those countries, it has been found necessary and desirable for the governments to adopt a policy similar to one which we are discussing here. Six of the seven Australian Colonies have adopted in some form or other the principle of Government advances in order to settle the people upon the land. In 1893 the State of Victoria passed a law providing for advances to settlers to make improvements or to pay off old debts. The money was obtained from the Government Savings Bank at 3 per cent. and was loaned at 4½ per cent. over long periods. There the borrower paid 4½ per cent. on his interest and 1½ per cent. on the principal annually until the loan was extinguished, and the total advances which have been made amount to $5,600,000. The scheme has been successful and no serious loss has been incurred.

In 1894 Western Australia adopted a similar law, authorizing loans to settlers at 5 per cent. for improvement purposes only. Borrowers had thirty years in which to repay the loan in fifty semi-annual instalments, beginning five years after the date of the advance. This is a very liberal extension of credit, and goes farther than I would recommend. For the capital raised the government paid 4 per cent and the funds are turned over to an Agricultural Bank which operates the system. There is barely a margin of 1 per cent. between the cost on the money raised and the interest received on loans, but notwithstanding this fact the profits of the Bank's transactions for the year 1910 amounted to $34,000. That State has a population of only 281,000, considerably less than this Province. Since the Bank was established in 1894 it has advanced to settlers the enormous sum of $6,250,000. During the year 1910 the Bank advanced to borrowers $1,250,000 and in the same year the repayments to the Government amounted to $750,000. Through the instrumentality of this Bank and government credit not less than 600,000 acres of land have been cleared, 213,000 acres cultivated, and improvements of one kind or another have been effected at a cost of over $7,000,000. A reserve fund has been established for the redemption of the bonds issued by the State, and altogether the operations of this Bank are to my mind a complete answer to any objections that may be urged against a similar experiment in New Brunswick. If that State, with a population of less than 300,000 can carry out such a project successfully, for a period of seventeen years, why cannot the same thing be done here in New Brunswick? Annexed to my Address you will find, in table "E" the details of its operation.

Last of all, I should like to cite to you the achievements of New Zealand, the most wonderful little commonwealth that now exists. Many years ago the conditions in New Zealand were much the same as those now prevailing in New Brunswick. Cities and towns were filled with the unemployed, the congestion was producing slums, and vast areas of the land in the country lay idle. In 1894 a law was enacted providing for advances to settlers, and on terms varying from 20 to 36½ years. The system is operated directly under State control, and in this respect it differs from the plan in some of the Australian States. The chief officer is known as the Superintendent, who is advised by the Board. Altogether, for the purpose of this law, some $75,000,000 have been raised on the credit of the State. The funds have been raised at 4 per cent. and are loaned to borrowers at 5 per cent. plus the payment on the principal every half year, which brings the charge up to about 6½ per cent. per annum on the menoy lent. A sinking fund is created by the annual contribution of 1 per cent. on the total capital liability at the time of payment, and the fund is held by a Public Trustee for the redemption of bonds. New Zealand has also adopted a policy of erecting working men's homes, but this is altogether distinct from the law relating to advances for settlers upon the land. It is interesting to observe the operations of the New Zealand system during the past 17 years. Annexed to my address you will find in table "F" the actual results, but I would like to call your attention to the fact that advances of funds have been made to some 25,000 applicants aggregating about $45,000,000. These advances have been made upon first mortgages and generally upon freehold property. During the year 1909-10 the total advances amounted to $5,000,000 and the net profits on the transactions for the year amounted to $200,000. If New Zealand with a population of one million can advance $5,000,000 in one year and make a profit of over $200,000, are you going to shrink from pledging the credit of this Province to the small extent I have named? Five millions for New Zealand would be equivalent to $1,750,000 for New Brunswick. The sum that I have named for a beginning, viz., $150,000 is less than 1-10th the proportion of burden which New Zealand assumes. Conceding for the moment that New Zealand may be endowed with great natural resources, I cannot believe that there is such a vast difference between the ability of the two peoples to bear a public burden.

I know there are some persons who will say that the people of that Dominion are given over to wild and strange theories of government. They would class such legislation as Socialistic. But let us not jump at conclusions too quickly. I am aware that there may be some radical features of government policy in New Zealand, but after all due allowance for just criticism, the policy of any people must be judged by its results. To my mind there is nothing Socialistic whatever about this project, and I am convinced that if it can be made a success in Germany, Brazil, England, Ireland, Australia and New Zealand it can certainly be made a success in New Brunswick. The people of New Zealand and of this Province are essentially the same stock, and under normal conditions what our race can accomplish in one part of the globe it can usually accomplish in another.

CONCLUSION.

A few words more and I have done. Whether I have made out a case it is for you to say. I am not without hope, however, that this day will mark the beginning of a new era in the affairs of this Province. Upon your action much will depend. I have not discussed other proposals which have been made for the re-adjustment of our affairs. I have confined myself to a single great and supreme remedy. Other things such as Agricultural Schools, Experiment Stations, better roads, and probably an Agricultural College will accompany this forward movement. My remedy is not designed to build up cities or towns primarily, but to restore country life and agricultural pursuits to their proper place in the economy of a nation. If that restoration occurs, the cities and towns will receive adequate benefits. It is absolutely necessary for the people to recognize that the cultivation of the soil is the most important occupation in this country. Let us preach this doctrine from the house top, in every office, in every home, and upon every field, until our enthusiasm becomes so contagious that no government who cares for the welfare of its people will longer resist your demands.

Many years ago the late Thomas B. Reed, Speaker of the American House of Representatives, enunciated the pregnant truth that "man derives his greatest powers from his associations with other men, his union with his fellows." You and I, individually, can accomplish little. By our united efforts and enthusiasm we can achieve notable results. That is true of the project which we are considering. No individual, or group of individuals, can bring about the desired result, but the united efforts of the Province and people are sufficient to make this fair land rejoice and blossom as the rose. This country is not played out. Its resources are barely scratched, and its soil is only waiting for scientific treatment to respond to the necessities of man. In the mother country, beyond the seas, her hills and valleys have been cropped for a thousand years, and to-day their production to the acre is greater than any lands of the Western world. We have just as fertile lands, we have fairer skies, more beautiful rivers, and a variety of scenery which surpasses even the grandeur of the old world. What we require is a greater number of energetic and hopeful citizens, winning their triumphs from the soil and properly assisted with the living water of capital by the efforts of the State. I should like to see New Brunswick as the pioneer of this remarkable achievement. For it is certain as the rising of to-morrow's sun that something of this nature

This Washer Must Pay For Itself.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse. But I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right"

Well, I didn't like that. I was afraid the horse wasn't "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse although I wanted it badly. Now this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me.

So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

You see I sell my Washing Machines by mail. I have sold over half a million that way.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six minutes. I know no other machine ever invented can do that, without wearing out the clothes.

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It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first and I'll make good the offer every time.

Let me send you a "1900 Gravity Washer on a Month's free trial. I will pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months, in wear and tear on the clothes alone. And then it will save 50 cents to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week send me 50 cents a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day and let me send you a book about the "1900 Gravity" Washer that washes clothes in 6 minutes.

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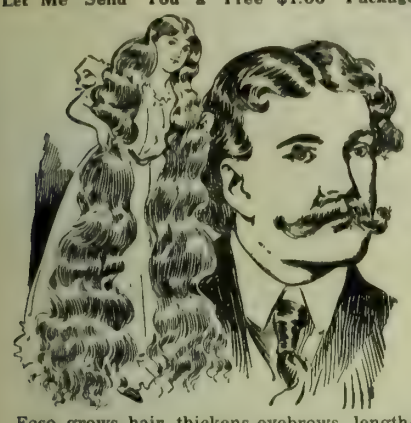

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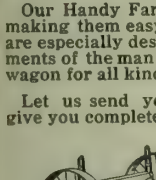

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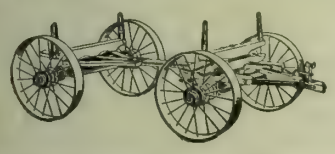

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must be done. Already Ontario has taken some steps in this direction, but it is for you men of New Brunswick to solve the problem by a clear, intelligent and feasible method.

Let us turn our backs upon the dreary past of pessimism and despair, and look to the morning dawn of the East. Other countries may excel us in art and refinement, they may surpass us in commerce and manufactures. But most of them are cursed with the slums of great cities, with too much riches and too much poverty. Never before has there been so much bitterness between the classes, never before has there been so much unrest, among the masses. I turn from this sickening spectacle to find rest. As my eyes close upon such a topsy-turvy struggle for contentment, I wonder if in this Province we may find relief. I should like to see a country with few millionaires and still fewer paupers. I should like to see a land where there were no huge cities and no empty country. Give me a land filled with human beings, living under normal conditions for fresh air, sunshine and clear skies, and deriving their sustenance mainly from cultivation of the soil, and I will show you a country where there are neither riches nor poverty, strikes nor slums. I will show you the finest example of economic contentment which our civilization can produce. I will show you men and women, modest and serene, humanized by contact with the soil, strong in physical and moral fibre, and fit to become the chosen breed of any race.

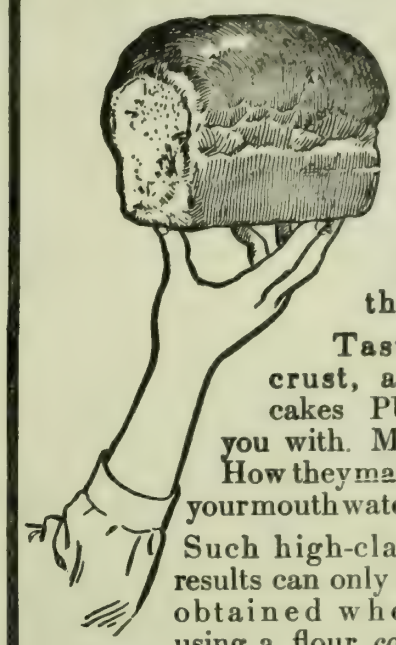
"Gray countries and grim empires pass away
And all the pomp and glory of citied towers
Goes down to dust; and Youth itself shall age.
But oh, the splendor of this Autumn dawn,
This passes not away!
This infinite great width of open space,
This virginal vast dome of open air,
These, these endure."

I have a pride in the traditions of this Province. Every phase of her history appeals to me. Her capacious forests first welcomed the log-cabin of my forefathers. Upon her lakes and streams they first met success in life, and transmitted to me an example of thrift and contentment which I revere. Their bones now lie buried beneath her soil, but the memory of their struggles is with me still. I cannot better state the philosophy of this movement, than by quoting to you the burning words uttered by James J. Hill, when discussing the future of the American Republic a few years ago.

"Now as ever, to the nation and race as to the individual, Nature, the unrelenting task-mistress of the centuries, holds out in one hand her horn of plenty and in the other her scourge. This country has brought itself within reach of the thong, while grasping at the satisfaction of present appetite and forgetting the primal relation between the earth and man. The pathway to prosperity is still open. The divinity of the earthly life at heart is kind. Under her rule there is work and abundant reward for all, but these must be won in her designated way and in none other. Her pointing finger that has never varied since man came upon the earth, shows the old and only way to safety and honor. Upon the readiness with which this is understood, the sober dignity with which a whole nation rises to the winning of its broad and permanent prosperity will depend the individual well-being of millions of this and many generations. Largely by this method will posterity, our fit and righteous judge, determine whether what

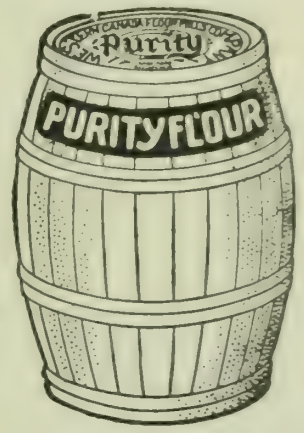
Be Fair. Buy a sack or barrel before judging PURITY FLOUR

SOME people have attempted to judge PURITY FLOUR before knowing the facts about it—before using it. So we ask you to be fair and to buy a sack or barrel of PURITY FLOUR and give it a thorough try-out before attempting to arrive at a judgment.



Look at the beauty and loftiness of the golden-crusted, snowy-crumbed loaves, fit for a king. Count them and see how many more of them PURITY yields to the barrel than ordinary flour does.

Taste the creamy, flaky pie crust, and the deliciously light cakes PURITY FLOUR rewards you with. My! How they make your mouth water!



Such high-class results can only be obtained when using a flour *consisting exclusively* of the *high-grade portions* of the *best Western hard wheat berries*.

And remember, that, on account of its *extra* strength and *extra* quality, PURITY FLOUR requires *more* water when making bread and *more* shortening when making pastry, than you are accustomed to use with ordinary flour.

PURITY FLOUR

"More bread and better bread"

Buy a bag or barrel of PURITY FLOUR. Test it for a week. Then pass judgment.

Add PURITY FLOUR to the grocery list right now.

105

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

"Why Don't You Mix Your Own Fertilizers?"

Buy "Vanco" straight Fertilizing Chemicals —mix them at home—and thus save duty on "imported mixtures" and get genuine fertilizers of guaranteed analysis.

Vanco

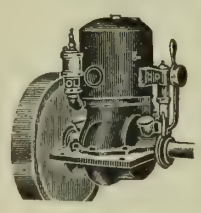
MURIATE OF POTASH
—guaranteed 50% actual Potash
SULPHATE OF POTASH
—guaranteed 48% actual Potash
NITRATE OF SODA
—guaranteed 15% Nitrogen
ACID PHOSPHATE
—guaranteed 14% to 16% 51

The "Vanco" Book will tell you how to mix all your own Fertilizers. Write for a free copy.

CHEMICAL LABORATORIES LIMITED,
148-158 Van Horne Street, - Toronto.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.



BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete,
12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton, Ont.

A GOOD INVESTMENT

is the money spent in securing a training at

FREDERICTON The Business COLLEGE
W. J. OSBORNE PRINCIPAL.

A catalogue of this school giving full particulars will be sent free to any address on application. Address

W. J. OBSORNE - Principal,
Fredericton, N. B.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

issues from the crucible of this twentieth century is a bit of rejected dross to be cast aside or a drop of golden metal to shine for ever upon the rosary of the years."

"B"

Estimate of Abandoned farms and importation of farm products in New Brunswick (Furnished by the Department of Agriculture and based upon report of Commission 1909).

Number of farms formerly occupied and now vacant 3500
Allowing 125 acres each,
Total Acres would be 437500
or about 1-10 farm acreage of the Province.

They are distributed among the Counties as follows :

Alberta	179
Charlotte	216
Carleton	405
Gloucester	164
Kent	460
King's	450
Madawaska	6
Northumberland	203
Queen's	360
Restigouche	10
Sunbury	84
St. John	220
Westmorland	181
York	330
Victoria	241
Total	3499

The Commission also reported that the following products were imported through brokers in St. John :

Butter	$ 25 800
Canned Fruit	128 068
Beans	77 500
Potatoes	8 250
Oats and Mill Feed	1 900 000
Eggs	28 600
Cheese	14 432
Pork Products	511 100
Apples	10 600
Horses	40 000
Poultry	6 000
	$2 750 350

"C"

TERM THIRTY YEARS.

Table of Half-yearly Instalments of $10 which will liquidate a loan of $309 08 with interest at 5 p.c.

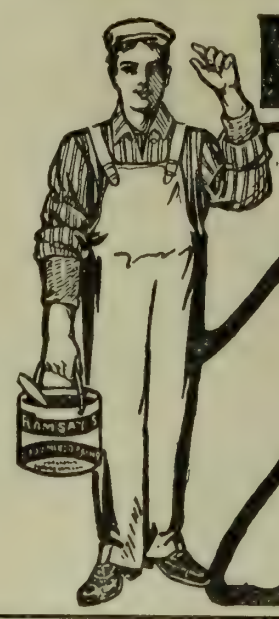
Instalments apportioned thus :

HALF YEAR		On account of interest at 5 p.c.	On account of principal	Balance of Principal unpaid
1st	$10	$7 73	$2 27	$306 81
2nd	10	7 67	2 33	304 48
3rd	10	7 61	2 39	302 09
4th	10	7 55	2 45	299 64
5th	10	7 49	2 51	297 13
6th	10	7 43	2 57	294 56
7th	10	7 37	2 63	291 93
8th	10	7 30	2 70	289 23
9th	10	7 23	2 77	286 46
10th	10	7 12	2 84	283 62
11th	10	7 09	2 91	280 71
12th	10	7 02	2 98	277 73
13th	10	6 95	3 05	274 68
14th	10	6 86	3 14	271 54
15th	10	6 79	3 21	268 33
16th	10	6 71	3 29	265 04
17th	10	6 62	3 38	261 66
18th	10	6 54	3 46	258 20
19th	10	6 46	3 54	254 66
20th	10	6 37	3 63	251 03
21st	10	6 27	3 73	247 30
22nd	10	6 18	3 82	243 48
23rd	10	6 09	3 91	239 57
24th	10	5 99	4 01	235 56
25th	10	5 89	4 11	231 45
26th	10	5 78	4 22	227 23
27th	10	5 68	4 32	222 91
28th	10	5 58	4 42	218 49
29th	10	5 46	4 54	213 95
30th	10	5 35	4 65	209 30
31st	10	5 23	4 77	204 53
32nd	10	5 11	4 89	199 64
33rd	10	5 00	5 00	194 64
34th	10	4 88	5 12	189 52
35th	10	4 74	5 26	184 26
36th	10	4 60	5 40	178 86
37th	10	4 47	5 53	173 33
38th	10	4 33	5 67	167 66
39th	10	4 19	5 81	161 85
40th	10	4 05	5 95	155 80
41st	10	3 89	6 11	149 79
42nd	10	3 74	6 26	143 53
43rd	10	3 59	6 41	137 12
44th	10	3 43	6 57	130 55
45th	10	3 26	6 74	123 81
46th	10	3 09	6 91	116 90
47th	10	2 92	7 08	109 82
48th	10	2 75	7 25	102 57
49th	10	2 56	7 44	95 13
50th	10	2 38	7 62	87 51
51st	10	2 19	7 81	79 70
52nd	10	2 00	8 00	71 70
53rd	10	1 79	8 21	63 49
54th	10	1 59	8 41	55 08
55th	10	1 38	8 62	46 46
56th	10	1 16	8 84	37 62
57th	10	94	9 06	28 56
58th	10	71	9 29	19 27
59th	10	48	9 52	9 75
60th	10	25	9 75	
	600.	290 92	309 08	

"A"

Comparison of growth in population between Maritime Provinces and New Zeland for last 40 years.

	New Brunswick	Nova Scotia	P. E. I.	Total
1871	285 000	387 000	100 000	772 000
1881	321 000	440 000	108 000	869 000
1891	321 000	450 000	109 000	880 000
1901	331 000	459 000	103 000	893 000
1911	251 000	492 000	94 000	937 000



Get the Right Idea in Painting.

Get the Ramsay idea—Ramsay's Paints are the paints that last—that beautify and brighten up your house—that preserve and increase the value of your property—that do not fade—crack or peel. They are economical paints in the colors you want and at the price you want to pay. Ask your dealer in your town.

A. Ramsay & Son Company, Montreal.

Write for this Illustrated Catalogue of Ewing's Reliable Seeds

—vegetable—flower—field root—field grain — grass—clover and ensilage corn.—Also fruit trees—small fruits —roses and other shrubs—bedding plants — fertilizers — insectides — garden tools — spraying appliances and poultry supplies. Mailed free for the asking. Address. 24

WM. EWING & CO., Seedsmen,
McGILL ST., MONTREAL.

COBEQUID FARM HOLSTEINS

We offer for quick sale, several bulls fit for service from cows with Record of performance tests of 12,715,75 lbs. of milk testing about 3.7 p.c. at 2 years 2 months, another with 13,283.5 lbs. milk and 512.67 lbs. butter when 2 years old and another with 18,482.75 lbs. milk and 753.3 lbs. butter in 1 year at maturity. These bulls are in good condition, well grown and straight. For particulars write.

SA UEL DICKIE, - Central Onslow, Col. Co., N. S.

MAPLE FOREST YORKSHIRES

Litters Dating from February 15th and After.

ADDRESS

S. J. GOODLIFFE, - Sussex, N. B.

Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

SWINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Statiou, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

Spring Brook Farm Ayrshires.

Why not buy from the herd that won 75 p.c of the first prizes at Halifax, Chatham and Fredericton 1911 exhibitions and Silver tea Service for best dairy herd, eight herds competing in all.

Bulls and females, all ages, for sale. Inspection invited.

McINTYRE BROS, Sussex, N. B.

Cattle and Sheep Labels.

Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

New Zealand

1870	248 000
1880	484 000
1890	625 000
1900	768 000
1910	1 000 000

Revenue 1910-11 ..... $51,000,000.

"D"

Half yearly instalments as below will liquidate a loan of $1000 with interest.

	5 p.c	5 1-2 p.c	6 p.c
20 Years	$39 84	$41 53	$43 26
25 Years	35 26	37 04	38 87
30 Years	32 35	34 22	36 13

Fractional parts of above loan will require same fractional parts for the Half-yearly payment.

For example, if a loan of $100 was made, the Half-yearly payments to liquidate principal and interest would be as follows :

	5 p.c.	5 1-2 p. c	6 p.c
20 Years	$3 98	$4 15	$4 32
25 Years	3 52	3 70	3 88
30 Years	3 23	3 42	3 61

"E"

Operations of the Agricultural Bank of Western Australia for the year ending June 30, 1910. (Funds provided for this Bank are raiesd wholly on the credit of the State, and the amounts below represent the conversion of Sterling into Canadian money.)

Amount advanced to Borrowers during the year	$1 250 000
Amount of Repayments By Borrowers during the year	750 000
Total amount advanced since the establishment of the Bank in 1894	6 250 000
Total repayment since the establishment of the Bank in 1894	1 600 000

Following improvements have been effected by farmers with the assistance of the Bank's funds.

Acres of land cleared' 603 000 ..... Cost	$ 475 000
Acres cultivated, 213 000 ..... Cost	600 000
Acres Ring Barked, 895 000 ..... Cost	405 000
Fencing done, 831 000 chains Cost	1 200 000
Draining done ..... Cost	25 000
Water supply furnished ..... Cost	300 000
Buildings erected, ... Cost	410 000
Acres Orchard established, 321 .... Cost	20 000
No. acres treated by blackboy and poison grubbing 34,420	43 000
Total Cost	$7 478 000
New accounts opened with borrowers during year	1354
Accounts closed	629
Total No. accounts current	6007
Average amount of Borrowers' Balances	$750
Expense of management during year	$31000
Expense of inspection and valuation	$24000
Net profit on the transactions of Bank for year	$34000
Profit was transferred to the Reserve Fund now amounting to	150 000

This Reserve Fund is employed by the State Treasurer for the repayment of mortgage bonds issued.

For the capital raised during the year the State Treasury paid 4 p.c. per annum, leaving a margin of 1 p.c. for the operations of the Bank on loans.

Lands upon which loans are made are classified for the purpose of valuation.

Population of Western Australia	281 000

"F"

Operations of Government advances to settlers in New Zeland, since 1894.

Net advances to March 1910.

To 25,722 applicants aggregating			$ 45 000 000
Total repayments			17 000 000
Advances outstanding Are			
Class.		No.	Amount.
Not over	$2500	11261	$110 000 000
Exceeding	2500 but not exceeding 5000	2136	80 000 000
Exceeding	5000 but not exceeding 10 000	955	6 500 000
Exceeding	10 000 but not exceeding 15 000	156	2 000 000
	Total	14 508	$27 500 000

The above advances are secured by mortgages aggregating	14 508	$28 000 000
Number Applications granted 1909-10		3201
Amount of money		5 $000 000
Gross profit on transactions 1909-10		$250 000
Cost of management, etc., ...		40 000
Net Profiton operations 1909-10.		$210 000.

Run the Disc Before the Plow.

The use of the disk is becoming more and more common before plowing. Many of the best farmers double disk the land as soon as it is dry enough in the spring to make the surface fine. This disking not only insures that the bottom of the plow furrow will be fine, but also cuts up and mixes with the soil any plant refuse or manure that is to be plowed under. At first this appears to be a lot of work in addition to that ordinarily expended on the preparation of the seed bed, but those who have tried this disking before plowing, most thoroughly, are its strongest advocates.

I have seen cases where heavy growths of cornstalks have been taken care of by this means in such a way as to be placed out of the way of the cultivator shovels, and so well mixed with the soil at the bottom of the plow furrow as to cause no obstruction to the rise of water from below.

An Object of Pity.

That part of our nature which we call the emotional is much more highly developed in women than in men. They are more sensitive, more tender, more sympathetic, more pronounced in their likes and dislikes, more susceptible to the extremes of pleasure and pain; and these refined mental qualities, no less than beauty of form and feature, make up the atmosphere of attractiveness and charm which always surrounds true womanliness.

The continued existence of these winning, engaging womanly characteristics depends to a very large extent on the regularity of the womanly functions and the condition of the womanly organs; and when these functions and organs become disordered or diseased the same mental qualities which are the glory of a well woman become the source of suffering and torture almost indescribable. Her cheery hopefulness is changed to a feeling of despondency, almost of despair, and she is haunted with forebodings of worse evils to come. Instead of being entertaining and companionable, she becomes moody and irritable, being unable to keep her mind from dwelling on her troubles. She becomes morbidly sensitive, imagining that she is being slighted or foresaken by her relatives and friends and she has a most humiliating sense of her miserable condition and of her loss of her womanly attributes. If she is religiously inclined she is very liable to be oppressed with doubts and fears in regard to her spiritual condition, or to think that she is eternally lost. In addition to this, she has also to endure the most distressing aches and pains.

What makes the case still more pitiable, especially with married women, is the fact that few men understand or appreciate the extent of their suffering, or the seriousness of the troubles causing it. Many doctors even speak of these disorders as subjects for ridicule, and the poor sufferer often gets a reputation for being a crank or a scold when she more nearly approaches being a martyr.

As these disorders are due to a disordered condition of the womanly organs, it is evident that to effect a cure these organs must be restored to normal condition; or, in other words, the circulation, which has become congested and stagnant in these parts, must be improved so that the waste matter will be expelled, and the nourishment so badly needed be brought to these suffering organs. It is the waste matter, or broken down tissue, which is held in the stagnant blood vessels in these parts, that causes most of the suffering by oppressing the nerves located in these parts.

The remedy known as ORANGE LILY will positively relieve this congestion and restore normal circulation in the disordered organs. It is an applied or local treatment, and acts wholly on these parts. It is absorbed into the blood vessels in these organs, and as it has powerful antiseptic properties, it immediately acts on the waste matter held there, and causes it to be discharged. As this dead matter is discharged the nerves are relieved, the pains and mental troubles become less, and the nerves and blood vessels become stronger. ORANGE LILY thus proves its merit by actual, visible results. It acts as certainly and as positively on all female troubles as anti-toxin does on diphtheria.

Winnipeg, April 28th, 19—

Dear Mrs. Currah,—I am very grateful to ORANGE LILY for the change it has made in my life. When I commenced its use eight months ago I felt I would be surely insane before the year was ended. The pain I suffered often made me wish for death, and besides I would have such fits of depression and nervous twitching that I would have to scream. I had doctored with three different doctors for over two years, and had also used both the Pierce and Pinkham medicines, but none of them seemed to reach my case. I felt some improvement after the first month's use of ORANGE LILY and have kept gaining ever since. I do not feel that I am entirely cured yet, but I am so much better than I was that I am sure I will soon be entirely well. I sleep well, and feel cheerful and happy, except that I am occasionally somewhat depressed, but these spells are getting fewer and milder. I have also noticeably improved in appearance. Enclosed find $2 for which please send me two boxes of ORANGE LILY and one of Cerate Massage. I might add that the matter which used to be freely discharged, and which looked like a chicken's gizzard, is becoming very scant, and I imagine that the circulation is pretty well restored. Am I not right in this? Your sincere friend. MRS. L. E. A.

Free to all Sufferers

In order to enable every woman suffering from any form of female disorders to test the merits of ORANGE LILY, I will send to everyone who will send me her address, or the address of any suffering friend enough of the remedy for ten days' treatment, absolutely free. As this is worth 35c. it is only because I know that it must give relief that I make this free trial offer. Further, if any woman wishes expert medical advice, and will write me a full description of her case, I will submit same to the staff of the Coonley Medical Institute, Detroit, Mich. and they will write her direct without expense to her. INCLOSE THREE 2-CENT STAMPS and address MRS. FRANCES E. CURRAH, WINDSOR, ONT. 2

Well, Well!

THIS is a HOME DYE that ANYONE can use

I dyed ALL these DIFFERENT KINDS of Goods with the SAME Dye.

I used

DY-O-LA

ONE DYE FOR ALL KINDS OF GOODS

CLEAN and SIMPLE to Use.

NO chance of using the WRONG Dye for the Goods one has to color. All colors from your Druggist or Dealer. FREE Color Card and STORY Booklet 10. The Johnson-Richardson Co., Limited, Montreal.

Small Fruits.

Strawberries.—I have the following varieties that have been widely successful. Extra early, Michel's Early, Excelsior, Bederwood; Early, Dunlap, 3 W's., Glen Mary; Midseason, William Belt, Parsons Beauty; Late, Sample, Buster, Uncle Jim, Stevens; Extra Late, Nettie and many others, $1.00 per hundred mail postpaid. And three varieties of recent introduction which I believe have come to stay; Gill, an extra early and Fendall and Golden Gate, midseason, $1.25 per hundred, mail postpaid.

Raspberries.—I have a fine stock of plants of Herbert and King, the two best hardy commercial varieties; Eaton and Brighton, two promising new ones and Marlboro and London, two old ones. All hardy. 1 dozen of any of the above 75 cents, mail postpaid. Send for catalogue and prices for quantities.

P. P. NEWMAN, Box 51, Lachine Locks, Que.

Strawberry Plants

Glen Mary, Sample, Williams, Three W's, President, Buster, Springdale Beauty, Stevens Late Champion and others. Prices, 25 plants 50c, 100 plants $1.00, postpaid. With every order for 100 strawberry plants or over we will send free of charge, 1-2doz. "Hiram" Raspberry plants for trial.

Raspberry Plants

Hiram.—A fine large berry of choice quality, 50c per doz. post paid, $1.50 per 100 by express. Herbert.—Very hardy and heavy yielder. 75c per doz. postpaid. Owing to large future orders and increasing our own acreage we will not be able to supply "Herbert" in 100 lots this spring.

Orchard Hill Farm, Brown's Flats, N.B.

KINNEAR POULTRY CO. LTD.,

Sussex N. B.

We are now prepared to supply eggs for hatching from our Utility Pens of B. P. Rocks & R. I. Reds (bred for egg production and market qualities) at $4.00 per 100 in lots of 50 eggs or more. Order ahead of time to ensure delivery when wanted.

STRAWBERRY PLANTS

All the latest, best producing varieties including: Senator Dunlap, Williams, William Belt, Brandywine and numerous others. Send for Catalogue.

JOHN H. CHUTE,
Berwick, N. S.

Aid to Thoroughbred Stallions.

The policy initiated in 1911 by the Department of Agriculture with reference to the granting of aid, under certain conditions, to the owners of Thoroughbred stallions is generally meeting with approval and is accomplishing, in part at least, the objects sought when the policy was undertaken. Amongst other things, owing to the rigid conditions imposed, it is encouraging those maintaining really high class horses and is serving to organize the system of breeding followed in the different communities where Thoroughbred stallions are located. The stimulus given, in this manner, to the use of Thoroughbred blood will, it is believed, lead to an improvement in the light horse stock of the country. Thoroughbred stallions, if really good individuals, may be expected to exert such an influence in the development of Canadian horses for saddle and harness use, as is greatly needed and greatly to be desired. The premium placed upon quality, soundness and prepotency, through the grants awarded by the Department is serving to check the use of unsuitable sires and is tending to conserve a type of Thoroughbred, the utility of which is beyond question.

While, as perhaps should be stated, it is not the intention of the Department to encourage the breeding of Thoroughbred horses or to develop a type in light horses approximating closely to that of the Thoroughbred, there is no question but that a strong infusion of Thoroughbred blood in the light legged mares of the country will be of inestimable value in improving the quality of the stock got from them by stallions of the various light harness breeds.

Believing himself to be justified, therefore, in further prosecuting the policy begun last year, the Honourable Martin Burrell, Minister of Agriculture, has authorized the continuance of the grant, to be available for all Thoroughbred stallions, standing for public service during the season of 1912, which comply with the conditions imposed by the Department.

The conditions under which assistance will be given are as follows:—

(1) All horses on account of which aid is given by the Department must be registered in the Thoroughbred Stud Book of the Canadian National Live Stock Records.

(2) Horses shall be of good size, quality and conformation and shall be free from all hereditary unsoundness; these conditions to be ensured by submission annually to a thorough, careful examination either at the hands of the Veterinary Director General or such other members of the veterinary staff of the Department, or other persons as the Minister may from time to time appoint for this purpose.

(3) Horses so approved shall be duly and properly advertised to stand for service of mares, under the ordinary and general conditions usual in the districts in which they are to be kept, at an annual service fee (except in the case of Thoroughbred mares) of not more than $10.00 to insure, such service fee to become due and payable only when mares prove to be in foal.

Any person, firm or corporation owning or controlling any Thoroughbred Stallion in regard to which all of the conditions above set forth shall have been duly and properly fulfilled, shall, on production of satisfactory evidence thereof and of the fact that a reasonable number of mares, other than Thoroughbred mares, have been served during the season, be entitled to receive at the close of each such season the sum of $250, from the funds of the Live Stock Branch.

"NOW I have the best roof in this township. One that will last—one that's waterproof—one that will resist the hardest storms—and I didn't have a bit of trouble laying it."

That's about what every Amatite owner says. Its superiority over all other ready roofing is apparent to anyone who uses it.

Amatite does away with all roofing troubles and unnecessary expenses because it is made with a real mineral surface that *needs no painting*. It is durable, fire retardant, practical, economical.

Don't buy any other roofing till you look up Amatite. Write to nearest office for samples.

Everjet Elastic Paint

Save money by using this black paint wherever the color is no objection. Elastic, heat-proof, durable. Use it for "rubber" roofings and all exposed iron and wood.

The Carritte Paterson Manufacturing Company
LIMITED
HALIFAX AND ST. JOHN

SYDNEY BASIC SLAG

WORKS NOW IN FULL OPERATION
IMMEDIATE DELIVERY CAN BE GIVEN

OFFERED IN TWO GRADES:—
"A" Quality is High grade, bearing **Green Tag, No. 557**
"B" Quality is Medium grade, bearing **Pink Tag, NO. 558**
BOTH REGISTERED WITH GOVERNMENT.

Farmers who want the BEST GOODS should Buy the SYDNEY SLAG with GREEN TAG No. 557

Being produced here and having no ocean freight to pay our prices are much lower than anything previously known. Buyers who can take delivery in carloads and pay cash with order can be supplied direct from Works.

Farmers who get Sydney Slag with Pink Tag No. 558 will understand they are buying a lower grade article.

The CROSS FERTILIZER CO.,

LIMITED

Purchasing Agents Wanted Everywhere. Sydney, C. B.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

Prize Winners at the Fredericton Seed Fair.

WHEAT, White Fife—1—J. S. McFarlane, Sussex; 2—David Currie, Tobique River; 3—Geo. E. Fisher, Chatham.

WHEAT, Red Fife—1—J. W. Stevenson, Gladstone, Victoria County; 2—Henry Gordon, Chatham; 3—H. B. Parlee, Sussex.

WHEAT, White Russian—1—Henry Gordon; 2—G. E. Fisher; 3—David Curry.

WHEAT, Any Other Variety—1—Edward Jarvis, Stanley; 2—Walter Payne, Lake Edward.

WHEAT, Special Competition—1—Henry Gordon; 2—G. E. Fisher.

OATS, Banner—1—Robert Shaw, New Maryland; 2—David Curry; 3—A. R. Gorham, Gorham's Bluff.

OATS, Any Other Variety—1—Robert Shaw; 2—Edward Jarvis; 3—Donald Innes, Tobique River.

OATT, Early Blossom—1—Donald Innes; 2—A. and C. A. Harrison, Maugerville.

OATS, (any variety), Black—1—E. Jarvis; 2—G. E. Fisher; 3—J. W. Stevenson.

OATS, (special competition)—1—Donald Innes; 2—W. E. Palmer, Scotch Lake.

BARLEY, (two rowed)—1—Donald Innes; 2—Henry Gordon; 3—Edward Jarvis.

BARLEY, (six rowed)—1—H. B. Parlee; 2—Donald Innes; 3—R. J. Shaw.

BUCKWHEAT, Smooth—1—H. P. Parlee; 2—A. R. Gorham; 3—G. E. Fisher.

BARLEY, Rough—1—H. B. Parlee; 2—J. W. Smith; 3—E. Jarvis.

FIELD PEAS, Large—1—H. B. Parlee; 2—J. W. Stevenson; 3—D. Curry.

FIELD PEAS, Small—1—J. W. Stevenson; 2—E. Jarvis; 3—H. Gordon.

GARDEN PEAS—1—A. R. Gorham; 2—G. E. Fisher; 3—H. Gordon.

BEANS, Colored—1—J. W. Stevenson; 2—E. Jarvis; 3—H. B. Parlee.

BEANS, White—1—E. Jarvis; 2—J. W. Stevenson; 3—J. Merceau, St. Basil.

TIMOTHY SEED—1—E. Jarvis; 2—W. H. Moore, Scotch Lake.

CORN, Any Variety—1—J. W. Smith, Nashwaak Village; 2—W. E. Palmer, Scotch Lake; 3—A. E. Kilburn, Macnaquac.

CORN, (any variety), Sweet—1—A. and C. A. Harrison; 2—A. R. Gorham; 3—E. Jarvis.

POTATOES, Green Mountain or Delaware—1—W. H. Moore; 2—B. M. Fawcett, Sackville; 3—J. W. Smith.

POTATOES, Irish Cobblers—1—H. B. Parlee; 2—H. Gordon; 3—J. S. McFarlane.

POTATOES, Any Other Variety, Long White—1—Henry Gordon; 2—A. R. Gorham; 3—W. E. Palmer.

POTATOES, Round White—1—H. Gordon; 6—H. B. Parlee; 3—E. Jarvis.

POTATOES, Rose Type, (Long)—1—H. Gordon; 2—H. B. Parlee; 3—T. W. Butler, Newcastle.

POTATOES, Rose Type, (Round)—1—E. Jarvis; 2—T. W. Butler; 3—W. E. Palmer.

POTATOES, Red, Skinned, Any Variety—1—H. Gordon; 2—H. Duplisea, R. F. D. No. 21.; 3—E. Jarvis.

POTATOES, Dark Skinned—1—W. E. Palmer; 2—H. B. Parlee; 3—H. Gordon.

POTATO ONIONS—1—D. Innes; 2—E. Jarvis; 3—H. Gordon.

TURNIP SEED—1—W. Palmer.

SIX TURNIPS—1—J. W. Stevenson; 2—W. E. Palmer; 3—A. R. Gorham.

SIX MANGOLDS—1—A. and C. A. Harrison; 2—B. Goodspeed, Pennise; 3—J. W. Smith.

Weak Men Listen

ELECTRICITY WILL CURE YOU

Electricity is animal vitality. It is the foundation of all strength. It is the fuel to the engine which runs the human machine. Electricity, as I apply it, is a source of new life to all parts of the body.

No man should be weak; no man should suffer the loss of that vital element which renders life worth living. No man should allow himself to become less a man than nature intended him. no man should suffer for the sins of his youth, when there is here at hand a certain check for his weakness, a check to his waste power. Most of the pains, most of the weakness of the stomach, heart, brain, and nerve, from which men suffer, are due to an early loss of Nature's reserve power through mistakes of youth. You need not suffer for this. You can be restored. The very element which you have lost you can get back, and you may be as happy as any man that lives.

DR. McLAUGHLIN'S ELECTRIC BELT

Restores the snap the vim and vigor of youth. Any man who wears it can be a giant in mental and physical development. Men, are you weak,, have you pains in the back, varicocele, weak stomach, constipation, lumbago, rheumatism, enlarged prostrate gland, or any of the results of early mistakes, excesses or overwork? Our method of applying electricity while you sleep at night will cure you. It fills the nerves with the fire of life.

EVIDENCE COMES FRESH EVERY DAY.

Strong and Active Again.

Molesworth, Ont., Dec. 28, 1911.

M. F. McLaughlin:—

Dear Sir,—I take great pleasure in asking you to file my name as cured. I have worn your Belt as directed for four months, and I feel like a new man. I am strong and active again, and feel as well as any one could feel. Wishing you every success in your business, I remain, Yours very truly, WM. H. Lynn.

Cured of Weak Back and Tired Feeling. in One Month.

M. F. McLaughlin:—

Dear Sir,—I am very thankful to say that I feel much better, both in health and strength. My back is not like it was, for I can do a day's work now. I now wake up in the morning feeling fresh, and not like when I had that languid feeling. I have more life in me now. I am well satisfied with the Belt and only wish I had obtained it before. Yours truly, Severine Cotreau, Wedge Port, N.S., July 26, 1911.

Mr. Thomas C. Morton, 75 Cameron St., Windsor Ont., says:—"Before I used your Belt, three or four years ago, I was unable to walk, but it improved me so much that I had no difficulty to walk after using it for some time and my advice to all sufferers is to use one of your Electric Belts. No doctors; no drugs, just one solid comfort. I hope your good work will be kept up."

I HAVE AN ELECTRIC BELT THAT DOES CURE, and I am offering it to you in such a way that you take no chances whatever. Give me your name and address with a statement of your case, and I will at once arrange a Belt suitable for your case, and

When You Are Cured Pay Me

CALL TO-DAY for Free Test of our Belt and Free Book. If you can't call cut out and send in this coupon.

FREE BOOK

Write to-day for our beautifully illustrated book with cuts showing how my Belt is applied, and lots of good reading for men who want to be "the noblest work of God"—A MAN. Enclose this coupon and we will send this book, sealed, free.

Put your name on this coupon and send it in.

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Put your name on this coupon and send it in.
Dear Sir,—Please forward me one of your Books, as advertised.

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Look for this box at your local store. If your local dealer cannot supply you order direct.

STEELE, BRIGGS SEED Co LIMITED
WINNIPEG TORONTO

Home Mixing and Application of Fertilizers.

(Continued from page 468).

applying the fertilizers in the drill with the sowing attachment but we prefer broadcasting. Of course we realise that a lot of time is saved by combining the two operations. By the broadcasting method of sowing, the fertilizers become more thoroughly incorporated with the soil and thus a more extensive root growth is encouraged. The succeeding crops also grow and ripen more evenly than where the fertilizers are applied in the drill.

In conclusion. We have endeavored in this short article to outline, somewhat briefly perhaps, the method and some of the advantages to be gained by "home-mixing."

It is for each farmer to decide whether this method or the use of mixed goods is most profitable in his particular case.

To Concrete a Cellar Floor on Wet Land.

(Continued from page 462).

board back about two and a half feet and fill in your space which is easier to get level as you have the concrete already laid on one side and the board on the other to go by. By finishing the bottom coat in this way it will take 20 cubic feet of gravel and 2 6-17 bags of Canada Cement to cover 100 square feet.

The finish coat is mixed, one part Canada Cement to four parts of sand and mixed wet enough so it will spread out easily with a Mason's trowel, as you spread even to the guide board run the trowel over it a few times and you will get a smooth surface. Now cut your one and a half inch guide board in halves take one piece of it and round up the ends a little so they will not catch, and draw it along on its edge in the finish coat about 6 inches from the wall pressing on it heavy enough to make a little water trench to carry off any water that may soak through the wall above the concrete. This is done as you work along the wall before the finish coat sets, smoothing off the ridges on each side of the trench with your trowel as you go along. By making the finish coat in this way it will take 12½ cubic feet of sand and 2 6-17 bags of Canada Cement to the 100 square feet.

I have concreted the floor in my cellar in this manner and it is giving good satisfaction, part of it I did in 1910 and the remainder in 1911. House is 24 x 32 feet with a kitchen 18 x 18 feet the work being done by one farm hand and myself at odd times. Counting our labour at $1.50 per day it would cost $3 for doing 100 square feet not counting time of digging out the cellar deeper than it was before. The stones used in the bottom were picked off the land and I was glad to get them out of sight. The gravel cost me nothing, only the hauling. It is needless to give cost of gravel as no two districts are in the same position to get it and you will think the same applies to Canada Cement as it costs 65 cents per bag, but we return bags and get 10 cents back. We can get cheaper Cement than the Canada Portland but a few cents don't amount to much on the difference between a good job and a poor one.

The cost of concreting 100 square feet of my cellar floor putting labour @ $1.50 per day.

Cement @ .55 per bag.
Gravel @ 1.00 per yard.
Sand @ 1.00 per yard.

Would be $5.85, this includes the breaking of the stones for foundation.

Horsemen Attention!

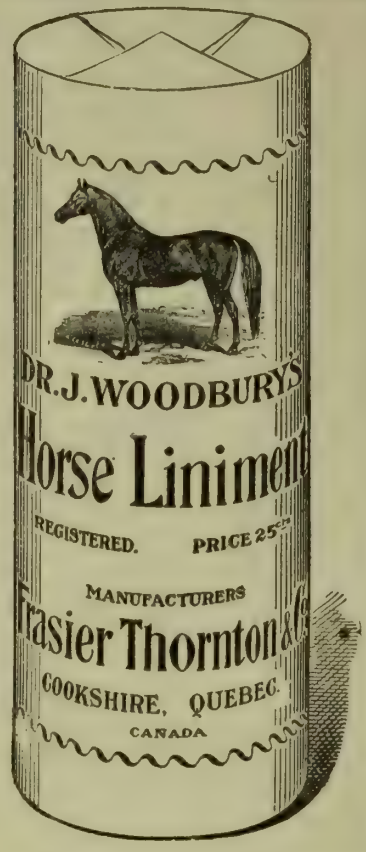
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents

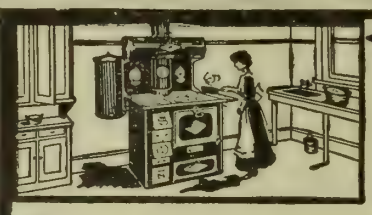


Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

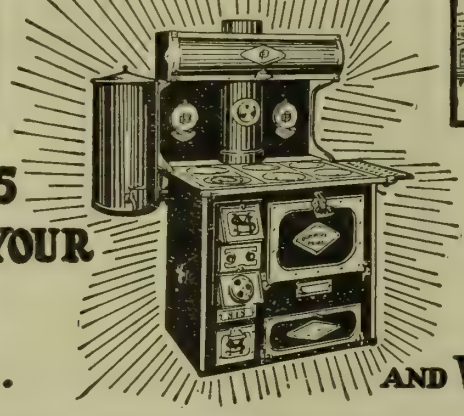
Demand
DR. J. Woodbury's
Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.



←DIRECT FROM FACTORY TO KITCHEN←



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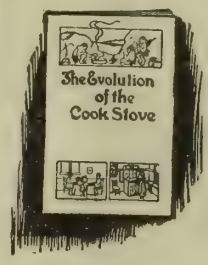
You Can Buy "DOMINION PRIDE" RANGE At Factory Price

Direct From The Largest Malleable Range Works in Canada

IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



"The Evolution of the Cook Stove"

TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of **tough, strong, malleable iron** and the **best blue polished steel**—materials which **will not warp, crack or break.**

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it **saves over 30% of fuel,** burning either wood or coal.

WE PAY THE FREIGHT

A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. **If not convenient to pay cash we will arrange to accept your note.**

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

When writing it will be a distinct favor to us if you will mention this paper. 7

"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man

See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good $100,000 of produce in your barn in 100 years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods.

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card request. Let it plan your barn. Write me to use."

"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."

G. K. Pedlar

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YOU do not need to know anything about company organization or telephone line construction to start a telephone company in your own community. "How to Build Rural Telephone Lines" will tell you absolutely everything you need to know. When you have read this book you will be amazed at the simplicity of the whole proposition and wonder why you and your neighbors have not had a telephone system of your own long ago. Sooner or later someone is going to start a telephone system in your neighborhood. Whether you or one of your neighbors chances to be that "someone," you owe it to yourself to be fully informed on the subject.

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THIS book contains seven chapters of detailed information on the construction of rural telephone lines, abounds in photographic illustrations and diagrams and deals with every vitally essential fact as does no other book in existence. Remember this book has cost too much money to prepare to send it out haphazard. While we will be glad to send you a copy, we will not do so until you ask for it. If you are interested in the subject send us the coupon and we will send you one copy of this volume free by return of mail.

Let Us Teach You How To Start Your Own Telephone Company

THE full details of company organization are described in this book. Mutual and stock companies are explained fully so that you can go out among your friends and neighbors and show them just exactly what has to be done.

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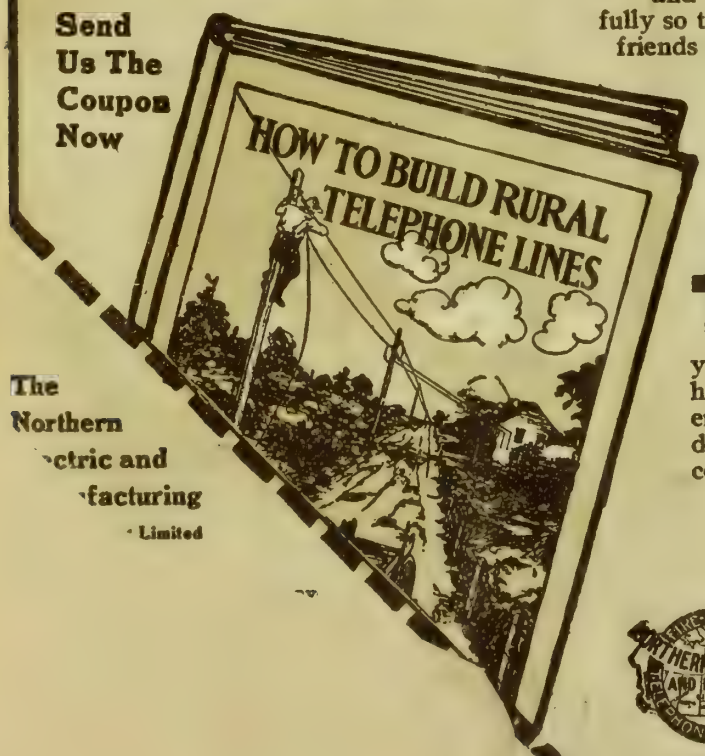

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THE expert advice of high salaried telephone engineers is back of you in every detail of your line construction. With the help we give, you do not need to employ expert linemen but can keep down the cost by doing your own construction work. One chapter of our book alone shows thirty-seven diagrams and illustrations dealing with this branch of the work. On request we will also tell you of your provincial regulations, what your government demands and what it will do to help you.

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Vol. 17. ST. JOHN, N. B., APRIL 30, 1912 No. 14

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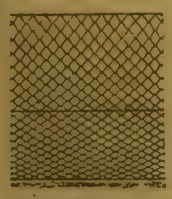
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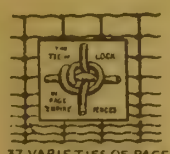
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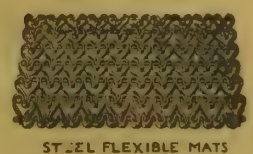
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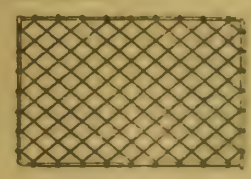
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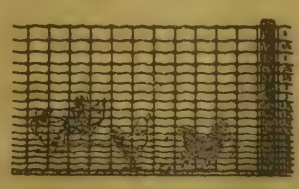
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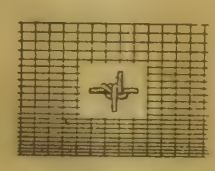
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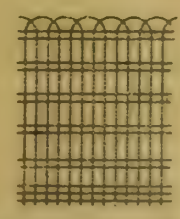
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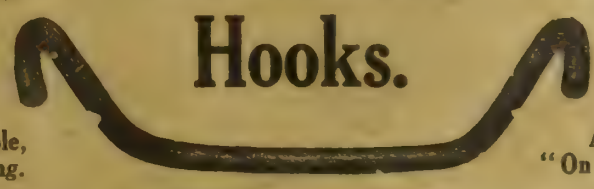

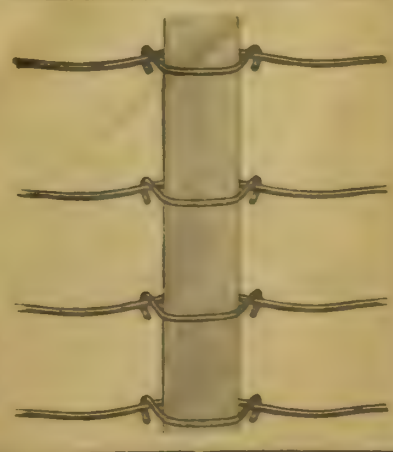

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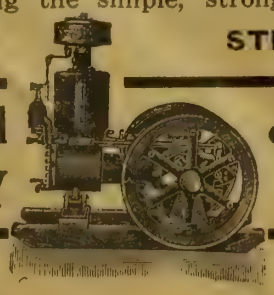

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Volume 17. ST. JOHN, NEW BRUNSWICK, APRIL 30, 1912. Number 14.

How I Grow Potatoes on a Business Basis

By A. E. L. Fritze, Lunenburg, N. S.

Awarded Second Prize in the Maritime Farmer's Potato Growing Contest.

THE growing of potatoes successfully, like the realization of success in every branch of farming, varies as does the tenacity of the individual, even when following minutely the theory of the Professors of Agricultural Colleges.

Success can only be attained after we can conscientiously say that we have undoubtedly given it a very thorough trial in every detail. A plan which I have followed for a number of years, and which I feel convinced gives the ground the best tilth, is to plow the sod, the earlier the better, if quite early after haying roll it and after a few weeks, or a couple of heavy rains, harrow with a disc harrow. The heat and moisture being necessary to rot the sod. If it is done later in the fall which is usually the case with me I do not harrow, as the action of the frost is somewhat lessened, which loss is perhaps as vital as the extra rotting of the sod. If a rich sod or clover it will be easy to make it as fine as any alluvial soil and is consequently as good as required. As soon as the ground is dry in the spring harhow with a disc harrow, in each trip across the field overlap half of the last trip, which prevents the surface becoming irregular, then harrow at right angles, and twice criss cross. After a week or ten days of sunshine repeat and, if time will permit, give it a third harrowing. By this time the ground is as fine as flour; the weeds should have all come up and been destroyed.

Minnie and Major.

Prize winners at the recent Maritime Horse Show. First and third Grade Heavy Draughters. First and Grade Heavy Draught Teams. First and Second Agricultural Horses. First Agricultural Team. Minnie and Major were both sired by the Clydesdale Stallion, Prince of Annick. Owned and exhibited by Fowler Bros., Amherst Point, N. S.

Last year, for the first time, I had my potatoes all planted during the first week in May. I had in previous years never began to plant before June 3rd. I find that while the earlier planting does not come up as quickly, the plants resist drought better, and escape the first rot, so common the second week in August.

Last year when the ground was properly prepared for planting May 26th, I sowed broad cast 500 lbs. Albert's Basic Slag, 200 lbs. Murate of Potash per acre, and harrowed in with a light harrow. I then took all the hoes off the cultivator, with the exception of the deep one behind. One of the men lead the horse the first trip to insure the rows being straight, and made the rows about 28 or 30 inches apart. As soon as a few furrows were finished, two of the hands began dropping the seed, and finished the field of an acre about the same time as I did covering them up. To cover them up put on the hillers, care being taken to closely observe the last row on the side of the field you begin on, to insure all being covered, a thing impossible to do if you try to watch both rows. The field presents a fine appearance as the rows can be run as straight as a line. The potatoes being on hills can be the more readily cultivated, three or four days after the first ones have come up.

I cultivate and spray every few days as per the annexed record with Bordeaux mixture, using 5.4.40. the extra amount of lime seems to make the mixture stick better. The nitrate of soda was applied broad cast just before cultivating, and the result was very noticeable. In planting I cover deeper, as a drouth may cause the seed to perish if planted any shallower. The distance between the seed to give the best results in digging is about 15 inches. The seed was cut with one good eye never more than three, a larger number of eyes usually produces two many stems, the potatoes usually being smaller. The potatoes on one part of the field did not look very promising when they came up, being spindly, and I think this was caused by the crows digging up the seed, I believe they destroyed about a bushel in this way. The stalks remained green until the frost came October 12th.

There were ten bushels of seed in the field, the varieties were Bovee and Green Mountain. We began using Bovee July 24th. They were small but dry, each week they got better: in September many weighed 1 1-2 lbs., and a few nearly 2 lbs. After selecting seed of medium size from the hills having the largest number of tubers, we harvested nearly 200 bushels; there were not five bushel of unmarketable potatoes, and not one rotten one.

From experience I may say I find the mixture of the bordeaux and the application of it the most difficult to master, but once learned thoroughly you may do the work quickly and with confidence as to the results. The mixture should be put on with as much force as possible.

The selection of the seed, and the care of the same during the winter is another important factor.

The growing of potatoes is becoming a most vital question, as each year the demand exceeds the supply, and therefore offers the farmer a safe and profitable investment.

Record of 1 acre of potatoes grown 1911		
Plowing Nov. 1910 8 hrs.	$2.50	
May 1911 harrow 3 days	7.50	
Cost of Bassic Slag 200 lbs.	2.00	
Murate of Potash 200 lbs.	5.00	
Nitrate of Soda 100 lbs.	3.50	
10 Bushels of seed	8.00	
1 horse and 3 men planting	2.50	
12 hours cultivating	3.60	
1 1-2 days hand hoeing	1.50	
Spraying 28 hours	2.80	
Cost of Bordeaux mixture	2.10	
Harvesting 5 days	5.00	
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By 196 bushell of potatoes at .60		$117.60
By 40 bushels of seed at .80		32.00
		149.60

Record of work done on the above.

Planted May 26th, 1912.
June 24th, Cultivated.
July 1st, Application of Nitrate of Soda 50 lbs.
July 1st, Hand hoed.
July 5th, Cultivated and sprayed
July 9th, Cultivated.
July 15th, Cultivated.
July 29th, Cultivated.
Aug. 11th, Application of 50lbs Nitrate of Soda and Hilled.
July 16th, Sprayed with Bordeaux Mixture.
July 24th, Sprayed with Bordeaux Mixture.
Aug. 18th, Sprayed with Bordeaux Mixture.

THE HOME VEGETABLE GARDEN.

Plan Large Assortment and Continuous Supply.

The home garden should be planned with a view to furnishing a large assortment and continuous supply of vegetables through the entire season. Its size will depend primarily upon the amount of land the owner desires can be reserved for a garden, vegetables to be stored for winter as well as the summer supply, should be grown. On the village lot, space may be insufficient to grow more than the summer's supply, and it may also be necessary to leave out certain vegetables that require a large amount of space. On a city lot, the space available for growing vegetables is necessarily small, and plantings must usually be confined to those vegetables which produce a large amount of edible product for the space occupied.

Whether the garden is on the farm, in the village, or on the city lot, the principles governong its planting and care are the same although the distances of planting, methods of tillage, and intensity of cropping may differ widely. On the farm, the saving of labor is more important than the saving of space; even the small vegetables are planted in long rows rather than in beds; and horse power is substituted for hand power wherever possible. In the village and the city, the vegetables must usually be planted as closely as the nature of their growth will permit, and hand tillage employed almost exclusively.

Much loss of time in planting a garden can be avoided by making a definite plan of the garden several weeks or even months before the planting is to begin. After measuring the area to be used for the garden, the next step is to decide what vegetables are to be grown. If space is ample, this will be determined primarily by the personal tastes of the gardener and his family. However, if only a limited amount of time and attention can be given the garden, it may be wise not to undertake the growing of some of the more exacting crops. Whatever the space to be devoted to gardening, the crops to be grown should be decided upon long before the time of planting.

In planning the garden, it is well to arrange the vegetables in the order in which they are to be planted. This facilitates the preparation of the land for planting, and makes it possible to maintain the unplanted portion in a good friable condition with the least expenditure of labor. In order that the vegetables may be so arranged, it is necessary to know the proper time for planting each crop. This depends primarily upon the temperature and moisture requirements of the particular crop in question.

Lady Primrose

First prize three-year-old Clydesdale mare and winner of the Championship Diploma for best mare, any age at the recent Maritime Horse Show. Lady Primrose is a full sister to Baron Graham the Champian Stallion in 1911. Her sire is Baron Primrose the 1912 Champion Stallion. Owned, bred and exhibited by C. R. H. Starr & Son, Port Williams, N. S.

Model Performer

Champion Hackney Stallion at the recent Maritime Horse Shown. Owned and exhibited by R. A. Snowball, Chatham, N. B.

TEMPERATURE AND MOISTURE REQUIREMENTS OF DIFFERENT VEGETABLES.

The vegetables grown in our gardens are native to many different countries, differing widely in climatic conditions. Each kind of vegetable has its own peculiarities and thrives best under certain conditions of soil and climate. When an attempt is made to grow many sorts in the same garden under the same conditions, it is not surprising that difficulties arise, and that some thrive better than others. Many of the difficulties can be overcome, however, by adjusting the time of planting each crop to meet its temperature and moisture requirements as fully as possible. Failures in gardening often result from planting some crops too early and others too late. Each should be planted at the season most favorable to its development.

Vegetables are usually classified as "hardy" and "tender". This classification is based upon the fact that certain vegetables will endure the ordinary frosts of spring without injury, while others would be killed if subjected to the same temperatures. This classification implies that danger of frost injury is the chief distinction between the two classes of vegetables, and that while the "hardy" vegetables can safely be planted "before danger of frost is over," there would be no objection to planting them after that time, and that danger of death from frost is the only reason for late planting of the tender vegetables. As a matter of fact many of the so-called hardy vegetables would be as utterly ruined by the heat and drought of summer as are the tender vegetables by the light frosts of spring. They demand cool weather, and without it will not produce an edible product. Furthermore, the danger of death from frost is not the only reason the so-called tender vegetables should not be planted early. The cool weather normal to that season of the year, though no killing frost occurred, would preclude the proper growth and development of the crops in question, for they thrive only in warm weather. A more satisfactory wording for this classification of crops would therefore be "cool season" and "warm season" crops, for these terms suggest the conditions under which the crops must be grown to develop satisfactorily, rather than merely designating their susceptibility to, or immunity from, frost injury.

While vegetables in general may be classified as cool season and warm season crops, the different vegetables in each of these classes do not all thrive equally well under the same conditions of temperature and moisture. Although all the cool season crops will germinate and grow at a relatively low temperature, and demand comparatively cool weather for their highest development, some will endure and even demand, lower temperature than others. The converse also is true; some will endure much higher temperature than others.

COOL SEASON CROPS.

From a cultural standpoint, the cool season crops may be divided into three general groups. (1) The first group is composed of short season crops which cannot endure the heat of summer, but which can safely be planted in the open ground sufficiently early to attain full development before the normal season for hot weather. The following vegetables belong to this group: garden cress, kohl-rabi, leaf lettuce, mustard, peas, radisnes, spinach, turnips. Of these crops, cress, lettuce, mustard, and spinach will stand slightly lower temperature in the seedling stage than the other crops mentioned. However, in practice they are usually all planted "as soon as the ground can be worked in spring" or at the ideal time for seeding oats. Additional plantings of lettuce, radishes and peas can be made somewhat later for the sake of securing a succession, since radishes and lettuce grow quickly, and peas can stand a slightly higher temperature than most of the other crops of the group. Any later plantings of cress, mustard, spinach, or early turnips are usually overtaken by such high temperature that the products are of little value, so that it is possible to work the soil. Such crops any later than the very opening of spring.

All the crops of the above group require an abundant supply of moisture throughout their entire period of growth, and this is normally provided by the copious rains characteristic of the spring months.

Some of these crops can also be grown in the autumn if there is sufficient rainfall to supply the needed moisture. Turnips, radishes, lettuce and spinach are the crops best adapted to this purpose.

(2) The second group of cool season crops consists of those which which at the same time have so long a period of growth that it is impossible for them to complete their development before the normal season of hot weather, if the seed is planted in the open ground even as early as it is possiblt to work the soil. Such crops are early cabbage, early cauliflower and head lettuce. The only way that these crops can be grown with any assurance of success, is to start the plants under glass and have them ready for transplanting as early as the weather will permit. This will be about the time the second planting of radishes and peas is made.

Another crop having temperature requirements similar to those of cabbage and cauliflower is celery; but this crop requires so long a season that it is impossible to grow it as a spring planted crop except in northern localities, where the summers are relatively cool. Together with late cabbage and cauliflower, it can be grown as a summer planted crop designed to make its principal growth during the cool, moist weather following the autumn rains. Cool, wet seasons favor their development. In hot dry years they may fail utterly. As commercial crops, they reach their highest development only in relatively cool climates.

(3) The third group of cool season crops consists of relatively long season crops, demanding cool, moist weather during the earlier stages of their development, but capable of enduring considerable heat and even drought after becoming fully established. This group includes beets, carrots, chard, kale, leeks, onions, parsley, parsnips, early potatoes, sal-

sify, upland cress, and New Zealand pinach. It also includes the perennial crops asparagus and rhubarb. All of these crops should be planted relatively early, though extremely arly planting is more important with ome than others and is especially mperative in the case of onions. In actual practice, all the vegetables in this group, together with those of Group 1, may be planted as soon as the ground can be worked in the spring. If, however, the early planting is followed by unusually cold, wet weather, replanting of the beets, carrots, chard, and parsnips may become necessary, for these crops do not germinate readily at as low temperatures as onions or kale, nor will the seedlings survive so severe a frost.

The vegetables in this group are exceedingly satisfactory to grow, for they have an extremely long period of edibility, relatively few enemies, practical immunity from injury by heat or cold, excessive rain or drought, and are practically certain to yield an edible product, even under somewhat trying conditions.

WARM SEASON CROPS.

The warm season crops fall naturally into two groups. (1) The first group includes those with a sufficiently short period of growth to enable them to perfect their product during the normal season of weather favorable to their development. Such crops can be planted in the open ground after the weather has become sufficiently warm in spring, and will complete their growth and mature their crop before the plants are killed by the frosts of autumn. This group includes string beans, Lima beans, sweet corn, cucumbers, gherkins, muskmelons, watermelons, okra, squashes and pumpkins. Of these crops, string beans and sweet corn will germinate at a lower temperature, and hence can be planted earlier than the Lima beans and the vine crops. All the crops in this group demand warm weather, but some of them will suffer if the weather is excessively hot and dry. Those most resistant to drought are gherkins, watermelons and okra; and these crops are especially adapted to southern localities. Cucumbers demand more moisture than any of the other crops in this group, and if possible they should be planted in a depression where the soil will be moist.

(2) The second group of warm season crops consists of those having so long a period of growth that they are unable to mature a full crop unless started under glass considerably in advance of the normal season for weather suited to their growth in the open. This group includes eggplants, peppers, sweet potatoes and tomatoes. Of these, eggplants and sweet potatoes demand a higher temperature than tomatoes and peppers, and under normal seasonal conditions should not be transplanted to the open ground until two or three weeks after the ideal time for setting tomatoes. Eggplants and sweet potatoes are especially suited to growing in localities subject to severe drought, for after these plants have once become well established, their demands for moisture are not great, and the more intense the heat, the better they grow.

The wide differences in the temperature and moisture requirements of the various vegetable crops, as above outlined, explain why some crops thrive much better some seasons than others, in the same locality, and also why certain crops are most extensively grown in certain localities. However, careful attention to the time of planting each crop, in view of its particular temperature and moisture requirements, will enable the gardener to grow to perfection a much larger assortment of vegetables in the same garden than could possibly be done without consideration of the specific requirements of each particular crop.

THE FARMER'S VEGETABLE GARDEN.

The most distinctive feature of the garden on the farm should be the reduction of hand labor to a minimum. In planting the garden, therefore, it should be laid out in long rows, sufficiently far apart to permit the use of a horse and cultivator in tending the crops. Time and confusion will also be saved if the vegetables are grouped according to their cultural requirements, and the number of plantings made as small as is consistent with the demands of the various crops. Each group of crops may then be planted and tended as one crop, and the garden operations thus greatly simplified. When more than one planting of a given crop is desired for the sake of securing a succession, the second planting may be put in at the same time that other crops are being planted, so that even in this case, the number of plantings need not be multiplied. The use of two or more varieties of the same vegetable, differing in their time of maturity, will also aid in keeping down the number of different plantings.

Royal Night.

Second Prize aged Standard Bred Stallion at the recent Maritime Horse Show. Owned and exhibited by C. R. H. Starr & Son, Port Williams, N. S.

Sedgeforth Enterpeise.

Second Prize Hackney Stallion and First Prize Carriage Stallion in harness at the recent Maritime Horse Show. Owned by Fowler Bros., Fox Harbor, N. S

THE PLAN OF THE GARDEN.

The exact plan of the garden will depend upon the personal tastes of the owner, and will be different for each individual; but in any case, much loss of time in planting will be avoided if a definite plan is made before the planting season arrives. The accompanying plan is presented merely as a suggestion, and illustrates one possible arrangement of a farmer's garden planned with a view to securing a large assortment and continuous supply of vegetables, and at the same time simplifying the planting and minimizing the labor of tillage. The area designated comprises nearly one-half acre, but smaller or larger gardens rould be arranged in much the same way. Except where noted, the rows are three feet apart.

The planting of the garden might be as follows:—

Row 1.—Perennials: 1-2 row asparagus; 1-3 row rhubarb; 1-6 row perennial onions.

Row 2.—1-6 row parsley; 1-3 row carrots; 1-2 row parsnips. (Marked with turnip radishes).

Row 3.—Onions (yellow).

Row 4.—1-2 row early beets; 1-2 row onions (white). (Marked with long radishes).

Row 5.—1-6 row lettuce; 1-6 row onion sets; 1-6 row turnips; 1-2 row spinach.

Row 6.—Peas 1-2 row extra early smooth; 1-2 row early dwarf wrinkled.

Rows 7, 8 and 9.—Early potatoes.

Row 10.—Peas: 1-2 row early dwarf wrinkled; 1-2 row late wrinkled.

Row 11.—1-4 row early cabbage (30 plants 2 feet apart); 1-4 row cauliflower; 1-6 row lettuce; 1-3 row beets (marked with long radishes).

Row 12.—1-4 row summer cabbage (transplanted); 1-4 row of same (seed sown); 1-2 row string beans.

Row 13.—Sweet corn: 1-2 row extra early; 1-2 row second early.

Row 14.—Tomatoes: (60 plants 4 feet apart). (4 feet from row 13).

Row 15.—1-2 row Lima beans; 1-4 row string beans; 1-4 row peppers (30 plants). (4 feet from row 14).

Row 16.—Late cabbage: (seed sown).

Row 17.—Sweet corn: 1-2 row extra early; 1-2 row second early.

Row 18.—Sweet corn: two late varieties.

Rows 19, 20, 21 and 22.—Vine crops in hills 6 x 6 feet, in blocks crosswise the four rows, as follows: 40 hills cucumbers; 12 hills summer squash, 28 hills winter squash, 40 hills watermelons, 40 hills muskmelons.

It will be observed that the vegetables are arranged strictly in the order of their planting, so that planting may begin at one side of the garden and proceed across the area as the season advances. This makes it possible to easily fit a piece of land for planting or to harrow the unplanted portion at any time desired and thus keep it free from weeds and in a moist, friable condition. Another feature of this plan is that while two or three kinds of vegetables may be planted in the same row, all the crops in a given row require essentially the same kind and amount of tillage and other care. It is also true that the crops occupying the land about the same length of time are planted together. After the early maturing crops are harvested, it is therefore possible to clear quite a wide strip of land for the planting of turnips and other late crops, if desired.

While this plan specifies different times of planting, besides the celery, late beans and turnips, it is possible in some seasons to combine the second and third plantings, so that if celery and sweet potatoes are omitted, there will be only three plantings besides the turnips or other incidental late crops. This simplifies the planting and better adapts the garden to the tastes of the average farmer.

PREPARATIONS FOR PLANTING.

The arrangement of the garden as to length of rows and time of planting, is not the only labor saving feature that should characterize the typical farmer's garden. Field methods should be practised in preparing the land for planting, and as much preliminary work done in the fall as is possible, for the sake of both securing an early garden and reducing the amount of labor in spring. After the land is cleared of refuse from preceding crops, it should be heavily manured, and plowed in the fall. The amount of manure to be applied will depend somewhat upon the fertility of the land, but more largely upon the trueness of the farmer's conception of the plant food requirements of garden crops. The best gardens are possiqle only where plant food is supplied much more liberally than is considered ample for field crops. Forty tons of manure per acre is a very moderate application for garden crops, and this amount should be applied annually, even on soils already rich, if maximum crops of vegetables are to be grown.

The plowing under of manure in the fall hastens the drying out of the soil in the spring, so that planting may begin earlier than if the manuring and plowing were deferred until spring. This is both because the soil actually dries out earlier, and also because no time is lost in manuring or plowing after the soil has reached workable condition. It often happens that early in the spring when the cool season crops should be planted, the soil remains in ideal condition for working only a brief period, and then becomes so thoroughly wet by copious rains that further garden work is precluded for two or three weeks. If the manuring and plowing have been done in the fall, it is often possible to plant the early vegetables in the brief period during which the soil is fit to work, while otherwise this entire period might be expended in making preparations, and the actual planting necessarily deferred until the next time the soil was dry. Since the success of many of the early crops depends upon early planting, the wisdom of fall preparation is apparent.

If the land has been manured and plowed in the fall, and is worked at

(Continued on page 566).

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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APRIL 30, 1912.

DATES OF ISSUE.

May .....14—28
June .....11—25

GREAT DANGER IN PLANTING IMPORTED POTATOES.

The following warning notice is being sent out by the New Brunswick Department for Agriculture:—

In view of the great scarcity of potatoes in several sections of the province and that many hundreds of barrels have been imported from Great Britain, our farmer should realize the danger of introducing one of the most serious potato diseases yet known, by planting this imported seed. The disease known as "Black Scab," "Warty Disease," "Cauliflower Disease" or more properly "Potato Canker" has been spreading rapidly in European countries during the last fifteen years. It was first known in England in 1901. It was imported to Newfoundland in 1908, and there is grave danger of its introduction here by the importations of European potatoes that have been made during the past winter. Any one wishing full information in regard to this serious disease may obtain it by addressing H. T. Gussow, Botanist to the Dominion Experimental Farm, Ottawa, requesting a copy of Bulletin No. 63. After obtaining the information contained in Mr. Gussow's bulletin, no potato planter will wish to risk introducing this very virulent and destructive disease to his land. The disease comes from spores which are introduced into the land from the infected seed potatoes. It is stated these spores will live in the soil for years, so that a field when once infected is not safe again for potatoes for a long time. The disease is said not to be noticeable while the crop is growing, but when harvesting begins it will be found that in some cases the whole hill is destroyed, in other cases the destruction is partial.

This disease, if reports regarding it be true, is the most serious danger affecting potato growing known to-day, and every man who takes any interest in the future prosperity of the province, should prevent, as far as possible, its introduction here, The only safe and sure plan known at the present time is to rigidly abstain from planting imported seed, unless it has first been examined by a competent authority and pronounced free from the disease.

THE SEED BED.

An improperly made seed bed is like a shifting sand foundation for a house. The seed bed is the foundation for the crop. It must be so that it will receive and absorb rainfalls, be they light or heavy. Primarily they must be deep and mellow. A deep, mellow seed bed acts as a temporary reservoir to receive and hold water until it percolates into the deeper subsoils. If it is shallow, a rainfall of two or three inches during one shower will not be absorbed, but as soon as the hard pan is reached the surplus will run away.

A deep seed bed insures a rapid and strong development of young roots with strength to penetrate deep. A shallow seed bed means delicate roots which seek the course of the least resistance in the loose surface soils.

That statement can be verified by any farmer who takes the trouble to make a careful investigation. A deep seed bed means good ventilation and an abundance of room for plant food. It must be remembered that plant roots first seek water and they will go to it if they have strength, hence the farmer should exert every effort to encourage their early development.

In order to make this subject plain, let us start with a field of ripe grains. The grain shades the ground and in a measure prevents the broiling sun from drawing away the moisture.

Moisture is the elixer of plant life; every particle possible must be saved. How can this be accomplished? You know that the surface is full of cracks; you know that as soon as the grain is cut every stalk is an escape chimney. You know that moisture will escape through both cracks and stems. What should be done? The answer is easy. Stop up the leaks. Follow the binder with a disc harrow. That implement forms a mulch which effectually closes up the little openings and at the same time works into the soil the stubble. You have accomplished three very important things. First, you have checked the escape of moisture; second, the surface is made porous, an essential condition in the event of rains. Third, you have worked the stubble into the seed bed so that when the plow turns the furrow slice, the thrash will not act as an insulation to prevent capillary attraction.

The next step is plowing. The sooner the ground is plowed after harvest the better, provided that the plow is followed with implements, calculated to place the soil in a condition to store and conserve moisture. If the ground is plowed, and left loose and lumpy, it would be better not to plow at all until seeding time, unless the plowing is done late in the fall.

PLANT A TREE.

He who plants a tree,
Plants a hope.
Rootlets up through fibres blindly grope;
Leaves unfold into horizons free.
So man's life must climb
From the clods of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?

He who plants a tree,
Plants a joy;
Plants a comfort that will never cloy;
Every day a fresh reality.
Beautiful and strong
To whose shelter throng
Creatures blithe with song
If thou couldst but know, thou happy tree
Oft the bliss that shall inhabit thee!

He who plants a tree,
He plants a peace
Under its green curtains jargons cease
Leaf and zephyr murmur soothingly;
Shadows soft with sleep
Down tired eyelids creep,
Balm of slumber deep.
Never hast thou dreamed, thou blessed tree,
Of the benediction thou shalt be.

He who plants a tree,
He plants youth;
Vigor won for centuries, in sooth;
Life of time, that hints eternity!
Boughs their strength uprear,
New shoots every year
On old growths appear.
Thou shall teach the ages, sturdy tree,
Youth of soul is immortality.

He who plants a tree,
He plants love;
Tents of coolness spreading out above
Wayfarers he may not live to see.
Gifts that grow are best;
Hands that bless are blest;
Plant; Life does the rest!
Heaven and earth help him who plants a tree,
And his work its own reward shall be.

—Lucy Larcom.

ADVICE OF A MILLIONAIRE.

Thomas Neacy says:

A man makes his own luck.

If you make a promise, keep it, even if it takes the shirt off your back.

Be punctual, saving, temperate.

Remember that there is more honesty than dishonesty, nine times over.

A good wife is half the battle. Most of my bad deals have been made when I neglected to consult my wife.

If there is peace in the home, there is peace in one's work.

You can never tell just what is going to be the pivotal point of your fortune, so keep striving.

If a man doesn't recognize failure, failure cannot work him harm.

Sympathy and kindness go a long way in business.

If you are an employe, trust your employer; if you are an employer, trust your men.

Remember that work is the greatest thing in this world. When a man stops producing, he stagnates.

THE SEED SHORTAGE.

The nearer the seeding season approaches the more evident it becomes that seed of all kinds is abnormally scarce. This is more particularly true of timothy and mangels, but shortage extends more or less to all lines.

Those who acted on the warnings given from time to time and secured supplies early, have reason to congratulate themselves. Those who have put off until the last moment are likely to have to do with a short supply and of inferior quality.

NOTES.

Look at a proposition to see how you can use it—Not how you can get along without it.

The most successful dusiness man is he one who asks to be stown "why" he hould do a thing, and then does it.

Western Impressions.

Editor Maritime Farmer:—

For some years the West has been a constant drain on the Eastern Provinces of Canada. This is true particularly along agricultural lines and it is our rural districts that have sacrificed most on the altar of Western development.

Until the last six months when I became a Westerner myself I saw only the Eastern aspect of this Westward tide. Now I have seen a little of this end of it, which makes me wonder more than ever at the blind, unreasoning tendency of prosperous Eastern farmers to give up their well worked, comfortable, farms to build for themselves homes on the prairie.

Not for a moment would I speak disparagingly of the West. It is a wonderful country, a country of Golden opportunities, but outside the cities it is a hard country, a country that demands the best, a country where weakness spells failure. There is much about the West that one does not read in its wide-spread advertisements. One feels almost anarchistic. It is like throwing a bomb at the king or ridiculing the Fathers of Confederation to even hint that in the West there exists such peace destroying things as frost or loneliness or despair.

Undoubtedly fortunes have been made in the West, but when you hear of some man who came West probably five years ago, absolutely without capital and to-day is wealthy, just find out what happened between the beginning and end of his financial career. Sometime ago I was talking to a one-time homesteader, who six years ago borrowed the first ten dollars to pay to the C. P. R. for his land. To-day his farm is worth at a conservative estimate $10,000, but you would think he had earned it if you heard the story of those six years of cold and loneliness and discouraging drawbacks. Day after day he lived on one meal and borrowed the necessary stamp to send the home letter, which must go whatever else failed.

If a young farmer starting up in New Brunswick or Ontario would put up with hardships like that, would work as hard and as independently, would he not be just as well off at the end of six years, and there would be no overpowering counter account of loneliness and physical and mental hunger.

All through the New England States and our Maritime Provinces we find dozens of deserted farms, apparently good farms if properly treated, but now given over to a luxurient crop of young spruce trees and oxeye daisies. The buildings on these farms are very often good, very very good when you think of the shapeless little sod shack one finds on the prairie. Yet these farms have been sold for a few hundred hollars, or in many cases abandoned by their owners in order to take up land in Western Canada. In the Eastern part of New Brunswick I know of a block of over 800 acres of land, consisting of three abandoned farms, three fairly good farm houses and nine barns, which sold last year for $2,000. Three good streams crossed this block of land; four hundred acres of it are cleared and there is timber enough on it to more than pay for it. Of course the land was run down as is the land on most of the abandoned farms, but in five years, with up-to-date methods of farming this land could be made as fertile as almost any in the Province, but the owners have gone West. They have taken up land perhaps 20 miles from a station. Instead of the well-built New Brunswick house they are living in a one-roomed sod shack, divided into two rooms by a suspended piece of rag carpet. They must draw their fuel 20 miles, and most important of all, they must not let their supply run out. We have heard what has sometimes happened in such cases. They may have water near and they may not. A Nebraska farmer once told me that while travelling through the "bad lands" of Dakota he came to a deserted shack on the door of which was painted the following:—

"Sixteen miles from a railway,
Six hundred feet above water,
Six feet from hell;—
God bless our home."

And in all probability the optimist who left this final message had given up some fertile Eastern farm to try this get-rich-quick scheme in the West.

How seldom we hear anything about this side of Western life. It is the spirit of optimism that envelopes this Western World. Why is it? No one knows. This seems to be the land of new Hope, of the Second Chance. Everyone in the West is going to be rich to-morrow and as Stevenson says: "It is better to travel hopefully than to arrive" (perhaps). It is this same optimistic view that makes everyone in the West a booster. And look what they nave to boost in a great many cases. Why if New Brunswick were set down in the middle of the Canadian West they would be crazy about it, and there would be no more deserted farms or houses with empty, staring windows.

Splinter

Champion General Purpose Horse at the recent Maritime Horse show.
Owned by Spurgeon Gammom, New Glasgow, N. S.

People from all over the world would be rushing to it.

When I compare my preconceived ideas of the prairie with what I know about them now it is like drawing a comparison between a candle and the sun. There is a suggestion of unlimited strength and power about their vastness. The isolated homesteads intensify the loneliness. Your first thoughts are, "Oh the loneliness and the cold and the unending sameness of a life like this." But while nothing would persuade me to try rural life in the West, the City life appeals to me strongly. There is an exhilaration, an impetus, a sort of mental speed about it which is most fascinating. It is the Spirit of the West; everyone is a booster; everyone is willing to help you along if you are really trying to make good. I do not know whether it is the influence of the vast expanses of the prairie or the rugged strength of the mountains but all through the West one finds the same spirit of charity, of another chance given to the derelict to make good.

Westerners are extremists. They do everything to excess and at high speed. They work hard, they play hard, and like the little girl in the nursery rhyme, "When they are good, they are very, very good,—But when they are bad——??????"—Elizabeth Wood, Calgary.

Preparing Wool for Market.

At the Charlton Arms Hotel, Wellington, Shropshire, England, a very interesting address on "The Preparation of Wool for Market" was given by Mr. J. W. Collinson (Bradford), under the auspices of the Wellington District Farmers' Union, Mr. W. H. Lander presided.

In the course of his observations, Mr. Collinson said: "My visit is the result of the request from your secretary to the British Wool-Buyers' Association, one of whose objects is to assist in anything that will benefit the trade, whether from the user's or the producer's standpoint, because we consider that, rightly appreciated, those interests are identical. It is in this spirit that I have come to talk to you, and I wish you to look upon this occasion as one for the mutual exchange of opinions and ideas. My object is not only to give you my ideas as to the best way in which to present your commodity on the market, but also to show you the necessity of doing so, if our English wools are to remain in favour with the users of them. Let me say at once, that a visit of this kind is less needed in your locality than in some others I could mention, but I take it as an indication that you wish to present your wool even better than you already do, and I commend the spirit that has prompted you to ask for this interview. I may tell you that some of our spinners and manufacturers are so dissatisfied with the way in which some classes of English fleeces are delivered, that they are diposed to discontinue their use altogether, wherever possible, and I think you will agree with me that in these circumstances it is not only desirable but very necessary that our farmers should seriously consider the situation. A few weeks ago a deputation from the Lincolnshire Farmers' Union came to Bradford, and our Association took them to see Lincolnshire Hog wools in process of "sorting", and their chairman stated at their next meeting that some of the wools they saw had been delivered in a disgraceful condition. When you know that most of the larger clips from our Colonies are not only graded and packed in their different qualities, but that the fleeces are all "skirted" —that is, the bellies of the fleece are all removed and baled up and sold separately you will see that these wools are put on the market in such a way that it becomes imperative that the British wool-grower should not offer his commodity in a slovenly condition. I may further add that nearly all the Colonial wools are produced on grass-land, and are therefore free from the clogs that our turnip-fed sheep are troubled with. I am aware they have drawbacks in some districts in what are called "burrs", prickly seeds that grow upon the bushes on the "runs", but these are now all eliminated in the combing process that has been wonderfully perfected for the achievement of this object. I know that with our much smaller flocks the "skirting" process is scarcely feasible, but it doesn't alter the fact that we have to meet the wools that are so treated. And now having said so much on the competitive wools we have to meet, let us consider how best to meet the competition. I shall make a number of suggestions which I commend to your consideration. Let us start at the time when you begin to feed the sheep with hay or clover in the winter-time. Avoid feeding them with these classes of food in such a way that it can get into the necks or backs of the sheep, because it is practically impossible to get the seeds out afterwards, and such portions have to be taken out and sold at a very low price, a "shivvy or moiety wool". The only way to eliminate the seeds, &c., is to treat the wool with sulphuric acid, which destroys the vegetable matter, and doesn't improve the wool, but the reverse. Always thoroughly "clag" (burl) the sheep before they are washed. If there is a choice of water to wash in, choose the softest; the reason for this is obvious, as the softest water most easily cleanses the fleece. The best wash-dykes have a "good swim" out for the sheep, where this is, lifted with poles made for the purpose as they go along, the difference in the cleanliness is great. Avoid driving the sheep on the road (if possible) after they have been washed, and also avoid putting them in fields where there is bare earth, as it sullies the fleece. It is right to clip then any time after they become thoroughly dry, but I know a great many farmers say they clip so much better when the grease has risen a little. That may be so, but we don't make cloth out of grease yet. (Hear, hear, and laughter). Sheep should be shorn say seven days from the time of washing, and certainly not more than 10 days. A great injustice is often done to the buyer by sheep going too long between the two events, and some of the wool in consequence is little better than unwashed, and yet the farmer is prepareh to bring all his men to swear that every sheep was washed. That may be so, but when? If the sheep are housed the night before or just previous to clipping, the place they are in should be "bedded" with bean or pea- straw if either are available, because if some of it adheres to the wool it is conspicuous and easily removed. Failing these, use wheat straw which is preferable to oat straw, being stifer in the fibre. If the weather is fine and clipping is done out of doors, it is advisable to do it upon a stack-cloth —the practice of cutting the grass prior to clipping even if carefully swept afterwards is most reprehensible, because the dried grass becomes almost like threads, and it is impossible to remove it. Consequently it gets through the machine, and into the yarns and pieces causing endless trouble and expense. It is essential that the wool should be clipped in a dry condition, otherwise it takes serious harm. The "band" that goes round the fleece should always be

(Continued on page 562).

HORTICULTURE.

Dominion Fruit Growers' Conference.

The third Dominion Fruit Growers' conference was held in St. Patrick's Hall, in the City of Ottawa, on the 14th, 15th and 16th of February, 1912. In many respects, this national assembly of the Fruit Growers of Canada was a notable event.

Some of the notable personages who honored the convention with their presence and delivered brief addresses were His Excellency, The Governor-General, Rt. Hon. R. L. Borden, Premier of Canada, The Hon. Martin Burrell, Minister of Agriculture, Prof. James W. Robertson, Mr. Sydney Fisher, ex-Minister of Agriculture, and Sir James Grant.

Among the most important of the Resolutions passed by the convention was one dealing with the Standard Apple Box. In the preliminary discussion of this subject, one delegate from British Columbia rather astonished the convention by advocating the holding in abeyance of this question, notwithstanding the explicit and definite instructions of the British Columbia Fruit Growers by resolution passed in January, 1911, and reiterated in their convention of January, 1912, by unanimous vote. Another member of the British Columbia delegation damned the proposal with feint praise, but the balance of the contingent came to the rescue loyally and a resolution was finally passed in the following terms:

"Be it resolved, That this conference recommends for domestic trade, the legalization of the apple box at a capacity of 2,200 cubic inches, as nearly as possible measuring twenty by eleven by ten (20 x 11 x 10) inches inside; and be it further resolved, that this amendment come into force within two years."

Other resolutions of importance were as follows:

Whereas, the discussion has brought out considerable difference of opinion as to the most suitable shapes for the various box packages of fruit, be it resolved, that discussion on this subject be deferred in order to enable the various Fruit Growers' organizations to investigate thoroughly and report with recommendations to the next Dominion Fruit Conference; and be it further resolved, that the conference request the Dominion Department of Agriculture to organize the investigation. A resolution was carried recommending the legalization of the four-basket plum crate measuring $15\frac{3}{4}$ x $15\frac{3}{4}$ x $4\frac{1}{4}$ inches inside measurement.

Resolved, that we urge upon the Minister of Agriculture the greatest care in securing competent inspectors and to this end suggest that the advice of a commission of three fruit growers, or dealers, from each fruit growing Province would be of valuable assistance in securing suitable men for appointment as inspectors.

Resolved, that sufficient inspection at point of entry in connection with imported deciduous fruit be made so as to ensure it being marked under the conditions of the Inspection and Sales Act.

Resolved, that the Minister of Agriculture cause investigation to be made as to the possibility of giving the applicants on payment of a reasonable charge, a certificate of the results of any inspection made.

Resolved, that when an inspector has examined a closed package of fruit, it be stamped "Inspected by No. ....."

Resolved, that the Fruit Marks Act (the Inspection and Sales Act, Part IX.) be so amended as to make it compulsory to mark on the outside of the box the number of apples contained therein.

Resolved, that this conference recommend that the Department of Agriculture divide the Fruit Growing Provinces into suitable districts, with a permanent and capable fruit inspector and instructor, in each district, so as to insure to the greatest possible extent inspection at point of shipment.

A resolution was adopted recommending the formation of a National Fruit Growers' Association, and the secretaries of the various local associations were appointed to perfect the organization after a provisional constitution had been adopted by the convention.

Be it resolved, that in the opinion of this conference, one of the first duties of the directors of the National Fruit Growers' Association would be to appoint a transportation committee of three members to look after the interests of the fruit growers with railway companies, cars and other equipment for the proper carrying of fruit; and to prepare cases from time to time for submission to the railway commission.

Resolved, that this third conference of the Fruit Growers of Canada would suggest to the Honorable Minister of Agriculture for the Dominion, to keep in view the fact that the fruit interests of Canada are now of sufficient importance to warrant the placing of the Fruit Division of the Dominion Department of Agriculture on the same basis as that of the Seed and Dairy Branches, with a commissioner appointed in charge.

Resolved, that the Government have daily market prices cabled from their commercial agents in Europe, published in the daily papers in all Provinces of the Dominion during the shipping season.

Resolved, that the Dominion Department of Agriculture be asked to inquire into certain legislation as will permit of the formation of co-operative fruit associations in Canada on the same line as has been so successful in other countries.

One of the retrograde resolutions was the adoption of a second standard size of apple barrel, rendered necessary through the uncompromising attitude of the delegates from Ontario and Nova Scotia, viz.: the following:

Whereas, there are two sizes of apple barrels in general use in Canada, and whereas it would appear that uniformity would be more nearly obtained by the adoption of the specified standard sizes for use in Canada, be it

Resolved, that the conference recommends the Government to provide two standards, one the 96-quart barrel commonly used in Nova Scotia, and the other 112-quart barrel commonly used in Ontario, and that the department provide for the enforcement of the use, by all growers and dealers of one or the other of these standards, and that the manufacturer (of the barrel) be responsible.

Perhaps the most impractical resolution brought before the convention was one recommending the adoption of definite sizes of various kinds of apples, to form part of the definition of grades, and we believe that it will be in the best interests of those who think this would be an improvement to the regulations, if the Goverbment should move slowly in regard to fixing by law standards of sizes for certain grades, the resolution was as follows:

Resolved, that Section 321, Clauses 2 and 3 of the Inspection and Sales Act, be amended in such a way that the minimum size of apples packed in barrels be as follows:

For Fameuse, No. 1, two inches; Golden Russets and kindred sized varieties, two and three-eighths inches for No. 1 and two and one-eighth inches for No. 2.

For Baldwins, Spies, Greenings, Ribston Pippin and kindred sized varieties, two and one-half inches for No. 1 and two and one-quarter inches for No. 2.

For Kings, Blenheims, Orange, Wolf

Costs Less Than Best Shingles—Lasts Longer—Adds Fire Protection

These are the three BIG reasons that have led thousands of farmers and manufacturers, as well as the big railway systems, to use

NEPONSET PAROID ROOFING

It has stood the test of the hardest service in every climate for years. The Chicago and Northwestern Railroad laid NEPONSET Paroid on one of their train sheds seven years ago. Last summer when the shed was torn down the NEPONSET Paroid Roofing was found to be in so good condition that it was cut in strips and used to re-roof several suburban stations. Isn't that the kind of a roof you want for *your* farm buildings?

Send for Our Free Booklet on Roofing

It is filled with interesting facts about roofing that you should know. A postal will bring it.

NEPONSET **Proslate Roofing** makes a handsome reddish-brown roof for houses

F. W. BIRD & SON, 431 Lotteridge Street, Hamilton, Ont.

Established 1795 NEPONSET *Roofings Are Made in Canada*

Winnipeg Montreal St Johns, N. B. Vancouver, B C

"VANCO" Lime Sulphur Solution

will keep your fruit trees free of Scale, Parasites and Fungi.

It is strong, uniform, clear, efficient—the strongest perfect solution that can be made and far superior in every way to home-made mixtures.

The Canadian Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

"VANCO" Arsenate of Lead

will destroy all leaf-eating insects — never burns — sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Company, was for "Vanco" Lead Arsenate.

"Vanco" Fertilizers—Muriate of Potash — Sulphate of Potash — Acid Phosphate—Nitrate of Soda. We are the only house in Canada selling straight fertilizing chemicals of guaranteed analysis.

Save Freight—by ordering Sprays and Fertilizers together and having us make one shipment of the lot.

Send for the "Vanco" Book—study it—and spray for fall profits.

CHEMICAL LABORATORIES, 148-158 Van Horne St., TORONTO. 44

The Advertisers in The Maritime Farmer are worthy your confidence.

THE POOR DYSPEPTIC

Suffers Untold Agony After Every Meal.

Nearly everything that enters a weak, dyspeptic stomach acts as an irritant; hence the difficulty of effecting a cure.

Burdock Blood Bitters will relieve all the distressing symptoms of dyspepsia and in a short time effect a cure.

Mrs. F. C. Gross, Berlin, Ont., writes: —"I have been troubled with my stomach for the last seven years and tried all kinds of medicine for it, but none of them ever cured me, for as soon as I would quit using any of them, the same old trouble would come back. Last fall I was advised to try Burdock Blood Bitters, which I did, and used four bottles, and now feel so strong I can do all my house work nicely and can eat almost anything without it affecting me in any way.

"Our boy is also using it; he always complained of pain in his stomach and all over, like rheumatism, and at the age of ten had to stay home from school. He hasn't quite used two bottles yet and is feeling good, can attend school regularly and eats heartily."

B.B.B. is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Ocean Limited Early on Route.

SUMMER TIME CHANGE ON INTERCOLONIAL RAILWAY JUNE 2.

The summer change of time on the Intercolonial Railway will go into effect on June 2nd, when the famous Ocean Limited will be placed on the route between Montreal, St. John, N. B. and Halifax, N. S. with connections for and from the Sydneys and Prince Edward Island in anticipation of an early rush of summer travel. The time schedule is expected to be practically the same as last year, which means that the "Limited" will leave Montreal at 7.30 p.m. reaching Levis at midnight, and giving through passengers the opportunity of seeing the famed Matapedia Valley during the earlier hours of the morning and a view of the Restigouche River and the blue waters of the Baie des Chaleurs. The beautiful valley of Wentworth, N. S. will be seen in the more mellowing light of early eventide, and the train will reach Truro at 8.00 o'clock connecting with the through night express for the Sydneys and arriving at Halifax at 10.00 p.m.

The Maritime Express under the summer schedule will leave Montreal at 8.15 a.m. and through passengers will have the daylight journey through Quebec, and a view of the majestic St. Lawrence as it widens in its course to the sea. Making connection at Moncton with morning ex, press for St. John the Maritime continuing eastward will reach Halifax at 13.30.

The Ocean Limited will leave Halifax westbound at 8.00 a.m. and the Maritime Express will leave as usual at 15.10 thus there will be a through week day service by two trains equal to the best on the continent.

Hay Higher

W. J. PHELPS

Chamber of Commerce, Boston, Mass.

Reference: BEACON TRUST CO.

RUN IT YOURSELF.

You can quickly learn to run steam engines by studying Young Engineer's Guide. Save the expense of hiring an engineer. Book recently revised to 254 pages. Illustrated. Endorsed by engine manufacturers and leading engineers everywhere. Price postpaid $1.00. Windsor Supply Co., Windsor, Ont.

FREE—Our large catalogue —"Engineers' Bargains."

River and kindred sized varieties, two and three-quarter inches for No. 1 and two and one-quarter inches for No. 2.

And that where a packer of apples in barrels desires to establish a higher minimum standard for a portion or all of his pack, he may do so by stamping or stencilling on the face end of the barrel the minimum diameter in inches and fractions thereof, and that the diameter so marked shall be the minimum standard of size for such barrel."

The above resolution is so involved and impractical that we have no hesitation in saying that it would not be in the best interests of the fruit industry to have it made law. There are certain portions of the fruit-growing areas of Canada where to speak of Kings, Blenheims and Wolf Rivers as kindred sized varieties would be to excite ridicule, and the impossibility of defining the size of all varieties is painfully evident.

One of the last and most important resolutions to receive the favorable consideration of the convention was that, recommending to the favorable consideration of the Dominion Government a grant of money toward the expenses of the next Canadian National Apple Show, which will probably be held in the City of Montreal about the first week of December in the present year. The resolution, which was carried unanimously, was

Resolved, that the Dominion Government be asked to appropriate $10,-00 (ten thousand dollars) towards the expense of the next Canadian Apple Show, provided that at least $20,000 (twenty thousand dollars) is offered in premiums by the promoters.—F. M.

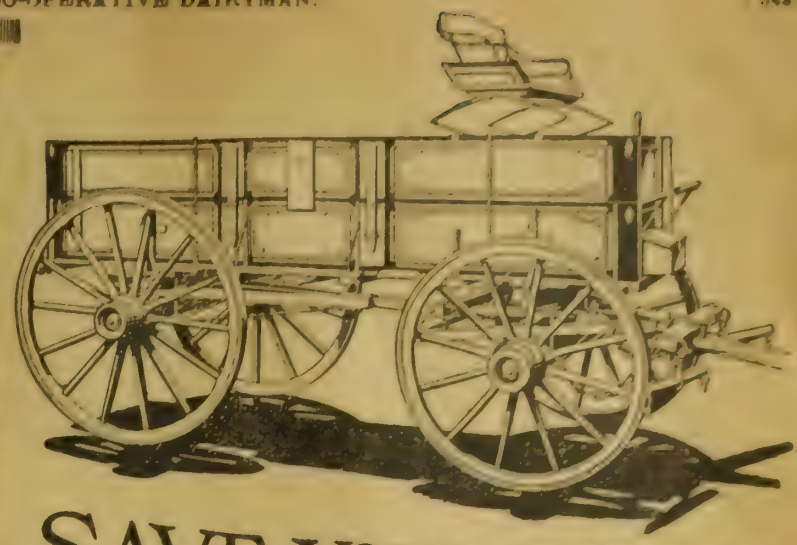
Cost of Spraying.

The cost of spraying four times during the season is about 20 cents per tree. That treatment increases the value of the fruit on the average not less than $1.50 per tree. Experiments have revealed that unsprayed apple trees yield from 10 to 50 per cent. of No. 1 quality fruit, according to the season, whereas sprayed apple trees yield from 80 to 90 per cent. of No. 1 quality. An instance is mentioned in which Mr. Medcalf, District Representative at Collingwood, Ont., took charge of a small orchard. It had never before yielded more than $50 per annum. He spent $50 on the orchard, gave it a good management, and within a year, the fruit brought to the owner $250. Another instance is that of Mr. Shearer, of Simcoe, Ont., whose two acres of orchard up to 1906 did bot yield more than $75 in any one year. He joined the local Co-operative Fruit Association. With the same number of trees, same area of land, and hardly any more expenditure of labor or money, he so improved his management that in 1910 the orchard brought him in $350, and in 1911, $432.20.

Garden Hints.

When there is danger of the frost biting the early vegetables, I take several thicknesses of newspaper and lay over the plants, and lay small clods on the paper to prevent the wind blowing the corners up. If beans are just coming through the ground, I turn two planks over them, fitting the top edges tight and propping securely. A better plan is to nail them together in a V shape, and turn the troughs upside down over the rows.

To transplant successfully the soil should be well moistened before the plants are pulled up, then with a round sharp stick make an opening in the ground, set the plant, partly cover the roots, add a bit of water and cover with fresh but not wet soil.—D. B. P.



SAVE YOUR HORSES

WHEN a wagon is designed for light draft, and the workmanship carries out that design, you have a wagon that is easy on horses. You need not be afraid to make your I H C wagon work. That's what it's built for. Loads and roads that make hard hauling are expected conditions for I H C wagons. I H C wagons have every advantage that first grade material and skilled labor can give them. They back up with actual results every claim we make for them. They haul heavy loads, with least strain on horses. Ask any farmer who has driven one of them. I H C wagons:

Old Dominion **Hamilton**
Chatham **Petrolia**

will do all the work you would ask of any wagon.

I H C wagon wheels—the foundation of wagon service—are built from selected, air-dried wood Hubs, spokes, felloes and rims are designed for strength and service, and the workmanship on them carries out the plans of the designer. Hubs are accurately bored and mortised. Boxes are forced to position in the hubs by hydraulic pressure. Therefore, they fit accurately, and, the skeins and skein boxes being paired, easy running is assured. The wheel has the proper amount of dish to make it as strong as a wheel can possibly be made.

The care and thought given to wheel construction and tire setting is evidence of equal thoroughness in the building of all parts of I H C wagons. Let the I H C local agent show you the extra value of other strong I H C points of construction. You can get literature and full information from him, or by writing the nearest branch house.

EASTERN BRANCH HOUSES

International Harvester Company of America

(Incorporated)

At

Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

You can plant Potatoes as easily as you rake Hay—with This Machine.

It saves you all the back-breaking labor—the weary stooping—and the tiresome days of work. This machine—which is as easy to operate as a horse rake—enables you to plant from *four to six acres of Potatoes a day*

"O.K." Canadian Potato Planter

opens the trench, drops the seed, covers with moist soil, and marks for the next row—while you ride on the machine and drive the horses.

Not much work in this, is there? And there's money in Potatoes. The average price last years was 60c. a bushel—and in February this year Potatoes sold for $1.60 a bag in carload lots.

Get an "O.K. Canadian" Planter this year and plant more Potatoes.

"O.K. Canadian Potato Cutter" enables you to cut from 5 to 7 bushels of potatoes an hour. Beats hand-cutting, doesn't it?

"O.K. Canadian" Sprayer enables you to spray four rows of Potatoes at once. Another time saver.

Write for descriptive catalog H *and book "Money in Potatoes"*

We also make Cattle Stanchions, Sanitary Stalls and Water Bowls.

CANADIAN POTATO MACHINERY CO. LIMITED, GALT, Ont.

DAIRYING.

Breeding and Feedning Dairy Animals.

Mr. President and Members of the N. B. F. and D. A.:—

Your Secretary, Mr. Fawcett, asked me for a short paper on Breeding and Feeding Dairy Animals. I do not know why he omitted Weeding, as I consider that it is very important and believe not enough of it is practised. Perhaps he considers weeding has already been done.

I might say here if more farmers and dairymen kept a record of performance there would be more weeding done and as statistics show a decrease in dairy cattle it would still be greater and a benefit to the country.

BREEDING.

In Breeding some authority places the male 50 per cent. of the herd. In my opinion this is too great a percentage as the dam of the herd head should be greatly considered.

The head of the herd should have a broad and clearly defined forehead, with horns strong at base and set wide apart, the eyes large, full and bright. Jaws wide and strong, with muzzle, broad and nostrils large and open, which denotes good lung power, a good large mouth, denoting a good feeder. The shoulder strong, chest deep and low, fore legs well apart, short and straight.

Body: Back short, with straight top line and openly jointed, ribs broad, long, well sprung and wide apart, abdomen large and deep.

In hind quarters the thighs should be thin, long and wide apart, with rudimentaries of uniform size, squarely placed and wide apart.

The covering should be medium thickness, mellow and elastic, with soft and fine hair.

The weight governed by the breed.

The female should be along the same line of points as the male but of course of finer type and carrying an udder wide, deep, firmly attached to the body, well up behind and far forward with evenly placed teats of good size. The mammary veins, long and branching and entering large orifices.

FEEDING.

There is a wonderful difference in the amount of food required by different cows to produce the same amount of milk or butter, and a proposed ration given to suit one section of farmers or dairymen might be almost impossible for another section to follow.

Whatever should the proposed ration be, it should be palatable, nutritious and succulent.

In some sections , hay, (clover hay preferred), roots with more or less mill feed consisting of wheat, bran, middlings and cotton seed meal make up the stabling ration. The grain or mill feed should be governed by the production of the individual and length of period in milk; when an individual is loosing flesh, more concentrated food should be added and should she apparently forget the pail and remember her back the cotton seed meal should be lessened and more wheat bran added. Some are governed by a form of for every 3 or 4 lbs. of milk given one lb. of mill feed should be fed. In my experience no two individuals can be profitably fed the same ration. Too many milk records are rather misleading as they do not make mention of the cost of food consumed which is of great importance, especially when feed is quoted at the price of to-day.—Paper by J. F. Roach, Sussex, N. B., read at the recent N. B. F. and D. A., Fredericton, N. B.

The Gathered Cream System.

Under the heading "True Statement" the Chicago Dairy Produce writes: "Several years ago, when the whole milk creamery or the whole milk system was predominant, sour tainted, or unclean milk was generally, if not always, returned to the producer. A large percentage of the creamery butter was then of good quality and this had a stimulating effect on the demand. When a large number of whole milk creameries adopted the gathered cream system, a number of changes occurred and new methods and practices came into vogue. These resulted in a serious deterioration in the quality of the butter, which checked the demand."

Seldom does a heading answer more truly to the matter below it, and the editors and dairy-leaders who once boomed the system together with hand separator agents, have a heavy responsibility in having assisted in the unnatural reaction from the whole milk system which undoubtedly had been pushed too far in some districts, where the gathered cream system should have been maintained but changed from shallow pans and deep-setting to the hand separators.

Whenever sufficient milk—say about 10,000 lbs. per day—can be secured within a radius of some three or four miles, it would be well to change back accepting the lesson, needed by whole milk creameries, that a proper care of the skimmilk—pasteurization without dilution—is necessary to satisfy patrons.

In districts, where this cannot be done, the only remedy is to educate the patrons by quality payment to a better care of the cream and make the best of a bad job.

We cannot change human nature and of 100 patrons there is a large percentage who will not clean their separators or care for the cream, and the quicker we get the milk away from their control, the better it is.

Comparative Statements of Dairy Output of P. E. Island of Years 1910-11 Compiled by P. E. I. Dairy Association.

MILK SUPPLY

	1910	1911	
Cheese	34,818,286 lbs,	29,425,332	7,392,954 decrease
Butter	14,920,624	13,394,323	1,526,301 "
	49,738,910	40,819,655	8,919,255 "

GROSS VALUE OF OUTPUT

	1910	1911	
Cheese	$361,452.59	$325,045.76	$36,406.83 "
Butter	152,949.10	145,351.34	7,597.76 "
	$514,401.69	$470,397.10	$44,004.59 "

NET VALUE TO PATRONS

	1910	1911	
Cheese	$284,018.03	$271,006.78	$13,011.25 "
Butter	121,327.33	113,500.78	7,826.55 "
	$405,345.36	$384,507.56	$20,837.80 "

NUMBER OF PATRONS SUPPLYING MILK

	1910	1911	
Cheese	3,498	3,307	191 "
Butter	939	998	59 increase
	4,437	4,305	132 net dec.

LBS. MILK CONTRIBUTED PER PATRON

	1910	1911	
Cheese & Butter	11,210 lbs.	9,482	1,728 decrease

AVERAGE RETURN PER PATRON—CHEESE AND BUTTER

	1910	1911
Gross	$115.93	$109.27
Net	91.35	89.31
Difference	$ 24.58	$ 19.96

Net average return per 100 lb. milk to patrons Butter and Cheese 1910—81 cents
" " " " " " " " " 1911—94 cents

JOHN ANDERSON, Secretary.

Last Pound Skimmed As Well As First Pound

We will guarantee that you can take a "STANDARD" cream separator and skim to the full amount of its capacity, even if the milk is not at its natural heat, and that the last pound will be skimmed equally as well as the first ponnd. After the skimming is done, open up the

Standard

bowl and you'll find the inside edges of the discs are not clogged with cream, nor the outside edges stuffed with foreign matter. That is because there is ample space space between the discs and the bowl to provide room for more impurities than will accumulate in one hour's skimming. This is one of the greatest improvements in cream separators in recent years. It was suggested by Professor J. H. Grisdale, Director of Dominion Experimental Farms, Ottawa, and carried to completion by Standard experts. It means CLEAN CREAM, ALL THE CREAM, NO WASTE. Our booklet explains this feature and many others more fully. Drop a post card today for a copy.

The Renfrew Machinery Co. Limited

Head Ofiice and Factory, Renfrew, Ont. Sales Office, Winnipeg, Man. and Sussex, N.B.

Dairy Jottings.

Have a small pasture, or at least a grassy yard in which the calves may frolic. Such places should have shade and shelter of some description for the calves to run to during rains.

Allow them to come to the shed or stable during the spring rains or chilly nights, if they wish to. Some cows shed earlier or shed off all at once. Such will feel the spring chill much more than others.

Perhaps this should have been noted first: by all means go over the pasture to see if there is any barb wire loose, or any fence posts decayed so that a smart push would send it over; such a thing may cause serious damage through the cows getting out of bounds, or the loose wire may inflict serious injury.

The dairy cow must be provided with an abundance of feed to enable her to keep up her milk flow.

Have the milk for the calves sweet and of the same temperature as when it comes from the cow.

See that the salt supply is furnished constantly.

Know that they have all the drinkable water they want.

How Prize-Winning Herds Were Fed.

The method of feeding and management of three of the herds that won high places in the Dairy Herd competition, conducted by the Western Ontario Dairymen's association last year are given as follows by Farm and Dairy:

"My farm contains but 25 acres, 13 of which is in pasture, two in buildings and orchard, leaving 10 acres to grow fodder crops. We usually have two acres of corn, two acres of mangels, two or three of clover, and the balance in Hungarian grass. Most of the feed for our cows is run through the cutting box, clover, corn, and Hungarian grass being mixed together. All of this cut feed that the cows will eat up clean is given in the winter along with a few mangels. Occasionally a feed of long hay is given for a change. I find that Hungarian grass cut and cured at the proper time is one of the best feeds for milch cows. When the cows freshen in the spring, they are fed half a gallon of bran morning and evening all summer until mangels are fed again. The cows run on the highway in the daytime, for which privilege we pay $1.00 a week, and in the pasture at night. A pure-bred sire is used and heifer calves from the best cows are raised. Attention is paid to persistency in flow of milk rather than a large flow for the first few weeks. The milking is done in the stable all the year round, and care is taken that the cows are milked dry."—George Bourchier, Oxford County.

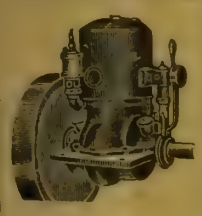
THE CASHIER SAID—"I notice your Butter Checks have been getting bigger lately. Did you buy another cow?".

THE FARMER SAID—"No, I'm using WINDSOR SALT. It makes better butter and I am getting better prices. It certainly does pay me to use Windsor Dairy Salt."

THE CASHIER SAID—"I should say it does. Do you mind if I let some of my friends in the secret?"

THE FARMER SAID—"Go ahead. Tell them all to use WINDSOR DAIRY SALT if they want to get the 'top' price for their butter" 67D

WINDSOR DAIRY SALT



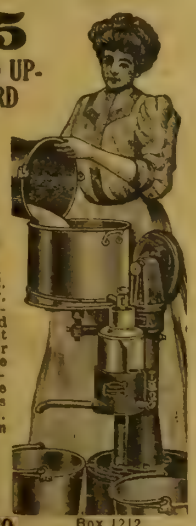
BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton Ont.

15 95 AND UPWARD



AMERICAN SEPARATOR

THIS OFFER IS NO CATCH. It is a solid proposition to send, **on trial, fully guaranteed,** a new, well made, easy running separator for $15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for **small dairies, hotels** and **private families.** Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from **WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B.** Whether your dairy is large or small, write us and obtain our handsome free catalog. Address:

AMERICAN SEPARATOR CO. Box 1212 BAINBRIDGE, N.Y.

Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all Dealers.

"The foundation af my herd consisted of grade Durhams selected for milking qualities. A pure-bred Holstein sire was used and his heifer calves form the present herd. About a week before the cows freshen, I start to feed a few mangels, three pints chopped oats, and a little flaxseed meal in addition to the rough feed. A little oat chop is fed all summer. When pasture becomes short sweet corn is fed twice a day. When the cornstalks become too ripe, mangels and a little flaxseed meal are given until the factory closes. In the six months last season, 5,051 pounds of chop were fed to the cows which is scarcely two and three-quarter pounds a cowper day. All the feed was raised on the farm."—John Van Slyke, Elgin County.

"In the winter we feed corn fodder, hay and about two quarts of oat chop a day to our dairy cows. When the cows freshen a small amount of oil-cake, bran and oat chop mixed with sugar beets is fed. When the pasture is good, oil-cake and bran are fed once a day. About the first of July, we start soiling on green peas and oats, followed by green corn and roots. Late in the fall shorts, bran and alfalfa hay twice a day are also given. Our cows are Holstein grades."—Seymour Cuthbert, Oxford County, Ont.

Cheesemakers' Daily Record Blank.

Some of the information contained in the following Cheesemakers' Daily Record Blank could be omitted without seriously detracting from the value of the reports, but if kept up regularly and systematically the keeping of such records requires little time.

Date ..... Weather .....
Vat number .....
Time last milk in .....
Condition of milk:
- Flavor
- Temperature
- Acidity
- Per cent. fat

Pounds milk in vat.
Starter, per cent. used
- Condition
- Acidity
- Time added

Color, amount
- Kind

Rennet test
Setting, hour
- Temperature
- Acidity
- Amount rennet

Time required to coagulate
Curd cut, hour
- Condition
- Size of cubes

Steam turned on, hour
Time taken to raise temperatute to.....
Whey drawn, hour
- Temperature
- Acidity
- Hot iron test
- Condition of curd
- Per cent. fat in whey

How much was curd stirred?
- How matted and piled?

Milling, hour
- Acidity
- Hot iron

Salting, hour
- Condition of curd
- Amount salt
- Kind used
- Acidity of whey
- Hot iron

Put to press, hour
- Temperature
- Condition of curd
- Condition of whey

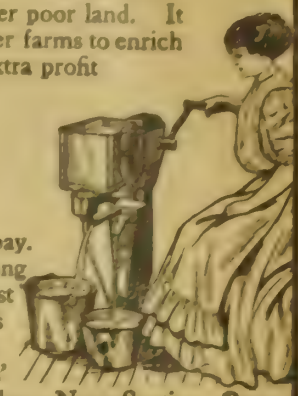
Time in press
Temperature curing room
Number cheese made
Pounds green cheese
Yield green cheese per 100 lbs. milk
Green cheese scored.....points...
Pounds cured cheese (filled in at shipping).
Yield cured cheese per 100 lbs. milk
Cured cheese scored.....points.
Remarks.

—N. Y. Produce Review.

Making an Extra Profit

Like other keen farmers, you are after extra profits. Rich land pays you an extra profit over poor land. It pays well to keep cows on wheat, fruit and other farms to enrich the land. High-producing cows pay you an extra profit over average cows—and the high-producing

SHARPLES
Tubular Cream Separator

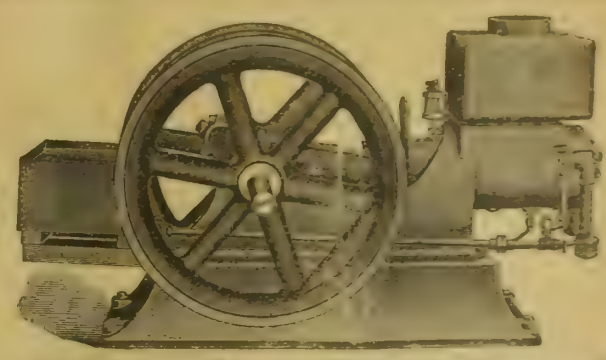


will pay an extra profit no other separator can pay. This is because Tubulars have twice the skimming force, skim twice as clean and produce the finest velvety cream. This extra Tubular profit appeals strongly to shrewd dairymen and business men. One instance, out of many, is the Free Masons' Home shown above, which is located at Windsor, Nova Scotia. Reverend J. B. Merrill, superintendent of the home, while treasurer of a well-known creamery, discarded a disk machine for the Tubular. The simple, sanitary Sharples Dairy Tubular, which contains no disks, is the machine which does the work for this well-known home and its guests.

Remember that the oldest separator concern on this continent positively guarantees Tubulars forever. Write at once for Catalog 194 and learn about the extra TUBULAR profits.

Sharples 31 Yrs

The Sharples Separator Co.
Toronto, Can. Winnipeg, Can.



The Waterloo Boy Gasoline Engine is the Price Maker

PRICE No other gasoline engine reduced the price of Gasoline Engines like the

WATERLOO BOY

Waterloo Boy has fewer parts than any other engine. It costs less to make few parts than many parts.

The **Waterloo Boy** is made in large quantities. It costs less per engine to make 100 engines per day than to make 10. That's why we make the underselling price.

Waterloo Boys are dependable, always ready to go. No fuss. No bucking, starts easy in winter. Automatic feed regulation does away with both the expense and bother of a pump.

Ignitor simple as a pair of scissors.

Speed lever works like a throttle on a locomotive.

Nearly all parts are interchangeable.

If you want satisfaction all the year round, buy the **Waterloo Boy.**

Built of best material by men that know how.

20 years of making good. Guaranteed 5 years. Write for catalog, it is free

THE WATERLOO GASOLINE ENGINE CO.

J. D. FRIER, Sussex, N. B., Eastern Representative.

LIVE STOCK.

Suffolk Sheep.

Natural hardiness and vigour of constitution, a great capacity for productiveness and early maturity and an unequalled record as mutton producers is a combination of properties so valuable and desirable, that, could it but be realised that such are beyond doubt and in a remarkable degree characteristics of the Suffolk Sheep, few would be slow to test the merits of that breed.

In the endeavour to show that this statement is not merely theoretical, but founded on actual fact, this article purposes dealing rather with facts and statistics relating to the qualities and uses of the breed than with details of its history which are so fully dealt with in the pamphlets issued by the Suffolk Sheep Society, and which receive special attention this year in a signed article in the current issue of the Royal Agricultural Society's Journal.

Recognised as a pure breed since 1810, the Suffolk was founded by crossing horned Norfolk ewes with improved Southdown rams, its origin being probably the result of an accident, for in the "Annals of Agriculture" (Vol: VI. 1786 A.D.) it is related by Arthur Young, the well-known Agriculturist, that a Southdown ram given him by Lord Sheffield got by accident among a little flock of Norfolk ewes belonging to a tenant who, as the result, had seven or eight lambs of an entirely different breed from all the rest. Early the following summer (1784) his lambs were drawn fat by the butcher who, when he came to make choice, drew every one sired by the Southdown before he took a single Norfolk, declaring at the same time that they were much the fattest of the flock. The farmer applied immediately to Mr. Young to save him a ram lamb for future experiment and during the early part of the next century there is ample evidence that the interbreeding of Norfolk ewes with Southdown rams was very general. By the middle of the century the breed was koown as "Blackfaced", and in 1859 was christened "Suffolk" and a separate classification provided for it at the Suffolk County Show.

The old Norfolk breed has now practically disappeared but in the Suffolk of to-day all its best qualities are retained—a hardy vigorous constitution, high breeding quality and fecundity, the black face and legs, bright eyes, quick movement and graceful carriage of the head, all denote the ancestor so often described as "deer-like", while from the more kindly natured Southdown come the breadth of carcass, the wide loin, the deep rib and good leg of mutton; these good carcass points, combined as they are with the fine flavour and juicy lean flesh of the Norfolk mutton, yield a meat capable of satisfying the most fastidious. A tendency to horns, due to the Norfolk progenitor, was overcome by selection in the course of a few years, nevertheless "Spud horns" will still occasionally crop out, but male sheep showing these small horns are to be avoided for pure breeding purposes. The Norfolk as well as the Southdown, was a short-woolled breed noted for the fineness and whiteness of its fleece. Arthur Young writing in 1804 speaks of the fleece of the Norfolk as "third in the kingdom for fineness."

Independent testimony of the progress of the Suffolk breed is found in 1886 when Mr. W. J. Moscrop, a Yorkshire Agriculturist, acting as judge of farms in Norfolk and Suffolk, reports thus in the Royal Agricultural Society's Journal (Vol. XXII 2nd Series):—"In the breed of sheep within the present century there have been greater changes even than in the cattle," and goes on to say that the result of crossing the old Norfolk breed with the Southdown was the creation of a new breed possessing the good qualities of both. The breed is now known as the Suffolk. The mutton is reported to be worth fully a penny (2 cents) more per lb. than that from the long-wool cross, and so famous has it become that gentlemen of the turf frequenting Newmarket and tasting it there are having it sent to their London houses. They are also very prolific breeders and excellent milkers and are much in demand for crossing purposes."

Not only were the good qualities of the two breeds combined, but in point of fecundity the capabilities of the Suffolk have been highly developed. For many years the Suffolk County Agricultural Association has held competitions with a view to encouraging fecundity among flocks and rewarding successful shepherds. The following figures represent the result of these competitions for the past ten years and it should be remembered that they are (1) accurate data, not the result of guess-work, and (2) the results represent lambs reared to May 1st, not offspring born.

Date	Tatal No. Suffolk ewes from registered flocks, in the competition.	Average No. of lambs weaned from each 100 ewes
1901	2,146	150.56
1902	3,076	151.27
1903	5,452	158.49
1904	2,959	158.06
1905	3,967	153.34
1906	2,676	150.60
1907	4,903	154.15
1908	5,474	149.91
1909	6,681	153.67
1910	5,459	145.58

In the same competition the record of losses among the ewes from time of turning in the rams until weaning is practically 2.5 per 100 ewes mated. These figures clearly demonstrate the excellence of Suffolks as nurses and the stamina shown by them when producing their young.

In East and North-West Suffolk are large tracts of heath-land, and, on these, Suffolk ewe-flocks spend a great part of the day, and for many months in the year get a large part of their living off land where no other animal but hares or rabbits could exist. It is a great merit of the ewes that while they have the power of earning a living on a wide range of poor pasture out of the breeding season or when not far advanced in pregnancy, they are also capable of converting a large amount of food into milk when rearing their lambs.

Those unfamiliar with the breed have been known to imagine that the Suffolk is a big eater and slow feeder. This may be emphatically denied. No animal will mature very quickly unless he is a pretty large consumer and the Suffolk, though a hearty feeder, is a kindly doer, and, while he wants plenty of good food, does not require a constant daily change of food to stimulate his appetite. And there is ample evidence of his capacity for early maturity. Ram lambs are so forward at from 7 to 8 months that they are largely used for breeding purposes. It is, in fact, the exception to find untried Shearling rams offered for sale, practically all being sold as lambs and used the same season. A well grown male of 8 months is usually mated with 40 ewes and with most successful results. Well grazed wethers brought to market at 9 months old yield from 70 to 90 lb. carcass weight and cut up full of lean meat. The average live weight of Suffolk Lambs exhibited in the Live Section at the Smithfield Club Show for the past five years is as follows:—

WETHER LAMBS

(under 12 months old).

Date	Average Weight (Pen of Three)	Average Weight (Per Lamb)
1906	562. lb.	187.3 lb.
1907	617. lb.	205.6 lb.
1908	637. lb.	212.2 lb.
1909	622. lb.	207.3 lb.
1910	615. lb.	205.0 lb.
Average	610.6 lb.	203.5 lb.

And, in 1910, competing with representatives of every breed, a pen of three Suffolk lambs, 9 months 3 weeks old, weighing 651 lb. was awarded the Prince of Wales Champion Cup for the Best Pen of Sheep or Lambs in the Show.

Statistics published in connection with the Carcass competitions at the same Show, give equally good results with regard to the percentage of dressed carcass yielded by Suffolks. The following are the averages for the past five years:—

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Wether Lambs (Under 12 months old)

Date	No. of Entries	Live Weight	Carcass Weight	Loose Fat	Pluck	Skin	Avg. percentage of Dressed Carcass to Live Weight
		lb.	lb.	lb.	lb.	lb.	
1906	10 avg.	136	86	8	5	12	63.24
1907	16 "	140	90	9	4	13	64.29
1908	8 "	143	89	8	5	15	62 24
1909	11 "	145	89	10	5	16	61.38
1910	9 "	142	90	8	5	13	63.38
	Average...	141.2	88.8	8.8	4.8	13.8	62.91

Wether Sheep (under 22 months old)

1906	5 avg.	193	129	12	5	15	66.84
1907	5 "	171	112	12	5	12	65.50
1908	5 "	157	102	11	5	14	64.97
1909	3 "	191	123	15	5	15	64.39
1910	5 "	183	119	13	7	13	65.03
	Average	179	117	12.6	5.4	13.8	65.35

No better test can be required of the merits of a sheep for mutton production than this "block test" at the Smithfield Show. The numerous entries in Longwool, Shortwool and Cross-bred Classes each year point to the anxiety of each breed to claim distinction. One of the two judges is invariably a meat salesman of repute and the following list of awards won by Suffolks and Suffolk Crosses convincingly proves them to be mutton producers of the highest quality.

Class for Wether Lambs of any shortwool breed—First prize to Suffolk ten years running, i.e. from 1900-1909 inclusive.

Class for Wether Sheep (under 24 months old) of any shortwool breed—First prize to Suffolks from 1900-1904 inclusive, and again in 1907 and 1909.

Class for Wether Lambs of any Cross-Breed—First prize to Suffolk-Crosses from 1902-1905 inclusive and again in 1908 and 1910.

Class for Wether Sheep (under 24 months old) of any Cross-breed—First prize to Suffolk-Crosses 1901, 1903 and from 1905-1909 inclusive.

Champion prize (Best Carcass in the Yard) for which all pure breeds and Cross breeds compete, awarded to Suffolks from 1902-1906 inclusive and again in 1908.

Besides nearly one-half the total other awards in the Short-wool and Cross-bred classes. The carcass in well-proportioned so that the best joints are prevalent, and the large proportion of lean meat and saleableness of all joints have won the universal admiration of the London meat traders.

Apart from the value of the "Clip," wool has an important bearing upon the constitution of the animal and upon the quality of its flesh, and Suffolk breeders have always endeavoured to maintain a close fleece with medium length of staple. The wool is fine in texture and well covers the whole body, with the exception of the head and legs below the knee, which should be quite bare of wool and covered with fine glossy jet black hair (the only exception allowed being a small tuft of white wool on the forehead). The average weight of fleece (first year's clip), on good soils, is about 8 lb. per head of washed wool. Ewes will clip from 5 to 7 lb. and rams up to 14 lb. (washed).

For crossing purposes, the strength of constitution, activity and prepotency of the Suffolk ram render him a most valuable mate and particularly with the long-woolled breeds. The cross so obtained is not only an animal yielding a heavy fleece of good wool but also a very superior carcass of meat, Ample evidence is afforded on this point by the remarkable success of Suffolk Crosses, as already stated in the Carcass competitions at Smithfield, while on four occasions (the only times that the chief award has gone to lambs) Suffolk-Crosses have won the Championship at the Scottish National Fat Stock Show. In 1910 the champion pen consisted of three Suffolk-Border Leicester Lambs, 8 months 3 weeks old, scaling 675 lbs. The same pen also won the Championship for Cross-breeds at Smithfield. The Suffolk-Cheviot cross is an excellent one and prominent among the Smithfield winners. The Suffolk-Southdown cross also makes a nice compact sheep, a great favorite with butchers. A flock of mongrel ewes and their produce crossed through several generations by Suffolk rams get type, fecundity, and good milking qualities. Interesting statistics have been preserved of an experiment car-

(Continued on page 562).

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THE HORSE.

Filing the Horses Teeth.

Any farmer of good judgment can be taught to float the sharp points off horses' teeth, but any of us can be shown in a few minutes how to accomplish something that we could not learn in days from what any man may write on the subject. Of course, horse dentistry cannot be taught in a few minutes, but the floating off the sharp points of a horse's teeth can be taught in a few minutes. The first lesson that needs teaching is that the upper jaw of a horse is much wider than the lower jaw, and when the mouth is closed the teeth do not set squarely together. The teeth on the lower jaw set only on the inner part of the teeth of the upper jaw. Lesson No. 2 is that when a horse masticates his food he doesn't do it by simply shutting his teeth down on the food. He gets the mouthful of food on his tongue, which he uses to carry the food between the teeth, and the lower jaw works sideways enough to grind the lower teeth on the upper teeth. Now, if he carried this sideways motion so far as to go clear across the teeth on the upper jaw there would be an even wearing of the teeth, but as a rule he does not.

Consequently the inner part of the teeth on the upper jaw is worn off, and the outer part of the teeth on the lower jaw. Thus it is that a saw of sharp points is formed on the outer edge of the teeth on the upper jaw, and a similar ridge of points on the inner edge of the teeth on the lower jaw. In time, as the wearing goes on, these points wound the cheek or the tongue of the horse so that he cannot make the lateral motion of the lower teeth on the upper teeth, as the ridge prevents it; also he cannot use his tongue as he would or should in carrying the food between the teeth. Now, all that needs to be done is to float off these points. Never allow the rasp to touch the main crown of the teeth. In case this is done, then the enamel of the tooth is removed, and the tooth soon decays; the nerve of the tooth is exposed, and the horse can never again chew his food without pain. Ignorant men think the teeth need filing down with the tooth rasp, when they need no such thing at all. It is the striking of the points named that makes the grating noise sometimes noticed and not that the front teeth are so long the grinders (molar teeth) cannot come together. The front teeth never need dressing. They are used only to pull hay out of the rack or nip off grass; and they never get long, as many suppose. The gums, as the horse grows older, settle away from them and make them appear to grow longer than they formerly were. This is all the secret there is about the filing of the horse's teeth. Use care to file off only the sharp points, then stop as soon as the points or ridges are filed off.

A twist is always needed to be put on the nose, and the tongue carefully pulled to one side by an assistant, so it may not be in the way of the one filing the teeth. Ignorance of what is needed spoils many a horse's mouth. It is seldom that all that is necessary to do cannot be done in ten minutes, and many times five minutes is enough when the rasp is a good one and the man who uses it understands his business. Ignorant men always try to do too much and make a great spread over a simple matter. It is more in the know how than in doing the needed work.—Dr. Smead, in Tribune Farmer.

Barley for Horses.

In the feeding of horses the object aimed at, so far as the commercial animal is concerned, is to obtain the maximum amount of energy, or work, at the lowest cost, but it is necessary to look a little beyond this. Economy does not necessarily mean the use of the cheapest or, rather, the lowest in price, or even the home utilisation of the saleable, for there may be circumstances under which the cheapest is not the best. This is the case with barley. In many countries, and especially in the East, barley is still the staple feeding grain for horses, and old Youatt tells us that until the introduction of the oat it seems to have constituted the only grain food of the horse, but this does not make it suitable for English horses, for which both experiment and experience has demonstrated oats to be a long way the best all-round grain.

NOT TO BE RECOMMENDED.

On paper barley is a better food than oats; it contains more albuminoids and carbo-hydrates, but is less digestible, and in this connection Youatt says:—"There seems however, to be something necessary besides a great proportion of nutritive matter in order to render any substance wholesome, strengthening, or fattening; therefore, it is that, in many horses that are hardly worked, and, indeed, in horses generally, barley does not agree with them so well as oats. They are occasionally subject to inflammatory complaints, and particularly to surfeit." Good barley is not a cheap food, it always commands a higher price than oats in the market, but it is when it is inferior, and in a sense unsaleable, that it is apt to be provided for the team. As part of a mixture, and given crushed, it is less objectionable, and may be economical, but if given uncrushed, or without any preparation —some boil qarley—a large amount of the grain passes out of the body with the foeces, having escaped digestion. The grain is very hard. It is frequently pointed out that horses are fond of it, and alleged that the trouble which admittedly often follows its use is due to the excessive quantity eaten, there having been a departure from the golden rule that no grain to which an animal is not accustomed should at first be given in anything but small quantities. This probably largely explains the success with which barley is used in other countries, but English horses are not accustomed to it, and while they are becoming accustomed, by its gradual introduction into the diet, something commonly happens, and loss of service—perhaps loss of a horse—and a veterinary surgeon's account must be added to the cost of food.

UNSALEABLE BARLEY.

A farmer who has unsaleable barley may use it for feeding his horses, and by using it in small quantities and increasing it gradually, may, perhaps, do so with safety; but, as a rule, the team of the man who goes in for feeding damaged or unsaleable stuff to his horses is not a source of pride

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We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

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Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER

Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

It's A Pleasure To Do The Churning

with Maxwell's "Favourite". The roller bearings—and easy Foot and Lever Drive enable you to bring the butter without an effort.

Maxwell's is the finest butter maker in the world—and the best made, the strongest, the most satisfactory churn on the market. The proof is in the fact that more of these churns are sold in Canada than all other kinds combined.

MAXWELL'S FAVORITE CHURN

I was cured of Acute Bronchitis by MINARD'S LINIMENT.
J. M. CAMPBELL,
Bay of Islands.

I was cured of Facial Neuralgia by MINARD'S LINIMENT.
WM. DANIELS,
Springhill, N. S.

I was cured of Chronic Rheumatism by MINARD'S LINIMENT.
GEO. TINGLEY,
Albert Co., N. B.

WHY HE WAS LATE.

"What made you so late?"

"I met Smithson."

"Well, that is no reason why you should be an hour late getting home to supper."

"I know, but I asked him how he was feeling, and he insisted on telling me about his stomach trouble."

"Did you tell him to take Chamberlain's Tablets?"

"Sure, that is what he needs."
Sold by all Dealers.

to his carter. Further, the farmer has generally about him other animals—cattle, sheep, pigs, and poultry—that can make much better use of inferior samples of barley than horses. The very fact that the grain is in some way so damaged or inferior as to make it unsaleable for the purposes for which it is usually marketed is against its being suitable for horses, who can never be economically fed on damaged grain. Even if barley can be demonstrated in every way suitable as a grain food for horses, and they are accustomed to it by its gradual introduction, it would never pay the horse owner who is not a corn grower to buy such barley as would be in a fit condition for horse feeding.—Pateley Bridge.

Lumps on Horse's Shoulders.

Constant Reader:—Being a constant reader of your valuable paper, and having gained much useful information from it, I would be much obliged to you if you could give me some little help in regard to my horse's shoulders. On two or three different occasions during the wet weather, after having done a full day in the collar in the wind and rain, on going to feed and harness up for a start the next day I have found a lump about the size of an egg on the horse's shoulder. I have eased tne collar, and on the last occasion the collar was not touching the place when he was in draught.

The lump or swelling complained of is due to effusion of serum or lymph, or both, produced by inflammation, and is not uncommonly met with in horses that are naturally tender skinned. With reference to the statement that you have eased the collar, and on the last occasion the collar was not touching the place when he was in draught, you are probably mistaken. It is not stated in what way the collar was "eased," but it is a most difficult matter, whether by "chambering" or pads to keep the collar off the damaged surface—that is, to remove all the pressure—without causing it some where else when the draught comes on it, although the collar may look to clear the injured part when it simply rests on the shoulders. Some horses are so defective in conformation about the neck and shoulders that they are entirely unsuited for harness work, and such animals are fitted and kept going only with the greatest difficulty. This cause of constant injury and soreness is often overlooked, and the trouble attributed to an excessive tenderness of the skin, which, though it is a frequent cause of trouble, is by no means the only cause. What will have happened by the time you see this reply we cannot predict, as much will depend on the management, but on the first occurrence of such injury, the best plan is to throw the animal out of work for a few days and use an astringent or "hardening" lotion. An example is powdered alum 1 oz., sulphuric acid 1 drachm, water one quart. When the horse comes in from work remove the hames, lift the collar from the shoulder to let the air under, and then allow it to fall back into position and remain on until the shoulders are quite dry and cool. A similar plan is practised with some success in hunting stables for the prevention of sore backs. After taking the collar off, give the skin a thorough wetting with the astringent lotion, and allow it to dry on. Care must be taken that the collar fits properly (old collars often get out of shape, and need to be "re-plugged" and re-lined), and that the lining is clean and dry. In prolonged wet weather, and often in muggy weather, it is impossible to get the lining dry without artificial heat, and it should be stood before the harness-room or kitchen fire.

INTERNATIONAL
3 FEEDS FOR ONE CENT
WE POSITIVELY GUARANTEE
that a 25-pound pail of
INTERNATIONAL STOCK FOOD
will save you $7.00 worth of Corn or Oats
Because it promotes digestion and assimilation and enables you to cut down the grain ration 15% to 25% and still get better results. The saving of grain represents a saving of good hard cash to you.
WE WANT YOU TO FEED 100 LBS. AT OUR RISK

¶ It will not cost you a cent if you are not satisfied. See our dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16 x 22, of our three champion stallions.

Read what James L. Hill, of Fredericton Junction, P.E.I., wrote us on February 15th:

I think International Stock Food is a great thing for stock. We wouldn't be without it for anything. It keeps our horses in fine condition; in fact, every person admires them, they have such a glossy skin and always look well. We give it to young calves and pigs and find it agrees with them splendidly, and the Poultry Food shows itself in a very short time. Our hens have been laying most of the winter. I cannot say too much for your food for all kinds of animals.

INTERNATIONAL STOCK FOOD CO., Limited - - - TORONTO

The "Bissell" All-Steel Rollers

The "Bissell" Roller is all steel except the Pole. It is braced and stayed to stand all kinds of hard work and wear well. The bottom of the frame is all steel too.

The end frame Hangers are formed from bar steel and there is no twisting or warping on "Bissell" Roller frames.

The (18) anti-friction Roller Bearings make light draught.

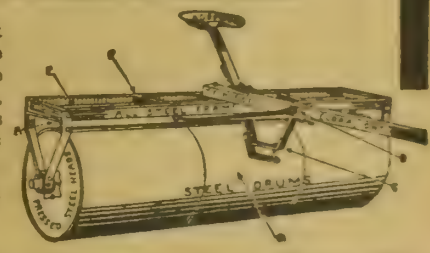
The Draw Bracket and low hitch does away with neck weight.

The Axle revolves with the drums and there is no squeaking or grinding.

The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL.

These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is 'built for business," that stands up, against lots of hard work.

Ask Dept M for free catalogue. 59



T. E. Bissell Co., Limited, Elora, Ont.

BRUCE'S SEEDS

BRUCE'S BIG FOUR FIELD ROOT SPECIALTIES

BRUCE'S GIANT ROSE FEEDING BEET—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the mangel. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field carrots. 1-4 lb. 68c., 1-2 lb. $1.24, 1 lb. $2.30, postpaid.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant Feeding Beets and equally easy to harvest. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top. 1-4 lb. 18c., 1-2 lb. 24c., 1 lb. 40c., 4 lbs. $1.40, postpaid.

FREE—Our handsomely illustrated 112-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1913. Send for it.

John A. Bruce & Co., Ltd., HAMILTON, ONTARIO.
Established Sixty-two Years

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

POULTRY.

The Incubator on the Farm.

It should be the policy of every farmer to provide some permanent improvement every season. One year it may be a building, another year some rather extensive fencing, at another time some implement that will prove of value in carrying on the farm work. One of the first of these improvements if it has not already been made, should be an artificial method of hatching chicks. The incubator is a necessity even if only a few chicks are to be hatched. Those who have had experience with the natural method of hatching, realize the changeable nature of a hen's disposition. One day she may be thoroughly broody and the next she may be flitting around the yard with never a thought of her maternal duties. Unfortunate indeed is the case when this light hearted disregard of the responsibilities of hatching comes at a critical time in the process of incubation. The incubator may not be a cure all for every problem in poultry raising, but it is most certainly a great boon to the farmer or even the city poultryman who wishes early birds and who would bring out his chicks at a time to secure the best growth before the cold weather. There are many reasons why the farmer should use the incubator. They may be summed up under three principal heads. First, the incubator is absolutely dependable and its disposition is neither fickle nor erratic. In the second place with the incubator one has definite control of the times and seasons for hatching. In the third place, the incubator chick does not come into this world hampered by lice or vermin transmitted from the plumage of the mother hen. These three factors should be sufficient to influence anyone in favor of artificial hatching. But after the hatching is over the artificial systems of brooding are also a welcome change from the older method. With all the chicks of uniform size and all in a single flock, it is much easier to care for them and leed them so as to get the most rapid growth. They can be handled with greater economy of feed and the results will be better and more profitable all along the line.

When it comes to a matter of sentiment the incubator is pretty nearly as faithful as the old hen and the man who refuses to use one because he likes to see the hen mother her chicks, is foolish in the extreme.

It never pays to feed ducks and chickens together in the same place, as a duck will pick up a half dozen grains while a chicken is getting one. Ducks are such stuffers that we often wonder how they get along from dark until daylight without getting a midnight meal. They will do well without much change of feed as all they want is enough of it.

Setting the Old Hen.

The motherly instinct which our great Creator in His wisdom has implanted in the breasts of all female creatures is especially strong in our humble friend, the hen. In some breeds this maternal instinct is much stronger than in others, and, run to excess, it becomes a nuisance, and interferes with the laying qualities.

We will step into our neighbors' yard and see how this is managed by different people. "Maria," calls the head of the family, "Old Speckle wants to set; have you any good eggs to put under her?" "Yes," answers Maria, "I have those expensive ones I bought from that crack breeder we went to see the other day." "Well, let's fix her up right away, for I am in a hurry with other work, and can't stop long to fool with an old setting hen this morning."

Maria gets her fancy eggs ready and sallies forth into the yard to find a box fit for a nest, husband suggesting that "Any old thing is good enough to set a hen in. Why," he enlarges, "my mother never made a fuss about setting a hen at all, just let her set where she pleased, out in the barn, under a fence or wherever she wanted to, and she always had swads of chickens. "Things were different on a big farm, from what they are on this small place," answers Maria, and at last she sees an old box, used for years and carelessly set away with the old straw still in it. "This might do if cleaned out well," she ventures, and her husband takes it in hand, looks it over and pronounces it all right as it is. "O, but the old straw won't do," says his wife, and after a little grumbling the old straw is carelessly turned out, to be blown at will, and the box shaken out a little and a cursory examination made for lice or mites, "although," Mr. Man says, "there is little danger of any living so long. The box hasn't been used for nearly a year." "But," says Maria, "they say mites live in cracks like bedbugs, and that old boxes are not safe to use at all." "Where did you hear such nonsense as that?" demands her lord and master. "Why," she replies, "I read it in that Poultry Book Mrs. H: lent me." "Maria Anderson, are you fool enough to read what those cs&zy chicken cranks write? Why, they don't know a thing about chickens, and sit up in their offices scribbling trash they don't know one thing about, and you read it. Well, I did give you credit for better sense than that." "But this box looks just like they describe, little grayish white specks in the corners, and they say every speck is either a mite, or an egg, and if this is true, this box is swarming with them and I ought to soak it in distillate or lamp oil." "There you go, wasting distillate and lamp oil like that, just for a fool of a scribbler that don't know dust from mites." Thoroughly squelched, Maria dusted out the box and put fresh straw in, making the nest as inviting as possible, and at nightfall the unsuspecting hen was placed therein. Sperkle resented the moving a little at first, but as she had dreams of downy little babes snuggling under her motherly wings, she finally settled down, and the eggs were carefully placed under her.

This box was placed in an old shed, and part of the day the sun beat in cruelly, but, faithful to her trust, old Speckle protected the eggs from the fierce rays by her own body, although a strange restlessness began to take possession of her. It seemed to her that she was the battle ground for an army of crawling, biting, hungry insects, of what kind she didn't know, but they increased daily until life was a torture, no dust bath being thought necessary, and only bare, hard floor in sight. Food was placed before her and fresh water for the first few days, but as other interests took up so much time, at last her wants were forgotten, the water grew hot and stale, and finally there was none at all with which to quench her fearful thirst, made worse by lack of green food, as her master and mistress didn't consider it necessary to give her a succulent bite now and then. To add to her torments, hordes of body lice now made their appearance, to vex her by day, while the nightly army of mites sapped her strength, and at last they didn't leave her day or night. Her nest was running over, the eggs were covered with them, not white or gray now, but full of poor old Speckle's blood, almost black to bursting with it. Her hopes of downy babies be-

RAMSAY'S PAINTS

Not a Mark of the Weather;

the same lustre and brightness as when first applied—no cracking—blistering nor fadeing—that's the kind of Paint you want. RAMSAY'S PAINTS stand the severest tests of weather and time because they are mixed right—honest linseed oil—turpentine and coloring pigment intimately combined — the result of 70 years of practical paint making.

RAMSAY'S are the best looking and best wearing paints made. Ask your dealer in your town.

A. RAMSAY & SON COMPANY, MONTREAL.

No Sane Farmer

will try to run his farm on a paying basis without proper implements and appliances for doing good work, and it should be the same with the farmer's wife. When she has to prepare three meals a day for 365 days a year, she should have in her kitchen an up-to-date range on which she can depend in any emergency, for broiling, baking, simmering or boiling to the best advantage with the smallest possible consumption of fuel.

THE ENTERPRISE MONARCH STEEL RANGE

will do all this, and in addition it is specially adapted for farm work as it has a large fire box for wood burning and large copper reservoir giving ample supply of hot water. Then the MONARCH is so thoroughly constructed that it is not necessary to send to town every few months for repairs.

Ask your wife if she does not want a MONARCH. It may add years to her life by lessening labour and saving time.

The ENTERPRISE FOUNDRY CO.,

Manufacturers Sackville, N. B.

FREE THIS MAGNIFICENT DOLL'S HOUSE AND HANDSOME IMPORTED DOLL

also TWO complete sets of beautiful furniture for the house and this lovely gold-finished jewelled ring

GIRLS, THIS IS A CHANCE OF A LIFETIME. DON'T MISS IT. This magnificent doll house is a perfect little palace, EXACTLY LIKE THE DRAWING IN EVERY DETAIL, with its quaint gothic roof with two chimneys, fine porch, lovely verandah and broad handsome front steps. The outside of the house is finished in red brick, the inside is beautifully papered throughout, and every window has curtains. IT IS FURNISHED COMPLETE with the loviest furniture you have ever seen—two complete sets, including sofas, chairs, tables, beds, bureaus, wash-stands, etc.

THE HANDSOME DOLL WE GIVE YOU WITH THE HOUSE is a little beauty. Fully jointed so that she can sit down, turn her head, move her arms and legs, and she is dressed with fine underwear, shoes, stockings, etc., complete from hat to shoes.

Girls, if you want to secure ABSOLUTELY FREE this handsome doll house, lovely doll, the two sets of furniture and the beautiful jewelled ring, send us your name and address at once and agree to sell only 25 of our delicious perfumes at only 10c. each. They come in six lovely odors, rose, carnation, lily of the valley, violet, lilac and heliotrope, and with each package we send a beautiful piece of gold plated jewellery to give free to your customers. This makes them sell like hot cakes. When sold, return us the money, only $2.50, and we will promptly send you all 5 hand some presents carefully packed, exactly as represented. We arrange to stand payment of all charges right to your door with free goods covering same. DON'T DELAY, write us to day, and in a few days you can have the magnificent house and all the beautiful presents. Address— NATIONAL SALES CO., Ltd. Dept. H 284 TORONTO, ONT.

Advertise in The Maritime Farmer.

gan to fade and she gave miserable little moans, hoping for help from her troubles, but none came, and at last her soul (if hens have souls) fled to a happier home, and when the time came for that hatch to come off, her mistress bethought herself of her, and found her dead upon the nest, millions of mites swarming among the eggs, and her hopes of choice chicks gone glimmering. Tears fell over the faithful martyr, I ween, and the husband was called to see the result of his stubbornness, and a partial convert to the fact that "maybe those chicken cranks do know a little something after all," was gained, but Speckle was not there to share in the better care setting hens would have on that place in future, her sacrifice was ended.

The pity of the above tale is that it is true in so many hundreds, nay, thousands of cases, and the unnecessary sacrifice goes on year after year, and will, until people learn to respect the opinions of those who have made the care of chickens a study, just as any other business is studied. Then, and not until then, will hens have proper care and chicks be well hatched and cared for.

We will now visit another hen yard, where an eager little boy runs to tell mamma that "the little red hen wants to set, mamma, the little red hen wants to set." Mamma smiles as she hurries to see if this be true, and as the pet referred to resents her approach by ruffling up her feathers and trying to be cross (unavailingly), she hastens to prepare a suitable place. "Get me a nice, clean box, son, and see how mamma fixes it." Sonny happily runs and brings, perhaps, a box he has been saving for his own manifold uses, but is pleased if mamma accepts, and watches her get it ready. First, this wise woman explains to the boy the habits of mites, as she has read in the down-to-date poultry books, how they hibernate in the cracks, and she illustrates the care of setting hens by pouring distillate into every corner, and letting it run through and through, "for, although this is a new box, the hen may carry a few in her feathers from her old nest, and we don't want them to find a place to lodge in." The box is allowed to air a while, then fresh straw is put in carefully, and a shady place found to set it in, away from other chickens. Right here I want to digress and say that queer places are sometimes chosen for setting hens, one woman putting them under the family bed, unbeknownst to her husband, to that worthy's consternation as he heard the hen turning the eggs in the middle of the night, and covered his head and whispered, "Burglars under the bed, saints preserve us!" A shady, cool place being found in some unused shed or building, said shed is then thoroughly sprayed with the distillate lest there be mites lurking there. A dust bath is provided, a dish of food is placed conveniently, and water and lawn clippings provided. Then at nightfall the happy little hen is placed in her comfortable quarters and a seteing of her own eggs placed under her (although she would be just as faithful to another hen'seggs). Every day the water dish is cleaned out and fresh water provided, and every other day fresh green lawn clipping or a little alfalfa is given. Lettuce and chard is rather too loosening for a setting hen, but clover or alfalfa can be given sparingly with good results. Grit is also given, and the happy hen, free from pests, dusted twice a week, is not allowed to want for anything, and in due time brings out a fine clutch of healthy chicks, which we feel sure will be cared for sensibly, and according to the best advice given in modern poultry literature. Which of these ways will you choose, my reader?—Mrs. Frank Metcalf, in California Cultivator.

What clothing is to man, paint is to property. Unprotected houses and barns, wagons and machinery cannot resist exposure to sun, wind, frost and rain. Rust and decay cost more than paint and varnish—that's why the use of Good Paint is wise economy. There's a merchant in your town who can supply you with reliable and durable finishes for every use.

SHERWIN-WILLIAMS PAINTS & VARNISHES

Around the Farm

Sherwin-Williams Paint—SWP—for the farmhouse. Covers most, looks best, wears longest. Ask for a color card—48 attractive shades.

Sherwin-Williams Barn Red—a rich durable red that spreads easily and covers well over rough lumber.

Sherwin-Williams Wagon and Implement Paint—protects the wood and metal of wagons and farm machinery, implements and tools from rust and decay. For Buggies use Sherwin-Williams Buggy Paint.

Sherwin-Williams Metalastic for windmills, metal roofs, and all metal surfaces. Prevents costly rust and decay.

Inside the House

Sherwin-Williams Brighten-Up Finishes include a paint, varnish, stain or enamel for every household use.

Sherwin-Williams Floorlac, stains and varnishes woodwork, furniture and floors in one operation. Looks like expensive hardwoods.

Sherwin-Williams Family Paint, over 25 attractive shades. For cupboards, tables, chairs, etc.

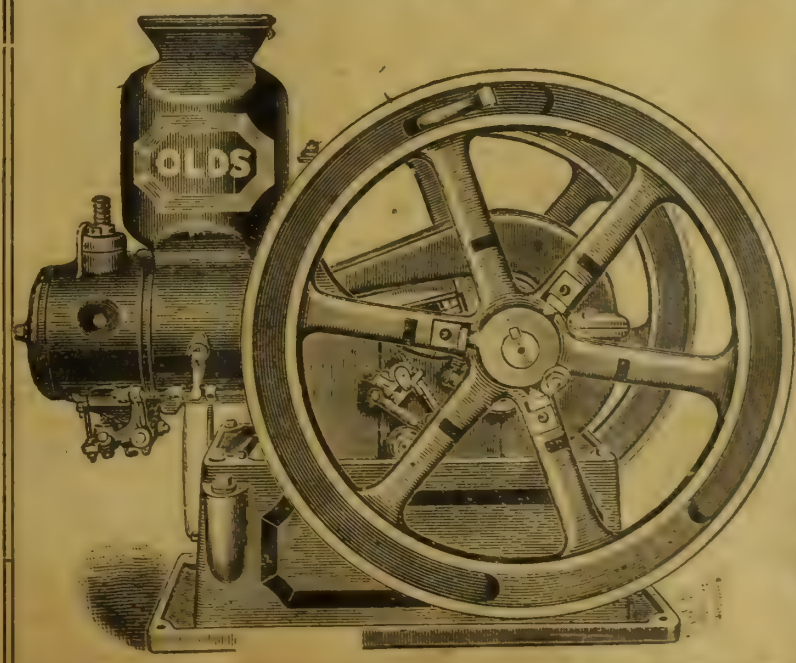
Sherwin-Williams Inside Floor Paint quick-drying and durable. 10 shades.

Sherwin-Williams Buggy Paint—Nine beautiful shades, for porch furniture, boats, flower-pots, swings, garden implements, etc.

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

B2

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

The White Sun Bonnet.

The clearing is little and rough and brown,
With jagged stumps where the axe descended;
A spring, where the sere leaves eddy down,
And harrow passes by briers defended.
The cabin stands on the forest's edge—
The window shines with the light upon it—
And over the twisted wild-grape hedge
I see the gleam of a white sun-bonnet.

Her hair is dark as the veil of night,
Her cheek is brown with the sun's caressing;
Her eyes are pure as the taper light
The foot of the Virgin almost pressing;
Her lips are sweet as the half-shut rose,
She graced this morn when she stooped to don it,
Her low brow under her tresses glows,
My woodland girl of the white sun-bonnet.

My axe strikes keen and sure on the tree
As I shout aloud with a joyous spirit,
The hut I builded for her and me,
And Paradise blossoms in and near it,
I set the window within the wall,
She hemmed the curtain that flutters on it—
To-morrow, the last sweet touch of all,
I shall drive the peg for her white sun-bonnet.

—From the Pacific Monthly.

Love's Barrier.

(Continued from last issue).

CHAPTER XXII.

FOR LOVE OF AUDREY.

The factories of Hayes, Bartlett and Hayes cover more than an acre of ground on the level plain outside Bradfield town. The business had been founded by old Christopher Hayes, who had ultimately taken his manager, Eneas Bartlett, into partnership, and married his sister. From a small handloom weaving factory, it had grown into a mighty concern, replete with every modern inpention for labour saving and swift production. There were no Bartletts now in Brettle Mills, only Geoffrey Hayes and his younger brother, Christopher. Christopher, familiarly known as Kit Hayes in the West Riding, was no asset to any business; he was in many respects the cross of his brother's life. There were no sons in the family, Kit being childless, and Geoffrey father to a solitary girl. At their death, therefore, the Brettle Mills must pass into the hands of strangers. For this reason Geoffrey Hayes had been inclined to do well by John Ridd, and to give him more encouragement in every direction than his wife approved of.

He was the son of an old friend of Geoffrey's younger and humbler days, and had proved himself more than worthy of the chances that had come in his way. The master of High Ridges depended more than he knew on the strong, shrewd loyalty of John Ridd, and though he was fully aware that he loved Audrey, the idea did not fill him with either dismay or indignation. The announcement of her engagement to Major Hunt at Marienbad had appeared in very large print in the Bradfield Gazette, being regarded as an event of the utmost local importance. It had, of course, been a blow of no ordinary kind to John Ridd. He had never alluded to it, nor had Mr. Hayes, but the light had gone out of the young man's face, He could not hide it, and the sight of John Ridd's misery added to the sum of Geoffrey Hayes' discontent. He had not sought the alliance with Gerald Hunt; it had been wholly his wife's doing, and though he had not refused his consent, he had given it rather grudgingly. He could not honestly say he liked the man, though he admired some of his qualities.

"What I do say, Maria, is that he isn't the husband for our little Audrey. He's too much the man of the world. I wish I felt easier about it in my mind."

But the very fact that he was so much a man of the world commended him to Mrs. Hayes. He represented the section of society she wished to enter, and of which she was determined that Audrey should become an ornamental unit. Lady Adela had promised, after she had made careful inquiry as to the amount of dowry the mill-spinner's daughter was likely to possess, that she would do her utmost to launch her well. She liked the girl for her own sake, her natural sweetness and gentlehood would make her task of the easiest. For the first time in her life Lady Adela was genuinely pleased with her nephew.

Great wealth had never tempted Geoffrey Hayes to slacken in his personal attention to his business. He was quite well aware that he was the mainspring and head of it, and that when he began to slacken his energies it was bound to decline. There was no one in the firm saving and excepting John Ridd who possessed a tithe of his energy or business acumen. He looked forward somewhat ruefully to the day when it might be to all their interests to float the business as a company concern.

It was his custom to leave High Ridges every morning at half-past eight to catch the nine o'clock train at Midcar, which brought him to Bradfield at a quarter to ten. It was the only train in the day that ran through the Junction without stopping. After nearly two months' absence on the continent he found plenty at the works needing his attention, and he had many consultations with John Ridd. He was, indeed, engaged with him relative to some desired extension of the business with Continental firms, when the young clerk whose business it was to attend to his private room, knocked at the door and said a lady was waiting below to see him.

Hayes glanced at the clock with surprise, and then at John Ridd.

"Half-past eleven—a lady! What does she look like, Briggs; not an insurance lady, eh?"

"No, sir; a real lady," answered Briggs quite innocently.

"Can't think what she wants here. Go and get her name—or no, just show her up. You can go now, John; we'll go into the matter later. I'm of opinion you're right after all; its hardly worth our while. I thought it would be when I was over there, but I see your point of view."

Ridd gathered up the letters, and prepared to withdraw. He was a fairly tall, well-built young man, with a good square head and a very pleasant, open face. He looked old for his years, which were only five-and twenty. But he had been fighting for his own hand since he was left fatherless at thirteen. He closed the door quietly, and in the passage outside met the lady, whom to his surprise he recognised as Mrs. Secretan, the wife of the Midcar Rector. They had met on one occasion at dinner at High Ridges. They exchanged bows, and John Ridd passed on. Afterwards he remembered that Mrs. Secretan had not looked quite like herself.

Geoffrey Hayes' surprise at sight of Mrs. Secretan was naturally very great. But he looked pleased enough.

"Mrs. Secretan! This is a very unexpected pleasure—only the second time, I think, that you have honoured the Brettle Mills."

He offered a kindly hand, and hastened to set a chair for her, not, however, before he had noticed that she looked pale and rather ill.

"Have you walked any distance?" he asked with his usual kindly solicitude, which made all women like him. "You look rather tired."

"Only from the station. I came down on the ten-fifteen. Thank you, I am not tired at all. I must apologise for coming here at this early hour when you must have so much to occupy you. But I wished particularly to see you, and thought I should be more likely to find you here early than late. You have so often things to do in Bradfield outside of your business."

"That's true enough; I am pleased to see you, of course, but you know that it would have given me pleasure to have called at the Rectory on my way up had you only let me know you wished to see me."

"I wished to see you here," she said quietly, and then he became aware that she was in an extremely nervous state.

"What can I do for you?" he asked with great kindliness. "Your face suggests that you are troubled about something. I hope the rector is quite well, and you also? My wife told me of your fainting the other night. I hope you have quite recovered from it."

"Oh, quite; indeed I had forgotten it. Will you allow me to tell you a story, Mr. Hayes? Can you spare me half an hour? It is necessary that I should tell you the story; it will explain the errand on which I have come."

"Why, yes; I can spare the time easily. I will just make sure that we shall not be disturbed." He touched the electric bell and Briggs appeared, in no doubt that he was summoned to show the lady out.

"I am not to be disturbed for half an hour, Briggs, on any pretext whatever. Don't come to this door again until I ring. Send any inquiries to Mr. Christopher, or Mr. John."

"Yes, sir," said Briggs, and obediently withdrew.

Helen began to draw off her gloves. She was trembling a little, and Geoffrey Hayes, wholly at a loss, waited rather anxiously for what he should hear. Many people brought their troubles to him, and he was usually able to suggest a way out. But he could not possibly imagine any trouble at Midcar Rectory unless a monetary one.

"I have to be very personal, Mr. Hayes. I am the central figure; at least, one of two central figures, in this little story. I wish to tell you that before I met my husband I was engaged to another man, a soldier, who was stationed with his regiment at Colchester. He had nothing but his pay, and I, of course, was poor too; but we loved, or thought we loved each other dearly. I was not very happy at home just then, and for that reason, perhaps, I gave my affections more unreservedly to the man who was kind to me. I would have followed him to the world's end without a question or a doubt. We were engaged secretly because he was in dread lest his family should know. But we met very often, we used to spend long days together in the country, and people talked about us a great deal. I simply did not care. He was the only joy I had in my life, and so few people had been kind to me since my father's death that I did not care about their good opinion or whether they talked well or ill of me.

"He was not well liked in Colchester, and many people warned me against him. He brought a reputation with him which was not what the nicest people liked. But he did not mind about that, he knew it would only be for a short time; and that opportunity would soon come for him to go elsewhere. He was everything to me, I thought we were everything to one another.

"One day something happened which turned out very badly for me. We were spending the day together in the country, and somehow we managed to miss the last and only train which could take us back to Colchester that night, and had to stay at a remote country inn until the morning. He laughed at it, and did not take the precautions he might have taken to make everything right for me. He

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promised to go to another inn two miles away, but I found next day that he had not gone away at all, and also that we had been seen by two young subalterns, who, of course, were only too ready to make the most of the story. You follow me, Mr. Hayes?"

The colour had risen in her cheeks now, and the clenched hands on her lap indicated how the recital had moved her.

"I understand perfectly, and the man was a scoundrel," said Geoffrey Hayes without a moment's hesitation.

"At least he was unkind, and selfish, because he knew, none better, what a nest of lying and evil speech a garrison town can be. In less than forty-eight hours we were the talk of the town. When I went out, I was cut in the street by the people I had known, and my stepmother, not very kind at the best of times, was furious. I can't think how I managed to live through those frightful weeks; the only thing that sustained me was clinging to the hope that when I became his wife everything would be made right.

"About six weeks after that his regiment was ordered to India. He left me without coming to say goodbye. He wrote me a letter—I have it here in my bag; I brought it in case you should be difficult to convince. In this letter he expressed great sorrow for all the suffering he had caused me, and said that if the fates had been kinder to us he would have married me there and then; but it was impossiblef He must marry money. He thought it better not to come and bid me a personal goodbye; it would be too hard on us both. And that was all."

"The scoundrel!" said Geoffrey Hayes between his teeth. Then seeing something more in Helen's face, he rose to his feet. "What are you going to tell me, Mrs. Secretan? Not—not—that the scoundrel you have just told me of, and the man who wishes to marry my little Audrey are one and the same?"

"That is what I have come to tell you, Mr. Hayes. The man was Gerald Hunt, and when I met him the other night in your house, and thought of all that might happen if Audrey was given into his keeping, I did not know what to do. But God showed me by and by; before the morning I knew that I must prevent that marriage at any cost to mysell."

Hayes walked to the window and stood looking out upon the pleasant stretch of green sward spread before the office windows. Helen bore the silence as long as she could.

"Perhaps you think I should not have spoken," she began timidly. "But if you knew that man as I do, his worldly heart, his—his srorn of everything that Audrey has been brought up to love and reverence, you would feel as I do. I entreat, at least, that you will believe I have not taken this step out of any mean or spiteful personal motive, for indeed it is likely to cost me very dear."

Listening to these pathetic words, Geoffrey Hayes felt his heart melt within him with pity and respect for the woman who had braced herself to render this true service to him and his. He wheeled round suddenly, and the expression on his fine face instantly comforted her.

"Mrs. Secretan, I understand; I quite understand. God will reward you for this; I never can! Give my little girl to such a man? No, by God I won't! I have never liked him quite; there is something in the background against which my soul revolts. From the bottom of my heart I thank you."

Helen, still trembling, rose to her feet, but he set her down again and stood in front of her with an expression of astonishing kindness on his

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Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

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And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

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So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

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face.

"It will be extremely difficult to do, Mr. Hayes; but one thing has comforted and strengthened me: I do not think that Audrey's feelings are very deeply engaged. I am sure that only her girlish vanity will suffer. It will not be a livelong sorrow to her. If I had feared that I should have hesitated."

"You are right; you are quite right. I don't mind telling you frankly, now, that this affair has been pushed for all its worth by my wife. She is different from me; she thinks the world of things which seem to me of no account. It is happiness I want for my little girl, and please God she will have it yet!"

Helen began to draw on her gloves. Now that the ordeal was over, she felt very weak and faint, but an ineffable peace filled her heart. Geoffrey Hayes' next words, however, caused the colour to leap painfully in her cheeks once more.

"Major Hunt came down with me this morning, and I have to meet him at the 'Golden Fleece' for lunch at one o'clock."

Helen rose hurriedly and glanced at the clock.

"I must be getting back. I cannot face him again. He will not be very much surprised, Mr. Hayes. I saw him yesterday, and told him what I was going to do."

"You did? You are a brave woman, Mrs. Secretan, and a good woman as well. I wish I rould tell you how highly I honour you. Some day, Audrey shall know what a friend you have been to her."

"I love her dearly; she has talked a great deal to me, and I know from these intimate talks that she could not, and would not be happy with Major Hunt. He would break her heart. That is my sole reason for what I have done. Now I will go. I can walk by the lanes to Wild Lane Station, so that I shall not have any chance of seeing him."

"I shall not allow you to go like that. You will stay here for another half an hour. They will bring you some lunch up; there is always something to be got here, for some days we have not time to go out. And afterwards there will be a brougham to take you to the station. I shall look in this evening, as I come up and tell you the sequel."

"Don't do that. I—I can't tell you why. Leave it. I shall know everything is right now I have given it into your hands. Only two more things I have to ask."

"Ask them, they are already yours," said Geoffrey Hayes in full tones.

"One is that you do not tell Mrs. Hayes my story. You will excuse me saying that I fear she might take a different view—she might blame me. If you can arrange it without telling her, it is the one service I would beg at your hands."

"Even if you had not asked me I should not have told my wife. It must be sufficient for her, as for Audrey, that Major Hunt cannot enter the family, and that I have abundant reason to forbid him the house."

"You will forbid him, then?"

"Absolutely! He shall not even return there to-night. I will have his things sent down. I have your permission, of course, to mention your name in the matter."

"Why, of course. You could not avoid that, however anxious we both might be. I counted the cost first, but may I ask one more favour—that you will not permit this to make any difference between High Ridges and the Rectory? What I want to say actually is, don't cut me off from Audrey."

"Cut you off! God forbid! I don:t think you quite understand what this means to me, Mrs. Secretan; how I honour you for what you have done."

"It is not only on my account or

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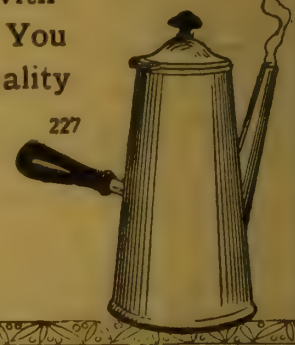

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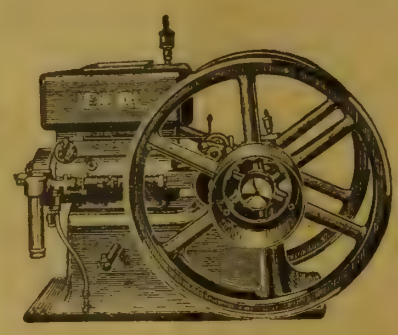

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because of his harsh treatment of me. His past will not bear such investigation as you would desire. In a word, he is not a fit husband for Audrey. I know it, and he knows that I know it, that is all."

Within the hour Helen left the Brettle Mills, being put into the hired brougham with great care by Geoffrey Hayes himself. He stood with his hat in his hand until she drove away, and she knew that he honoured her in his heart. She had made no mistake with him. Audrey would be saved, but her sinking heart told her that the price had still to be paid.

(Continued in next issue).

One Picnic.

Puff! Snort! The train started off from the little station at Kenwood, that looked as much like the shed beside the little Methodist meeting-house, as if both had been built for the same purpose.

Certain it is, that the horses that occupied the shed, while Parson Willowby expounded the gospel on Sundays, looked far more contented than the small group of children that emerged from the station and walked slowly and silently up the dusty road towards their home. But the silence was not for long. Brown-eyed Bessie soon began to reveal the cause of the tears that welled up in the eyes of her small brothers and sister. "I wouldn't mind staying home so much" she said, "only for that hateful Mrs. Stearns. What right had she to call us "Poor Dears," when everybody knows that we are richer than she is, and papa paid more to the church last year than ever Mr. Stearns did in his life?"

"Well! it didn't help much to get us to the picnic, when we couldn't get enough money to pay for our tickets," put in practical ten-year-old Willie.

Mrs. Lawman was busy preparing dinner and trying to persuade herself that the children really wouldn't mind, and that it was better to have the debts paid first of all. But the tear-stained faces of the four children as they burst in upon her, in high indignation for having missed the picnic, and, worse than all, the sarcastic, cutting pity of Mrs. Stearns, caused her to waver, and to forget for a moment the resolution that she and her husband had both made together to live as far as possible on a strictly cash basis. She felt rather inclined to blame Will for sticking to it so closely in spite of the fact that it would deprive the children of their Annual Sunday School Picnic. In a few moments Will Lawman came in to dinner. He noticed, at once, the signs of recent tears and the rather silent manner of his wife as they gathered round the dinner table, in the large and airy kitchen. Hey! Day! What's tne matter? Been getting in a fuss with Bentley's boys?" he interrogated trying to forget the picnic.

"This is the day of the Sunday School Picnic" his wife answered gravely by way of explanation. "And how was it last year? I don't remember any fuss about it." "We picked berries and there's n— n— n— none this year," and Bessie, unable to control her grief any longer, burst into a violent fit of sobbing.

"Well! there's nothing to cry about," said her father, "there are other things this year. It took nearly all my first milk cheque to pay for the hay-seed that I was obliged to buy on credit in the spring and there is a whole lot of the very best seed going to waste along the railroad track. It is just ripe, so you can each take a pair of shears or scissors and, cut off the heads and then, carry it home in baskets."

The faces of the children brightened visibly. "Could we go to-day," asked Bobby. "And could we dess

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up and take lunch and have a "make-on" picnic?" piped five-year-old Lucy. "Yes! Why not? Go and have a real picnic."

Dinner was finished in short order, and in a remarkable short space of time, four eager faced happy-looking children skipped along towards the railway track with one at least of their baskets filled with the most important part of a picnic.

Several times during the afternoon they returned to the house to empty the baskets. But they refused to have tea with their parents for were they not having a picnic?

Two sheets sewed together and spread on the granary loft, made a safe place for the odd-looking treasure, which their father estimated would yield at least a bushel of seed. "And how much is that at fifteen cents a pound?" he asked Bessie, who thought herself a great scholar. Bessie had to think, for a moment, before she could remember the number of pounds in a bushel of timothy-seed; although it had been the last table she learned before school closed. Even then she had to multiply it over again and again before she could believe that $7.20 was correct. Such a pile of money! The boys shouted, threw their hats in the air and made as much noise as they could, to celebrate the outcome of the "picnic."

They were too blissfully happy to feel tired, and as their mother put them to bed, after some protests, they declared it was the best picnic that ever was.

It was in the March following before their real triumph came, when the County Seed Fair was held.

The seed had been carefully threshed and cleaned, and entered in Willie's name, Bessie thought it would, perhaps, look unladylike to have her full name on a bag of timothy seed, entered hers as B. Lawman.

What a scramble there was for the paper when the prize list came out; and there, at the top of the page, was their names, Willie's for first and second B. Lawman.

It was an easy matter selling the seed. Several seed merchants wrote asking for it. The greatest trouble was to decide how to spend the money.

They all agreed to put away the prize money to take them all to the Sunday School Picnic the following summer.

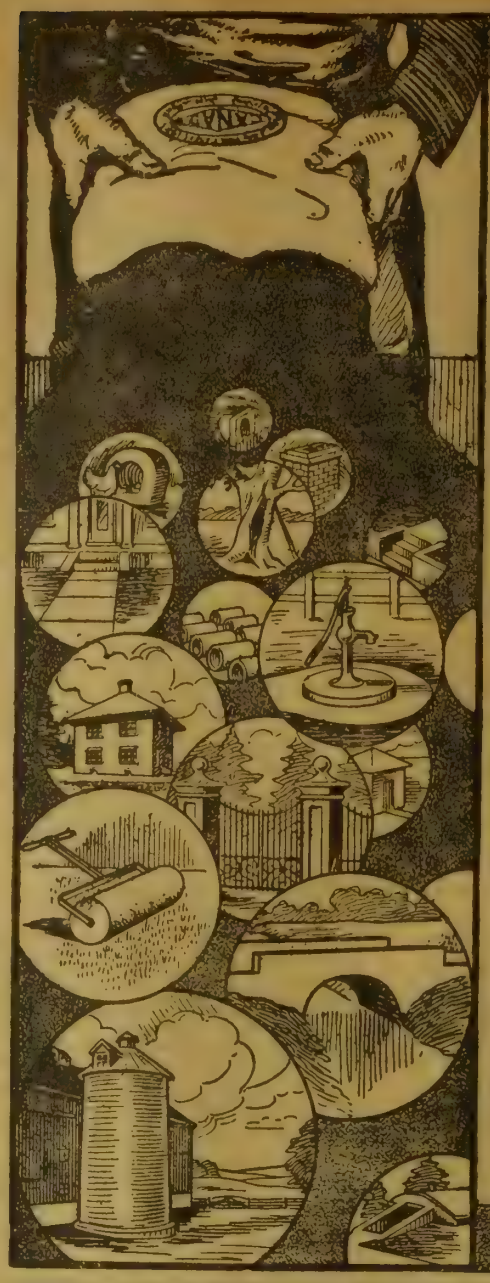
Then they wrote out a list of gifts to buy with the remainder, which was promptly discarded for another, anh went on that way for about a month when they adopted the following: Watch Chain for papa, shopping bag for mamma, "Ingersoll" watches for Willie and Bobby, fountain pen for Bessie, and doll for Lucy. Strange as it may seem, each one said it was just what they had been wishing for.

A Choice for Some Girls.

No, I don't agree with you. That is what a great many will reply, and very emphatically, when the opinion is expressed tnat it is better for a girl to go out and earn her own living unless she has to. If you don't agree with it, or if you do, I would still like to hear what you think about it. There are always two sides to a question, and you will certainly feel after reading this little say that it sets forth entirely the one side. It is a live question this,—what is best for a young woman to do, if she has the choice, and it would be interesting to hear what one and another thinks about it.

In Canada there are many fathers so placed, financially, that it is not necessary for their daughters to earn money for self support, and the number so placed increases each year. It is true that the more money we have the more we feel we need, but it is possible that in the struggle to add dollar to dollar we are aiming to accumulate more than is necessary, and are sacrificing present enjoyment and development to future unproductive possession. "After the first primitive needs are supplied, the wants of human kind are dictated more largely by what one's neighbor has than by what is actually required."

Why is it best for a girl not to go out and earn her own living unless she has to do so? She may be taking work from someone else who actually needs it; she is making competition keener; she is helping to lower the scale of wages. If only the girls who had to be there were in the field, there would not be as much competition, wages would, therefore, be better, and the struggle to make her way for the girl who must would accordingly be less difficult. It is not an invariable rule, but it is a very usual condition, to find that the one who is earning from necessity makes a better worker than the one who is



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Valuable Book on Barn Building FREE

Write at once for this valuable book. It contains information that every farmer should have regarding the sanitary housing of dairy cows. It explains every fundamental of correct construction and gives proper dimensions and arrangements. It describes lighting, ventilation, stable floors, and their construction, and contains suggestions about silos, site, exposures, appearance, design, drainage and inside equipment. Besides, you will find in this book a number of practical barn plans and other information that may point the way to your saving many a dollar. We have designed many of the finest and most modern dairy barns in this country and this book is based on our long experience and expert knowledge in dairy barn construction. The book contains in concise, clear and condensed form, information necessary to any farmer who is planning to build or remodel. Understand, we send you this book absolutely free without any obligation on your part—just for answering these few questions: Do you intend to build or remodel? How soon? How many cows have you? Will you want a litter carrier? Will you want a hay fork outfit? Send to-day.

BEATTY BROS. BOX H FERGUS, ONTARIO

earning from choice, and the influence of the latter is to lower the standard of pay for the work both are engaged in.

Taking for granted that the girl we are speaking of can be spared from the work of her farm or town home altogether, or for a part of the day, what else is there for her to do but to enter one of the professions, or one of the many lines of work now open to young women? In the first place, by leaving home she is depriving herself of the possibility of the best kind of training for the career which, in her heart, almost every woman hopes some day may be hers, that of wife and homemaker. So in considering "what else can she do," she can and should, first of all learn to excel in the things which concern the career she has at heart. That does not mean dishwashing, plain sewing and elementary cooking. It does mean these things first, but only so that from them knowledge can gradually extend into ever widening avenues. The use of certain preparations on washing day, we know makes the clothes a better color. Would it not be interesting and beneficial to go a step further, and find out what effect these preparations have on the fabrics themselves; and if the effect is detrimental to discover what could be substituted to give as satisfactory results without injuring the garments? Would that not be along the lines of good, of scientific housekeeping? We know that on some days we feel more heavy and drowsy after dinner than on others. Would it not be interesting and beneficial to discover what foods have that effect, and why? Are we not in our housekeeping planning to fit men, women and children to be efficient workers, and if we have the time to study these things is it not a useful occupation? Some will certainly feel this is not very practical work for the young woman who has the opportunity to stay at home. I feel she is privileged in having the chance to pursue it.

But only part of a girl's time would be taken up with actual housekeeping. Should not every girl have a hobby, if possible an outdoor hobby; and should she not have a certain amount of time every day for reading? The necessity for earning one's living often crowds these things out. There is also work a-plenty awaiting those who have a little leisure in which to do it—financially unremunerative work, but paying large dividends in love, in gratitude, in character. For the first year a girl trying to plan her own life and doings (having always previously been under direction) would find it a pretty difficult task; would change her plans frequently as experience suggested changes, and would often find it very hard to keep herself up to doing certain things when there was no actual compulsion. But with a very little perseverance she could win out.

"It is so poky at home," many girls say, and to them the faraway hills look green. But their voyage of discovery to those same hills often leads them to another discovery—that we carry "poky-ness" or the reverse around with us.

"But what if father dies, or our circumstances should change," says the prudent girl; and that brings us to another principal point. While it may not be best for a girl to make her own way unless she has to, I do believe that everyone should receive a training along some special line by which she could earn money if the necessity arose. With that security she could enjoy life at home. In older countries many a girl's hobby has been turned into a remunerative source of income in time of need.

Also it is said many a time, "I can't afford to stay out of business now because perhaps twenty years hence I may have to depend upon myself, and where would I be then?" Would not an ordinary healthy, middle-aged woman, well trained in the ways of a household, be better fitted physically and commercially to depend upon herself, than one who has been in business for that length of time, has borne its stress and is galled with its monotony?

I am not advocating a company of girls unprepared for conditions which they may have to face, girls so sheltered and nurtured that they lack strength to stand alone, but I do feel that the intelligent girl who is not forced to direct her energies into one particular wage-earning channel has a peculiar and special opportunity for development along the lines of her own particular nature, along the lines of her most womanly qualities, qualities which are her greatest strength, an opportunity which she should not lightly put aside when ambition or restlessness tempts her to seek self support outside the home.

If you have had the patience to read thus far, you will be more willing to agree with what was said at the beginning, that there are two sides to every question, and that only a very few phases of the matter have been touched upon. What do you think about it?—Margaret Freeston in Nor' West Farmer.

Cradles in Other Lands.

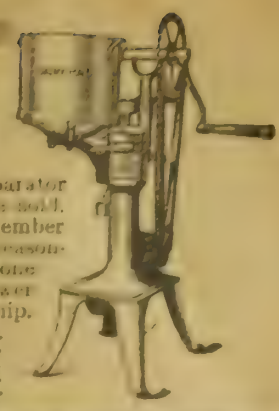
In Lapland a new-born baby is cradled in its mother's shoe, a big affair, covered with skin and stuffed with soft moss. This the mother can hang to a tree or cover with snow while she is busy. In India the baby rides in a basket which hangs from its mother's head, or from her hips in a hammock. Sometimes the baby's nose is adorned with a nose-ring; and in some parts its face is wrapped in a veil like its mother's. The Chinese baby is tied to the back of an older child; while the Mongolian infants travel about in bags slung on a camel. Strangest of all, the mother in Guinea buries her baby up to its waist in sand, and that is the only cradle the baby ever knows.

Worlds for Explorers.

Notwithstanding the rapid advance of exploration in various parts of the globe, a recent estimate by a member of the American Geographical Society shows that no less than 20,000,000 square miles of the earth's surface yet remains unexplored.

The largest unexplored area is in Africa, 65,000,000 square miles, but even North America contains 1,500,000 square miles of virgin territory. It is surprising to learn that there is three times as much land awaiting the foot of the pioneer in North America as in South America.—Philadelphia Record.

The Best Cream Separator is the Cheapest in the End



THE cost of manufacturing a cream separator determines the price at which it may be sold. Therefore, when selecting a separator, remember that the machines which are offered at an unreasonably low price can be offered at that price for one reason only—they are built to sell at prices lower than the cost of good material or workmanship.

Such separators are costly at any price. Only a good separator is cheap; not because of a low first cost, but because it will last for years and save enough butterfat from the milk of four or five cows every year to pay for itself. The best workmanship and material that money can buy are used in making

I H C Cream Harvesters Dairymaid and Bluebell

You will find an I H C the cheapest separator you can buy, because it will do better work and last longer than any other separator.

Go to the nearest I H C dealer who handles these separators and see how carefully they are made. You will find that they have phosphor bronze bushings—that the gears are spiral cut—are entirely protected from grit and milk, and at the same time are easily accessible.

The neck bearing is trouble-proof. The patented dirt-arrester chamber removes impurities before separation begins. These separators are made in four sizes. Ask the I H C local agent to show you one, and give you a catalogue, or, write the nearest branch house for catalogue and any other information desired

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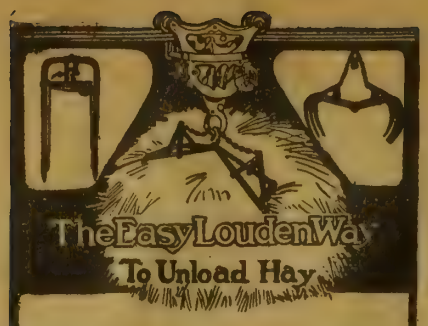

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to the repair shop. It lasts a lifetime. Its lock has a square catch and cannot possibly wedge or fail to work. The powerful wheel arms will never spread. All twist and kink are let out of the rope by our simple patented rope swivel, the only successful swivel on the market. Won't bind on the track, has adjustable stops. The **Louden Balance Grapple Fork** is the best fork ever built. Will handle dry clover, alfalfa or thrashed straw where all others fail. The **Louden Hay Carrier** and **Louden Grapple Fork** will work in any barn and handle all kinds of hay with more satisfaction than any others. See them at your dealer's—if he does not have them, write us. Send for catalog of complete barn and cow stable fixtures—**Hay Carriers, Door Hangers, Litter and Feed Carriers, Cow Stalls, Cow Stanchions, etc.**

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To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Returns From Money Invested in the Soil.

"Many farmers would get higher interest on their money if deposited in the shape of fertilizers in the soil than if they placed it in a bank, the interest being paid in increased crops. The returns are surer than if the money were invested in a gold mine."

During the past few years a number of educative, illustrated bulletins have been prepared by agricultural experts on the use of fertilizers in Canada. Amongst these are:

"Artificial Fertilizers, Their Nature and Use."
"The Potato Crop in Canada."
"Fertilizing Fodder Crops."
"Fertilizing Orchard and Garden."
"Farmer's Companion."

FREE copies of these bulletins as well as special expert advice as to purchasing and applying fertilizers economically may be obtained on application to

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THE ARNOTT INSTITUTE. BERLIN, ONT., Can.

Influence of Home Life.

What the children see in the daily life at home will undoubtehly have a stronger influence over their young lives than anything else. If the mother is quick, impatient, and fault-finding, she cannot expect a sweet-tempered, sunny daughter; if the father drinks, gambles or is sharp in business, he cannot expect a son that will be the pride of his heart for honesty and uprightness. That homely old saying, "Example is stronger than precept," has lived because of its great fundamental truth, and it can be daily proven by those entrusted with the training of children. And the fears from which the little ones suffer can be overcome with the aid of conscientious parents. As Emerson says:

"In brief, you will have to carry on your higher education at the same time you are educating your children. Intellectually you must cultivate to good purpose that most complex of subjects—human nature and its laws, as exhibited in your children, in yourself, and in the world. Morally, you must keep in constant exercise your higher feelings and restrain your lower. It is a truth yet remaining to be recognized that the last stage in the mental development of each man and woman is to be reached only through the proper discharge of the parental duties. And when this truth is recognized, it will be seen how admirable is the ordination in virtue of which human beings are led by their strongest affections to subject themselves to a discipline which they would else elude."

Washing the Breakfast Dishes.

Dish washing may be done now. Although in some homes, especially where much cooking is done or where many come home to luncheon, it is best to go directly upstairs after breakfast, make the beds and do the slight clearing up which is all that is necessary on other than cleaning days. This done, one is at liberty for kitchen-work and cooking without being interrupted. Another thing, after a strenuous morning in the kitchen one is likely not to think of the beds, until upon going upstairs one is confronted with this work. A feeling of depression is sure to follow, for by this time one is weary and the thought of extra work seems unendurable.

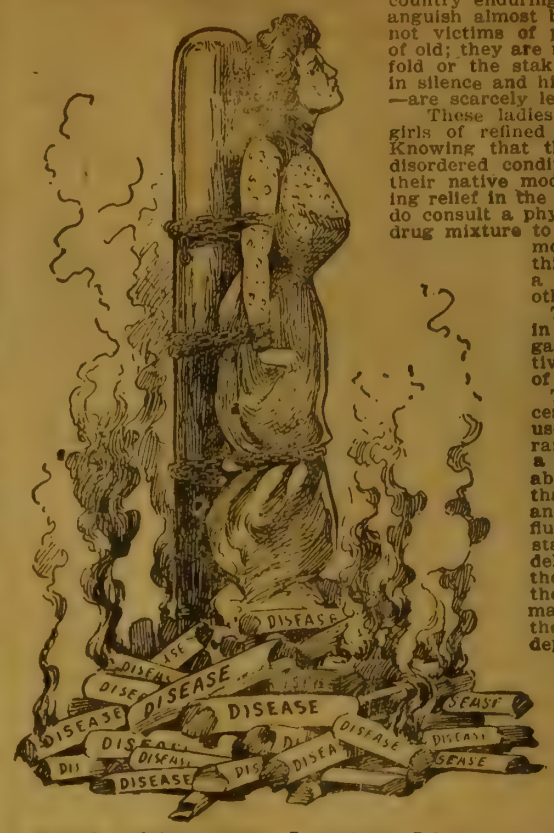
However, even though the bedrooms are attended to immediately after breakfast the dishes should all be removed from the dining-room and scraped and properly stacked before one goes upstairs. In this way one will not come back to confusion nor will a casual visitor see an entirely disordered house.

On Monday while straightening up the various rooms, put to one side all Sunday's clothes which require pressing or extra brushing. Also all which need repairing or special attention in any way. These may be attended to in the afternoon.

Hints on the maintenance of good hearing are given by the Family Doctor, which points out that the inside of the ear should always be left alone. The wax in the ear is absolutely necessary to keep it in a healthy condition. Never try to get it out. Washing the auditory canal with soap and water is also injurious, as in this way the wax is moistened. Never put cold water or any other cold liquid in the ear. When going for a swim insert cotton, or, what is still better, a little wool in the ears. When out in a cold wind or snowstorm it is best to protect the ears. Avoid blowing the nose violently in case of a cold. This sometimes causes the inflammation to spread into the eustachian tube, and causes deafness.

MODERN MARTYRS!

The age of martyrs is not passed. There are thousands of women all over the country enduring physical torture and mental anguish almost beyond description. They are not victims of persecution, like the martyrs of old; they are not called on to face the scaffold or the stake, but their sufferings—borne in silence and hidden from the world at large—are scarcely less intense.



These ladies, as a rule, are women and girls of refined and sensitive temperaments. Knowing that their sufferings are due to a disordered condition of the female functions, their native modesty deters them from seeking relief in the earlier stages; and when they do consult a physician, they usually get some drug mixture to take internally, which is not more effective for troubles of this kind than it would be for a toothache, a bruise, or any other strictly local ailment.

The seat of the trouble being in some one of the female organs, the remedy, to be effective, must act on this portion of the anatomy.

This is the secret of the success which always follows the use of ORANGE LILY in derangements of this kind. It is a strictly local treatment. It is absorbed directly into the parts that are inflamed and congested and its beneficent, soothing influence is noticeable from the start. The irritation of the delicate membrane is relieved, the congestion is overcome by the discharge of the watery matter which served to oppress the nerves and cause mental depression; the nerves are toned and invigorated; and the sunshine and joy of life again becomes part of her being. Read the following letters:

Archer, Ont., Feb. 1, '09.

Dear Mrs. Currah:—I received your kind letter some time ago, but was feeling so well, and not needing medicine, that I neglected replying sooner. I must say I have more confidence in ORANGE LILY than in any other thing I have ever used. Before I knew or found out anything about this medicine, I doctored away hundreds of dollars, and when I thought I was dying with inflammation of the womb, a box of ORANGE LILY was sent me through the mail from a friend. The first suppository I used I was greatly relieved, and in a few months completely cured. That was nine years ago this winter, so you can imagine with what esteem I hold the ORANGE LILY. I am thankful there is such a relief for poor, suffering women, for I have been one of them and can sympathize with others. Your sincere friend, MRS. NORMAN WEAVER.

Trenton, Ont., Dec. 4th, 1909.

Mrs. F. E. Currah, Windsor, Ont.—

Dear Friend,—I feel it my duty to write you a testimonial as to what Orange Lily has done for me. Last winter I was feeling very miserable indeed. I could scarcely do my housework during my menstrual period, and for two months or more I was never free from pain in the womb and ovaries. The pain would run down the groin, so I would frequently nearly double up. Then the pain began going up the back of my neck to my brain until I hardly knew what I was doing at times. Life was a burden indeed. I finally could endure it no longer, so went to our leading town doctor and had an examination. He pronounced it (I forget the word) a rigid condition of the generative organs, produced by repeated attacks of inflammation. He said I would have to take a course of treatment, and if that failed to overcome the rigid condition I might, in time be compelled to have the ovaries removed. I objected to that, so filled out Dr. Coonley's symptom blank and forwarded it to him, and he diagnosed the disease the same as my local doctor, so I decided to take Dr. Coonley's Treatment. I have used two jars of Cerate Massage, two packages of Herbal Womb Tonic and six boxes of Orange Lily. It is eight months since I began the treatment, but I feel like a new woman. I work right through everything now. Hardly know a pain, even during menstruation now. I often say, "I would not take $100 and be in the state that I was last March." I feel that Dr. Coonley's Home Treatment is a Godsend to suffering womankind, and shall continue to sound its praises whenever I have an opportunity.

Yours gratefully, MRS. T. H. HATTON.

ORANGE LILY as a remedy for these ills, as well as for leucorrhoea, painful periods, irregularities, cancers in their earlier stages, tumors, displacements, lacerations, and all ovarian troubles, has long since passed the experimental stage. So confident am I of this that I will send ten days' treatment, which is worth 35 cents, to any sufferer ABSOLUTELY FREE. The treatment is inexpensive, used at home, and no physician is necessary. Send at once for the

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Drugs never have cured, and never can cure Constipation. They work by introducing a poison into the system. Nature endeavours to cast out the poison and in doing so the cells are stimulated into temporary activity; but are left weaker than before by the reaction. Next time a larger dose is necessary and finally nature gives up the struggle and the poison remains in the system.

The only safe and permanent cure for Constipation is the

Internal Bath

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The internal bath is rendered convenient, safe and without discomfort by the J. B. L. Cascade, the invention of Dr. Tyrrell of New York. A 64-page book entitled "Why Man of Today is only 50 p.c. Efficient" describing the internal bath, with full directions for home treatment, will be sent free on application to

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Get a T-A Handy Farm Wagon—It's just the kind you need on your farm. This sturdy little wagon will get over the ground quicker and with less strain on your horses than any other wagon that's made.

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Our catalogue for the asking.

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You will look a good while before you find a better medicine for coughs and colds than Chamberlain's Cough Remedy. It not only gives relief—it cures. Try it when you have a cough or cold, and you are certain to be pleased with the prompt cure which it will effect. For sale by all Dealers.

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Personal attention given to sales of u tter, Eggs, Hogs, Beef, Poultry, Fruit, Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 906.

The Production of Mutton as Influenced by the Application of Manures to Pasture.

Following is a report of experiments carried on during fourteen years simultaneously in several districts in Great Britain with a view of ascertaining the results of manuring permanent pastures.

The trial fields were pastured with sheep the results being obtained in terms of live weight increase. Following is a summary of the conclusions reached:—

1. Cake of various sorts was fed to sheep on pasture at 11 centres, and in no instance was the outlay on the cake recovered in the increased mutton produced by the sheep in the season when the cake was consumed.

2. In the latter part of the grazing season sheep getting liberal allowances of cake did not increase in weight to a greater extent than those getting no cake, but which were grazing pasture that had been improved by liberal dressings of basic slag.

3. The residual values of cake were occasionally higher than is usually estimated, but, in comparison with basic slag, cake-residues had a poor ameliorative effect on the pasture.

4. Even when both direct and indirect effects of cake are taken into account, the original outlay was not recovered at two of the three main stations. This result was confirmed at such of the minor stations as were concerned with this problem.

5. It would appear to be bad practice to feed cake on pasture containing much clover, as the nitrogen in the cake residues has a tendency to repress the clovers by stimulating the non-leguminous plants.

6. Common burned lime, used alone at the rate of four tons per acre, has proved very ineffective; but smaller dressings of ground lime, when added to a phosphatic dressing, have sometimes been justified.

7. Basic slag applied as a single dressing at the rate of half a ton per acre, has generally proved a most effective agent in improving the feeding value of pasture, and its effects are not nearly exhausted at the end of nine years.

8. It has proved much more profitable to apply a heavy dose of basic slag as a single dressing, than to divide it into two equal portions and apply these with a three years interval.

9. A repeated dressing of basic slag has, however, had a marked effect in some cases, and the productiveness of slagged pastures that are showing signs of exhaustion can be rapidly improved in this way. The action of a repeated dressing appears to be more rapid in many cases than the action of the first dose.

10. Basic slag put on in the middle of June had much more effect than the same quantity applied in winter.

11. Where a direct comparison has been made between the effects af equal quantities of phosphoric acid derived from basic slag and superphosphate respectively, the former manure has always produced the greater amount of live-weight increase. When the cost of the manure is taken into account the profits from the use of basic slag have always been much greater than those from superphosphate.

12. Potash added to a phosphatic dressing generally resulted in the production of more live-weight increase, but this increase was not a profitable one.

13. The addition of moderate dressings of sulphate of ammonia or nitrate of soda to land already treated with phosphate has increased the yield of herbage, but has, as a rule, reduced the yield of mutton. The use of nitrogenous manures on pasture would, therefore, appear to be bad practice.

14. Dissolved bones compare badly

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SYDNEY BASIC SLAG

WORKS NOW IN FULL OPERATION
IMMEDIATE DELIVERY CAN BE GIVEN

OFFERED IN TWO GRADES:—

"A" Quality is High grade, bearing **Green Tag, No. 557**
"B" Quality is Medium grade, bearing **Pink Tag, NO. 558**

BOTH REGISTERED WITH GOVERNMENT.

Farmers who want the BEST GOODS should Buy the SYDNEY SLAG with GREEN TAG No. 557

Being produced here and having no ocean freight to pay our prices are much lower than anything previously known. Buyers who can take delivery in carloads and pay cash with order can be supplied direct from Works.

Farmers who get Sydney Slag with Pink Tag No. 558 will understand they are buying a lower grade article.

The CROSS FERTILIZER CO.,
LIMITED

Purchasing Agents Wanted Everywhere. Sydney, C. B.

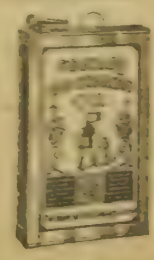
The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.



One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

A WEAK ACHING BACK

Caused Her Much Misery.

Mrs. W. R. Hodge, Fielding, Sask., writes:—"A few lines highly recommending Doan's Kidney Pills. For this last year I have been troubled very much with nasty sick headaches, and a weak aching back, which caused me much misery, for I could not work, and had no ambition for anything. My kidneys were very badly out of order, and kept me from sleeping at nights. I tried many kinds of pills and medicines, but it seemed almost in vain. I began to give up in despair of ever being well and strong again, when a kind neighbor advised me to try Doan's Kidney Pills, which I did, and am thankful for the relief I obtained from them, for now I am never troubled with a sore back or sick headaches.

"I will always say Doan's Kidney Pills for mine and can highly recommend them to any sufferer."

Price, 50 cents per box, or 3 boxes for $1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct specify "Doan's."

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Suits to Your Measure

From Maker to Man

ONE of the oldest established houses in Canada—25 years in the same store—offers you an exceptional opportunity to obtain by mail a high-class suit or overcoat, made from high-grade materials and tailored to your measure. Price special to those who answer this advertisement in order that our goods may be introduced into new localities. Handsome illustrated catalogue and all particulars how to order by mail if you mention The Maritime Farmer. METROPOLITAN MANUFACTURING CO., Limited. Toronto. Can.

A GOOD INVESTMENT

is the money spent in securing a training at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

A catalogue of this school giving full particulars will be sent free to any address on application. Address

W. J. OBSORNE - Principal, Fredericton, N. B.

"My little son had a very severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was as well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all Dealers.

with basic slag and superphosphate. This is doubtless due to two reasons: (a) the slower action of part of their phosphate, and (b) the presence of nitrogen. But the nitrogen of dissolved bones, being less active than that of sulphate of ammonia, the general effect on the sheep of the dissolved bones has been better than that of a mixture of superphosphate and sulphate of ammonia. The use, however, of dissolved bones on pasture would seldom appear to be justified, and especially so as their phosphoric acid costs more than the same substance in basic slag.

Prevention of Smut in Grain.

During the past twenty years various chemicals have been tested to secure one for the prevention of smut in grain crops. Little difficulty has been experienced in controlling this disease in wheat or in oats, but no practical method has yet been introduced that will entirely prevent it in barley. The formalin treatment has been found, after numerous trials, to be highly satisfactory. Formalin can now be secured almost everywhere; it is inexpensive, the solution is easily prepared, and its efficiency, when properly applied, is beyond doubt. One pound of formalin is sufficient to make thirty-two gallons of solution, and this quantity will easily cover forty bushels of wheat, or about twenty-eight of oats. Dipping and sprinkling have given equally good results, but carelessness in either method of treatment is sure to bring disappointment.

Bluestone has been found effective as a re-agent for destroying smut, but its use has not been attended with quite as satisfactory results as formalin. A bluestone solution of the proper strength is prepared by dissolving one pound of bluestone in six gallons of soft water. As with the formalin solution, it makes no difference how this solution is applied so long as every kernel of grain is thoroughly moistened.

Other treatments that have been on trial as preventatives of smut include those with sulphide of potassium, sulphate of iron, agricultural bluestone, massel powder, anti-fungi, salt and hot water. None of these has proven to be nearly as effectual as either formalin or bluestone. The hot water treatment and the sulphide of potassium both effectively prevented the disease, but the methods of application are too tedious to permit of either treatment coming into general use. Agricultural bluestone and anti-fungi are both mixtures of copper sulphate and iron sulphate, and their effectiveness is dependent upon the proportion of sulphate of copper that they contain, sulphate of iron being of little value as a fungicide.

No satisfactory remedy has yet been discovered for the control of loose smut of wheat. This is a disease distinct from the stinking smut or bunt.

Mice Damaging Orchard Trees.

J. B. D., Annapolis Co., N. S.—I find that mice have damaged some of my young apple trees by partly girdling them. Is there any poisonous preparation that could be placed in the runways which the mice would eat and cause them to cease their depredaeions?

Ans.—Dissolve one ounce of strychnia sulphate in a pint of boiling water, add a pint of thick sugar syrup, and stir thoroughly. The prepared syrup will be more attractive if scented with a few drops of oil anise, but this is not essential. This quantity of prepared syrup is enough to poison half a bushel of wheat; smaller proportional quantities may be used, of course. If, after thorough mixing, the solution is not sufficient to wet all the grain, add a little water. Allow the poisoned grain to stand twen-

TRAMPED 60 MILES TO SAVE HIS CHUM

Prospector at Larder Lake Got Back with GIN PILLS Just in Time.

LARDER LAKE, ONT., MARCH 26th, 1911.

"I am writing to tell you the good GIN PILLS did me. I had been suffering for some time with my Kidneys and Urine. I was constantly passing water which was very scanty, sometimes as many as thirty times a day. Each time, the pain was something awful and no rest at night. I began to feel worn out.

WELCOME RELIEF.

I heard of your GIN PILLS and decided to give them a trial at once. I sent my chum out to get them (about 60 miles) —and I am pleased to inform you that in less than six hours, I felt relief. In two days, the pain had left me altogether. I took about half a box and to-day I feel as well as ever and my kidneys are acting quite natural again. Thanking you for the pills which I always intend to keep by me. Yours respectfully,

SID CASTLEMAN.

We have never received a letter that pleased us more than this one. When we realize what Gin Pills meant to this sick man, lying on a bed of pain miles away from a doctor in the frozen north, and how they helped him, we feel that our efforts to prepare a standard preparation for Kidney and Bladder Troubles have been crowned with success.

GIN PILLS is a wonderful solvent for uric acid. It instantly neutralizes the hot, scalding urine, allays the burning pain, soothes the irritated bladder and heals the kidneys. Take GIN PILLS on our positive guarantee of a cure or your money back. 50c. a box, 6 for $2.50. Free sample, if you write mentioning this paper, The National Drug & Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS are a positive cure for Constipation, Biliousness, Sick Headache and Sour Stomach. Excellent for Indigestion. 25c. a box. 112

THE BEST OF THE PATCH
RENNIE'S SEEDS
ARE SUPPLIED TO YOUR DEALER DIRECT FROM US—AFTER EACH HARVEST—AND ARE ALWAYS FRESH AND RELIABLE—TESTED BY GOVERNMENT—BUY THEM IN SEALED PACKAGES—CATALOGS FREE
WM. RENNIE CO. LIMITED
TORONTO. MONTREAL. WINNIPEG. VANCOUVER.

It Pays to Advertise in the Maritime Farmer.

ty-four hours, to soak up all the fluid; if then it is too wet, a little dry corn meal will take up the excess of moisture. If the strychnia sulphate cannot be procured, and the alkaloid form must be used, then one pint of boiling vinegar will be required instead of water in which to dissolve it. Small suckers may be cut from branches of apple trees and dipped in the poison; these, if placed on the ground beneath the snow, preferably in the runways; if put on the surface of the snow the mice are not likely to touch it. As a further protection tramp the snow solid around the roots of the trees; the mice will not then work through it.

Feeding Value of Hay.

One of the most important substances in any foodstuff is protein. All nutritive substances which contain nitrogen are classed under the general term of protein. Protein is composed of nitrogen, carbon, hydrogen, oxygen, sulphur and phosphorus. Protein is the substance which builds up the body. The muscles, tendons, ligaments, connective tissues, skin, hair, hoofs, part of the bone, and in fact every part of the body but fat, are made up of protein, together with mineral matter and water.

The next important class of substances is the carbohydrates, which contain carbon, hydrogen and oxygen, but no nitrogen, sulphur or phosphorus; they include starch, sugar, etc. These are used for practically the same purpose for which coal or wood is used in the steam engine, namely, to furnish energy and heat.

The third important constituent of hay is its oils. Small quantities of oil are present in all kinds of hay. These oils serve the same purpose as the carbohydrates. A pound of these, however, will furnish two and one-fourth times as much energy or heat as the same quantity of carbohydrates. It can readily be seen, when the chemical analysis of hay is considered, why the price of the different grades or kinds of hay should depend first, upon the amount of digestible nutrients contained, and, second, upon the purpose for which the hay is fed. If the concentrated feed—i. e., the grain in the ration—lacks protein, then the hay that is high in this substance is more valuable than one which contains little but carbohydrates, and vice versa. There is quite a range in the amount of the different classes of nutrients in the various kinds of hay.

On an average, in 100 pounds of alfalfa hay the digestible protein amounts to 10.58 pounds; in cowpea hay, 10.79 pounds; in alsike clover hay, 8.15 pounds; in red clover hay, 7.38 pounds; redtop hay, 4.80 pounds, and in timothy hay, 2.89 pounds.

In 100 pounds of redtop hay the digestible carbohydrates amount to 47 pounds; in timothy hay, 43.72 pounds; in alsike clover hay, 41.70 pounds; in alfalfa hay, 37.33 pounds; in cowpea hay, 38.40 pounds; in red clover hay, 36.15 pounds.

When fed for protein, timothy hay ranks last, but when fed for carbohydrates it stands next to redtop, which heads the list. If the total nutrients are considered there are a number of different kinds of hay which are equal, if not superior, to timothy hay for feeding purposes.—H. B. M'Clure.

Woven Wire Fennes.

All things considered, a woven-wire fence around the entire farm is more economical in the long run than any other, since it not only keeps all the farm stock right where they belong, but it will last practically a lifetime, thereby saving much repairing and damages incident to keeping up poor or common fences.

"Here is my Letter to You. It is Worth One Thousand Dollars"

DEAR FRIEND:

If you're going to buy a horse, you look at his feet. But if you buy a building, you look at the ROOF last. A horse isn't worth more than his feet, and a building isn't better than its roof.

I want you to roof right. I want you to get the right stuff from me at the right price. I want to make your roof a good deal better than your building, because then you ll get everything out of the building that it can give in shelter, protection and proper storage. The right roof does more than anything else for any building.

My Oshawa Shingles have taken 50 years of my thought and time and invention. It was hard work. I tried to make a perfect shingling. I worked for years to get just the right kind of metal to last longest. I worked to get the easiest and best lockjoint that ice couldn't pry open. I worked and estimated hard to get a roof neither too heavy nor too light. I worked for a time-proof shingling. I have got it for you. It will last 100 years.

When you use this Oshawa Shingle of mine what do you get? First, you get a shingle so good to-day, that it gives perfect service. It suits any building. It meets every kind of need for a roof at low cost and with long service. Second, you pay a moderate price. This is because many buyers unite on using my Oshawa Steel Shingle. The Canadian Government Bernier Arctic Expedition used my shingle against Arctic ice and blizzards. The North-West Mounted Police use it, another Government proposition, against Arctic snow on permanent construction. The West Indies uses it against terrific heat and rain You find it in Japan because it stands earthquakes. My Oshawa roofing is on the farms of South Africa. Here is ONE roof that is perfect in every climate in the world from Arctics to Tropics. World sales are my reward for high quality. Third, you have a roof that is easy to lay and lay right You can lay it and lock it yourself. It will not leak nor burn. It is lightning-proof.

But I want you to pry into every detail of my proposition first. I want you to know it is right I will send you this book of mine, "ROOFING RIGHT," if you send me a post-card I have sent thousands of them out, for they have useful hints on planning barns and houses. The book is worth money to you, and if it leads you to use my Oshawa Shingles, the roof will be protecting your barn one hundred years from now.

Send for this book of mine now, to my nearest address below. If you are about to build a barn, it may have a hint or new idea worth $1,000 easily to you, even if you do not buy a roof. If you do get a Pedlar Roof from me, you get double or triple service from the building. I will be looking for your enquiry.

Yours truly,
(Sgd.) G. A. Pedlar

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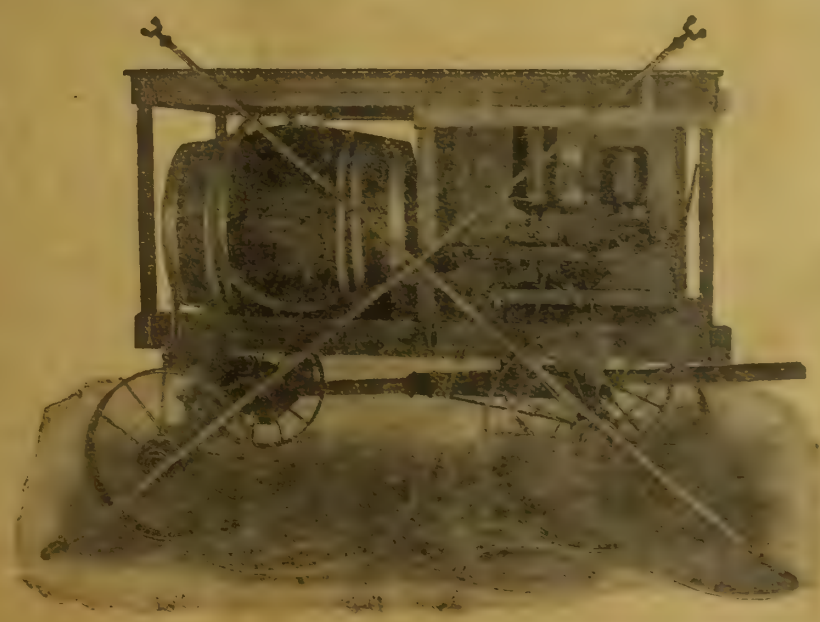
The PEDLAR PEOPLE Limited, of Oshawa

Established 1861

HALIFAX 16 Prince St. | ST. JOHN 42-44 Prince William St. | QUEBEC 127 Rue du Pont | MONTREAL 331-3 Craig St. | OTTAWA 433 Sussex St. | TORONTO 111-113 Bay St. | LONDON 66 King St. | CHATHAM 200 King St. W.
PORT ARTHUR 45 Cumberland St. | WINNIPEG 76 Lombard St. | REGINA | CALGARY Room 7, Crown Block | EDMONTON 563 Third St. W. | VANCOUVER 108 Alexander St. | VICTORIA 434 Kingston St.

Address our nearest warehouse: We want agents in some sections. Write for details. Mention this paper.

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,

Limited

Port Williams, N. S.

Catalogue Sent on Application.

Ornamental Fencing

affords protection to your lawns, flowers and children, in addition to adding a finishing touch of beauty that is most pleasing to the eye and satisfying to the owner.

Peerless Ornamental Fencing is unequaled for beauty of design, artistic finish and strength of construction.

We have spent years in the manufacture of fencing and consequently we know what is best to give real fence service and how to make such a fence at a price you are willing to pay. Don't be misled by the inferior and cheap article offered by catalog houses, because such fencing is dear at any price.

Our Agent will supply you, but if there is none near write us direct, mentioning the name of your dealer, and we will see that your requirements receive prompt attention.

Write for our printed matter. It is mailed free on request.

The Banwell-Hoxie Wire Fence Co.

Winnipeg, Man. Hamilton, Ont.

"Ocean Limited" Featured in English Magazine.

In the April number of the "Boys' Own Paper" an English magazine that for many years has been standard literature for countless thousands of English speaking youths all over the world, there is an interesting article on Canadian Railways, in which mention is made of the Intercolonial Railway's Ocean Limited Express. A half-tone illustration shows this famous train speeding around the shores of Bedford Basin, and there is a description of its fine equipment, the scenery on route and a fitting comment on the average speed maintained, with the information, interesting to British readers, that the Intercolonial Railway is owned by the people of Canada, and operated by the Government. The article is made additionally interesting and instructive by the comparisons made between British and Canadian Railways and the differences that exist in traffic conditions.

TAMLIN'S

ENGLISH

NONPAREIL

Hot Water Incubator, holder of Worlds championship in hatching. Awarded 53 Gold Medals. Used by the Royal Families of England, and 95 per cent of the Governments of the World. Twenty years ahead of every other make. Thermometer registers on outside of Egg drawer. Lamp burns thirty days with one filling, self-regulating. Finished like a piano. Will last forty years. Made in London, England. Different from common makes. Canadian customers joyful with results. If you send 5c. in postage for mailing, we will send you FREE our beautiful Illustrated Catalogue 1912 as well as a neat little book on Poultry diseases and their cure.

Freight prepaidon Incubators to any station east of B. C. SEND TODAY TO

Fletcher Bradley's Poultry Supply House. 104 Waverly St., Ottawa, Ont

STRAWBERRY PLANTS

That Are Great Yielders

We grow Glen Mary, Sample, Wm. Belt, Senator Dunlap, and other leading varieties of Strawberry Plants. Red, Yellow and Black Raspberry, Blackberry and all Small Fruit at LOWEST PRICES. For LARGE CROPS and QUICK RETURNS plant our NORTHERN GROWN STOCK.

150 Strawberry plants (assorted) or 24 Raspberry plants (assorted) postpaid for $1.00.

Bees and Bee-keepers' Supplies

PRICE LIST FREE

E. L. COLPITTS, Petitcodiac, N. B.

Preparing Wool for Market.

(Continued from page 541).

made of the wool of the fleece itself—there is no difficulty—for the use of twine, especially "binder-twine", is most objectionable, because it gets threaded into the wool. (Applause). Having carefully observed the foregoing suggestions, the wool should be neatly piled away in a suitable room, not being allowed to touch any outside wall unless it is one which faces the south, because wool is a material that will absorb moisture where it is possible, and only does so to its detriment in the eyes of the user. Cover the pile of wool with a good cloth of some kind to keep it free from dust, and also, where possible, store it in a place where rats or mice cannot get into it, or carry corn amongst it. They often play sad havoc with the appearance of it by doing this. If you intend to hold the wool for a time, it is much the best to store it in a dark chamber, as the light will make it lose its colour sooner, besides encouraging insect life that sooner or later will appear in the form of moths, that feed upon and destroy the fibre of the wool.

Suffolk Sheep.

(Continued from page 547).

ried out in 1894-6 by the Colonial College at Hollesley Bay—a bleak spot on the East Coast of Suffolk. A few aged Merino ewes were mated with a Suffolk ram, the average produce was fully a lamb and a half per ewe and gave when slaughtered at the age of 15 months an average live weight of 94 lb. per sheep, and an average dressed carcass weight of 54 lb. or 60.64 per cent. The average weight of fleece was 6.56 lb., the length of staple being about 50 per cent. greater than that of the average Southdown, and the wool of equally fine texture. The heaviest wether weighed 110 lb. and yielded 70 lb. or 63.63 per cent. of dressed carcass, and a fleece of 7½ lb. The flesh was of excellent quality, fine in grain and of good flavour with a large proportion of lean meat. The following report was received from a well-known wool expert, Mr. J. W. Turner of Bradford:— "I have carefully examined your sample of Suffolk-Merino wool. Of its kind the wool is most excellent. It has a "soft handle" and is withal quite firm in staple and would make a small proportion of "noil". For wool of its class it could not be beaten."

When the foregoing particulars are carefully considered it must be seen that for general utility and as rent-payers Suffolk sheep have no equal, and if further proof were needed it may be found in the fact that, of the 248 flocks registered in the last volume of the Suffolk Sheep Society's Flock Book, fully 85 per cent. are owned by tenant farmers the majority of whom can only afford to keep such stock as will ensure the most profitable return for their capital and skill, and this fact is also the surest indication of still greater extension in the future.—E. M. Prentice.

Lunenburg County Farmers' Meetings.

Editor Maritime Farmer:—

During the past two weeks, Mr. W. H. Woodworth, ex-President of the N. S. Farmers' Association and Institute Lecturer on Agriculture, has been addressing meetings in Lunenburg County under the auspices of the Lunenburg County Farmers' Association. Although the roads have been bad, the attendance has been greater than at any series of meetings for the past eight years, since the Farmers' Association was formed in this County. The fact of such a large attendance shows that the farmers are beginning to appreciate the efforts that are being made by the Government of Nova Scotia to bring to the farmers of this Province a wider range of knowledge relative to their business as tillers of the soil.

At West Northfield and Hebbville, the ladies came with well-filled baskets and after the lecture served sandwiches, cake and hot coffee. We believe this is a move in the right direction and hope that other localities will follow their example. The farmers are convinced that the subjects treated by Mr. Woodworth are of great importance and that if farming is to be successfully prosecuted, it must be done along the line of scientific principles. The speaker discoursed on the use and abuse of commercial fertilizers, and advised the farmers in buying mixed fertilizers to buy high grade goods in preference to the low grade material. He also said it was profitable to buy the chemicals and mix them at home. The conservation of soil fertility occupied part of the time at each meeting. The fact that wire grass and daisies in many localities are seen in abundance is a sure sign of poor farming. By making the farm a factory where the raw material is manufactured into beef, lamb, pork and butter and by practising a short rotation of crops the aspect af the fields will soon be changed and a better quality and a more abundant crop of hay the result. The price of farm products remains on a paying basis and conditions are more favourable than in the past. In a short report it is not possible to give an idea of the subject matter of these lectures, it is therefore important that in future each farmer make it a point to be present.

Number of meetings addressed, 11.

Total number present, 780.—J. L. DeLong, Secretary.

Your Delight

in Quaker Oats is its flavor. In no other oatmeal has it ever been equalled. Note why.

By 62 siftings we pick the rich plump grains. We get but 10 pounds of Quaker Oats from a bushel.

Those grains have the flavor, and our process retains it. The result is this unique oatmeal.

Every morning millions enjoy it. And it costs them only one-half cent per dish.

Why does anybody serve to their children any lesser grade of oatmeal ?

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c
Regular size for city trade, 10c
} *Except in Extreme West*

The Quaker Oats Company

PETERBOROUGH, ONT.

Look for the Quaker trademark on every package.

5 WONDERFUL Presents

Consisting of TEN PIECES

FREE TO GIRLS

The GREATEST Offer Ever Made

LIST OF PRESENTS

1. **Big Paris Beauty Doll, nearly 16 inches tall** beautifully dressed with picture hat fancy dress, shoes, stockings, lace-trimmed underwear, etc., real sleeping eyes, curly hair and jointed arms, legs and head, truly a grand doll.
2. **Magnificent Real Brown Imported German Reed Doll Carriage,** big and handsome with real enamelled steel wheels and axles, bent wood handles and big enough for a whole doll family.
3. **Lovely Silk Finished Parasol for the Doll Carriage,** can open and shut like a real baby parasol. It will protect dolly from the sun or rain and gives a very handsome appearance to the lovely doll carriage.
4. **This Great Little Five Piece Fairy Kitchen Set,** the loveliest little pastry and baking set you have ever seen.
5. **Handsome Gold-Laid Jewelled Ring** set with a sparkling imitation gem.

HOW TO GET ALL FIVE PRESENTS, FREE

JUST send us your name and address and you will receive by return of mail only twelve (12) lovely red and gold boxes of Dr. Edson's Famous New Skin Carbolic Salve, which we want you to introduce for us, at only twenty-five cents per box. It is the greatest ointment in the world for burns, cuts, scalds, bruises and all skin diseases, and you will sell it very quickly because with every box we will send you a lovely gold finished engraved Brooch, to give **FREE** to every purchaser. You are sure to sell them all in a few minutes. Return our money, only $3.00 when sold and we will promptly ship you **All Five Magnificent Presents (the whole ten pieces)** exactly as represented. We arrange to stand payment of all delivery charges.

We are spending thousands of dollars to introduce this famous product. You take no risk—if you cannot sell the goods you simply return them to us.

NATIONAL SALES CO., LTD.

Dept. D 263 Toronto, Ont.

Thoroughpin.

E. M. S., Pictou Co., N. S.:—What is the best treatment for thoroughpin?

If the lameness has passed away, leaving only the puffy swelling, or in

cases where a swelling has appeared without lameness, as the result of work or as a dropsical effusion similar in character to the bursal enlargements popularly known as wind galls, it is usual to recommend pressure. This can only be effectively applied by means of a specially constructed spring truss. Sometimes this proves useful, but very often it does no good. In recent cases, where there is lameness due to sprain, the indications are a high-heeled shoe, complete rest, in which the shoe assists by relieving the strain on the parts, fomentations or cooling lotions, and a smart dose of physic. When heat and tenderness have subsided, it is usual to blister, or fire, and even then there is generally a puffy swelling remaining. Puncturing the sac, and a special operation which is, if memory serves, known as Flintoff's operation, are sometimes practised, but as a blemish is a blemish, whether it is a puffy swelling or acicatrix or scar, the thoroughpin causing no lameness is generally best left alone.

Segregating Healthy Animals.

Resolution 6 of the report of the International Commission on Tuberculosis deals with the separation of healthy and diseased animals and the construction of a healthy herd by the process of segragation. It is one of the most important parts of the report and defines a plan by which it is possible to clean a herd of tuberculosis without putting it entirely out of business. The plan suggested is not a new one, however, and has been worked out satisfactorily in some countries, especially in Denmark. In the main it consists of separating the healthy from the diseased animals in a herd and keeping them isolated until all traces of the disease have been eliminated, the object being to prevent infection of the healthy animals and to keep the diseased animals under such conditions as may prove effective in bringing about a cure. Where a herd is extensively infected it is recommended that no separation method be followed, but that the construction of a new herd only from the offspring is advisable. The great objection to this plan has been that it could only be undertaken by the more wealthy cattle raisers, who are in a position to provide the necessary facilities. Experience in Denmark does not, however, bear this out. Reports of the working out of the Bang system, as this segregation method is called, show that ordinary farmers, with no greater facilities for the purpose than the farmers of this country have, worked it out satisfactorily and with very gratifying results. Before any effort was made to stamp out tuberculosis in Denmark, the cattle of that country were said to be more tuberculous than those of any other country in Europe. To-day, alter several years' careful application of this system, the cattle of Denmark average higher than those of other countries in their freedom from tuberculosis.

Intensive Farmer.

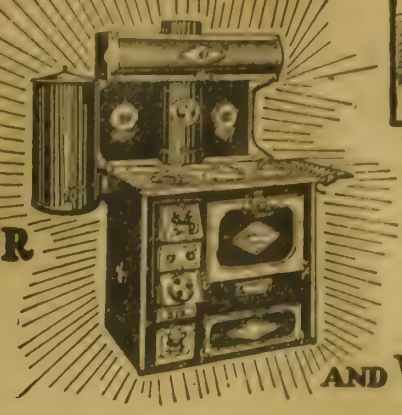
We nave borrowed this jingle from a journal which borrowed it from some other journal. As a sarcastic comment on intensive farming, it is good:

They used to have a farming rule
Of forty acres and a mule.

Results were won by later men
With forty square feet and a hen.

And nowadays success we see
With forty inches and a bee.

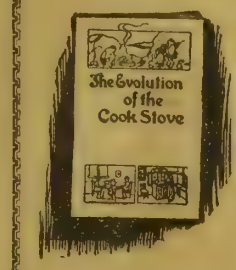
DIRECT FROM FACTORY TO KITCHEN


SAVE OVER $25 WHEN BUYING YOUR RANGE THIS FALL.
$41.00 TO $49.00
AND WE PAY THE FREIGHT

You Can Buy "DOMINION PRIDE" RANGE At Factory Price
Direct From The Largest Malleable Range Works in Canada

IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



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TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of tough, strong, malleable iron and the best blue polished steel—materials which will not warp, crack or break.

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it saves over 30% of fuel, burning either wood or coal.

WE PAY THE FREIGHT

A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. If not convenient to pay cash we will arrange to accept your note.

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

When writing it will be a distinct favor to us if you will mention this paper. 7

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Let us show you how you save architect's 5%, builders 10% and lumber dealer's big profits by buying ALL materials direct from our mills. Sovereign "Readicut" Buildings come to you with every piece cut, fitted, ready to nail.

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Sovereign Houses are not the portable kind, but are built like any other well-constructed, warm, substantial building. In our catalogue you see exactly what the completed house looks like and know exactly its entire cost. No extras. No delays. Shipped anywhere promptly.

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Everything Cut to Fit at Mill Prices

Saves You Time and Money

Some Intresting Figures.

In Farmers' Bulletin No. 469, just issued by the United States Department of Agriculture, we find, under the heading, Market Milk, some interesting figures and among them those giving the value of the manure of a dairy cow. The figures are taken from experiments conducted by Prof. W. J. Fraser of the Illinois Experiment station, and are as follows:

The manure is figured at 11 tons per head for cows producing 8,000 pounds of milk. On the 20-acre dairy farm at the university last year cows which were kept in the barn during the winter and in dry lot during the summer produced 13 tons of manure per cow. The average value is considered at $1.50 per ton. At the Illinois Agricultural Experiment station, on a three-year rotation of corn, oats and clover, manure has increased the crop yield $1.60 for each ton of manure used, figuring the market value of the crops, for the first three years after it is applied. No consideration is taken of the increased production from the effects of the manure after the first three years. At the Ohio Experiment station the value of the crop yields has been increased $2.34 for each ton of manure used. From the figures above stated, $1.50 a ton is a conservative value on cow manure which has been well cared for. Cows which produce less than 8,000 pounds of milk will produce, on the average, less than 11 tons of manure. Cows producing more than 8,000 pounds of milk will not only produce more manure, but it will be of a better quality, owing to the fact that they are fed more concentrates. For these reasons the value of the manure is lowered 50 cents per cow for every 1,000 pounds' decrease in production of milk below 8,000 pounds, and raised 50 cents per 1,000 pounds' increase in production above 8,000.

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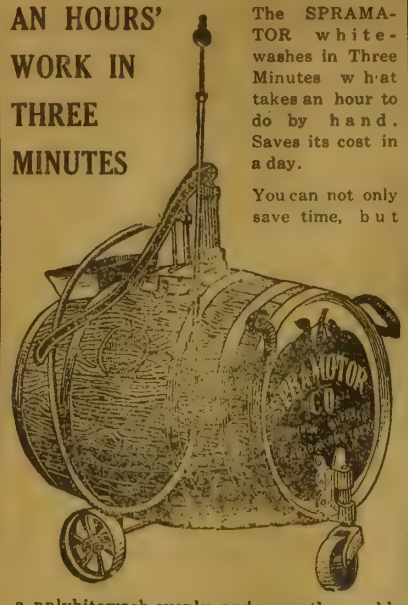
The SPRAMATOR whitewashes in Three Minutes what takes an hour to do by hand. Saves its cost in a day.

You can not only save time, but



apply whitewash evenly, and more thoroughly than in any other way, driving the paint in every crack and crevice.

It is easily handled and runs about smoothly in any direction. Nothing to get out of order, and no mechanical knowledge required.

10,000 sold in past five years. Forty tons of paint applied by N. Y. C. Ry. to Buffalo stockyards by the SPRAMOTOR method. THEY KNOW! Write for 88 page free booklet to-day. Paint formula and all directions with machine.

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Every Farmer His Own Painter.

Any man can do an average job of painting, and can thereby not only improve the appearance of his place but can add greatly to the durability of the buildings. Many a farmer seems to think that paint is used solely for ornament. He is of all men most keenly practical, and he eschews what he regards as an unprofitable luxury. It is perhaps the rule rather than the exception in some sections to see houses and agricultural implements sadly in need of repainting. Of course paint does improve the appearance of property, but it is far more useful as a protector rather than an ornament. The expenditure of a small amount of money and time in painting a valuable piece af farm machinery or a building will add greatly to the length of its life. Another useful object accomplished by painting is the improved sanitary condition of buildings and outhouses. The cost of such work is small, the necessary equipment not expensive, and with proper care will last a long time.

In order to supply information which will enable the farmer to purchase paints economically and apply them intelligently and to the best advantage, Secretary Wilson caused experts in the U. S. Bureau of Chemistry to investigate the subject and prepare Farmers' Bulletin No. 474 calling attention to the economic importance of painting farm buildings and equipment and giving details as to the cost, purchase, and care of brushes, cost of the ingredients needed, how to mix and apply them. Paint conveys to the casual reader the idea of a mixture of pigment with linseed oil, but the general conception of the word includes both whitewash and calcimine, but not varnish, and the bulletin gives several very valuable recipes for making both of those excellent coatings for both the out and inside of buildings.

The secretary in addition to urging the proper use of paints for both useful and ornamental purposes advises not to use any paint containing compounds of lead about stables or outbuildings where the fumes from decaying organic matter occur, since these gases are likely to darken the lead paints. Do not use with lead compounds any pigment which may liberate compounds of sulphur. For example, ultramarine blue white, containing sulphur in a form in which it may be set free, is a beautiful and very permenent blue and may be used with zinc white, but should not be used with white lead or any other lead pigments. Prussian blue, on the contrary, does not contain sulphur and may be used with lead pigments.

Turpentine and benzine are very inflammable and especial precautions should be taken not to bring paint containing these substances near any light or open fire. Many pigments are poisonous, and the workman should be particularly careful to remove all paint stains from the skin, and not under any circumstances allow any of it to get into his mouth. A man should not eat in the same clothes in which he has been painting, and before eating should not only change his clothes but wash all paint stains from his skin. It is not advisable to use turpentine or benzine in removing paint stains from the hands but by oiling thoroughly with linseed oil, or, in fact, with any fatty oil, and then thoroughly washing with soap, the paint may be removed, provided it has not been allowed to dry too thoroughly on the hands.

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You will be proud of the bread you'll make with PURITY FLOUR

AFTER seeing a batch of big, golden-crusted, snowy-white loaves, that you have baked from PURITY FLOUR, you will, indeed, be proud of your cooking-ability—and proud of your wisdom in deciding to pay the little extra it costs to procure such high-class flour. You will admit, too, that we are justified in the pride we take in milling this superb flour.

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PURITY FLOUR is milled exclusively from the best Western hard wheat—the world's finest. More than that, PURITY FLOUR consists *entirely of the high-grade portions of the wheat.* The low-grade portions are separated and excluded during the PURITY process of milling. Such high-class flour, of course, expands more in the baking. It makes "*more bread and better bread.*"

It makes lighter, flakier pastry, too, if you just take the precaution to add *more* shortening. On account of its unusual strength PURITY FLOUR, for best results, requires more shortening than ordinary flour.

Progressive dealers, everywhere, sell PURITY FLOUR and take pride in recommending it.

Add PURITY FLOUR to your grocery list right now. 106

FLORICULTURE.

H. A. G., writes:—I have a Tulip bed on the south side of my home and this winter, to my surprise, I discovered that the bulbs next to the house wall were started to a height of two inches. They were covered with litter and brush. Should I remove this covering?

It is unfortunate that these bulbs should have started so soon as no doubt the balance of the bed is frozen solid. Do not remove the brush but a portion of the litter may be scraped away, so that the frost will check the growth but be sure and keep them well covered from the sunshine.

Those forcing bulbs for early flowers, in the home, should have them up to the light now; and don't forget to keep them moist.

Ferns and Palms should be repotted soon, especially Ferns, as the spring growth has begun and if they are crowded at the roots the new growth cannot be healthy.

I have inquiries: If Red Begonias will grow from seed? Will the pods that form on a plant in the house have seeds in them? How are these plants usually grown, also are foliage plants grown from seed and if so, where can they be obtained? I know they grow from seeds but I am told that one gets new varieties from seeds.

It is possible to grow Red Begonias from seed but very difficult and one would have trouble to get seed. The pods on house plants very rarely contain seed and if they did its fertility would be problematical. Better start plants from cuttings as the florists do. Each leaf makes a good cutting. Cut the stems about two inches from leaf and trim the edges of the leaf until only about two inches about the crown of the stem is left. Place in wet sand and keep moist continually. This leaf will apparently wither and die but if patient a new growth will appear at the crown of the stem and the cutting can be potted in a small pot. Keep out of direct sunlight but give light and warmth and never allow cuttings to dry out under any condition.

By "foliage plant" I infer that the writer means the common varieties of colors, which are easily grown from seed which is sold by all the larger seed houses. It is very interesting to grow colors from seed as one gets so many odd and sometimes pretty types. It is well to pot quite a number of the seedlings as only a very few will be of any use and you cannot tell anything about them until a few inches high. The smallest and tenderest seedlings are more apt to make good varieties than the stronger ones which are nearly always so coarse as to be of no value. Sow seeds in shallow pans or boxes of sandy soil, cover with glass.

General Spraying Directions.

The essentials for successful orchard spraying are:—

(1) Spray intelligently. The sprayer should have a general knowledge of the more important insect and fungus pests. Unless a man knows exactly what he is trying to fight or prevent, he is apt to waste much time, labor, and spraying material. For particulars of the life history and habits of the more common orchard pests, see Part 8 of Bulletin No. 4, and read the same thoroughly. Those who have not this bulletin, may obtain it on application to the Department of Agriculture, Fredericton, N. B.

(2) Promptness is absolutely necessary. For those spraying applications which commence with the first signs of growth in the spring, delay is fatal. In most cases, at that time of the year, one might as well not spray at all as put it off for two, three, four days or even more. The object of a fungicide is to prevent and not to cure. Practically all fungicides should be applied before the disease appears so as to prevent its lodgement and are successful only when they prevent infection. While this is not so true in the case of insects, it is important not to delay spraying for them, since when they are well established and more fully grown, they are very difficult to control.

(3) Absolute thoroughness in all phases of the work. Many growers do their work in a half hearted way and then complain of poor results. In spraying for fungi it is absolutely necessary to entirely cover every portion of the tree, and in fighting insects, every individual must be reached. Every portion of the tree should be thoroughly moistened with a fine mist or spray in order that a uniform coating of the same may be left on the tree. The owner of the orchard, who, presumably, is the man most anxious to get good results from spraying, should not trust the work to ordinary labor, but he should do it himself or personally supervise it, unless he has very reliable help.

(4) Spraying solutions must be properly made. Standard made commercial lime-sulphur such as that prepared and sold by The Niagara Spray Co., The Grasselli Chemical Co., and other concerns, are reliable and only need dilution as per Part 3, Bulletin No. 4. The best makes of lead arsenate have proved so far to be the most satisfactory and most reliable poison for spraying apple trees, either with or without lime-sulphur.

(5) Spray every year. In some seasons fungi and insects are not very numerous and the fruit grower is then strongly tempted to save the expense and trouble of spraying, but it is a great mistake to do so. The spraying done in years when insects and fungous pests are scarce counts in the years when they are plentiful because the effects of proper spraying are not all harvested in the first year.

(6) Use a strong durable pump fitted with the best attachments. A No. 2 hand pump fitted to a cask of 40 gallons capacity, with 25 ft. ¼ inch hose, 10 foot bamboo rod, stopcock, hose connections, and double nozzle, will meet the requirements of most of the orchards in the province at the present time.

HOW TO SPRAY.

Spraying should in nearly every case be done with the wind. When spraying the first side of large trees, stop the wagon or spray cart just as it comes within a few feet of the tree and spray the nearest side as far in and as completely as the spray can be driven; then, drive directly opposite and spray all the central part thoroughly; then, move just past the tree and spray the last part as far in as possible. In this way, nearly two-thirds of the tree will be covered and when the wind changes it will be easy to complete the spraying from the other side. A very strong wind no doubt wastes a little of the mixture, but it is very seldom that there is any need of ceasing operations because of its violence. In spraying small trees it will not be necessary to stop so long at each tree. Go through the orchard as soon as the spray has dried on the trees and if you notice limbs or portions of the trees here and there that have been missed, it is well to take out the machine and give these spots an application of the spray mixture. In spraying after the foliage has appeared, people are often misled by the advice that is given to cease spraying just before the leaves begin to drip. It is impossible to spray a large or medium size tree thoroughly without a coosiderable amount of drip; hence, the first rule to follow is:—(1) Make sure that every leaf and fruit is covered; and, (2) Try to do this with as little material as possible.

IHC Engines Furnish Plenty of Power

WELL as you know your ordinary farm power needs, you can never tell just where you are going to need extra power, and need it badly. An engine with ten to twenty per cent of reserve power will often save enough to pay for itself, just by its capacity for carrying you safely through emergencies.

I H C Gasoline Engines

are large for their rated power—they are designed to run as slowly as possible because that increases their durability. They are equipped with a speed changing mechanism which enables you to vary the speed at will. By changing the speed they can be made to develop from ten to twenty per cent over their rated power with little detriment to the engine, and at a cost for extra fuel so slight that it will never be noticed on the bills for gasoline. As soon as the need for extra power is gone, the engine should be slowed to normal speed.

When you buy a gasoline engine, buy one you can depend upon; one that has plenty of power, one that is built to operate at lowest cost for fuel and maintenance. Buy an I H C engine—1 to 50-H. P., vertical or horizontal, water-cooled or air-cooled, stationary, portable, or mounted on skids, built to operate on gas, gasoline, kerosene, distillate, or alcohol Kerosene-gasoline tractors in all styles from 12 to 45-H. P. Sawing, pumping, spraying, grinding outfits, etc.

See the I H C local agent and get catalogues and information from him, or, drop a line to the nearest branch house.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

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A touch of the levers and the teeth are just where you want them at each round; not too deep at first, to ease the horses, then afterwards when the top soil is loose, throw them down and your getting something done.

Saves time bocause less scrapes do. Made in sizes 9 and 11 Tooth, Single Section. 15 and 17 Tooth, Double Section.

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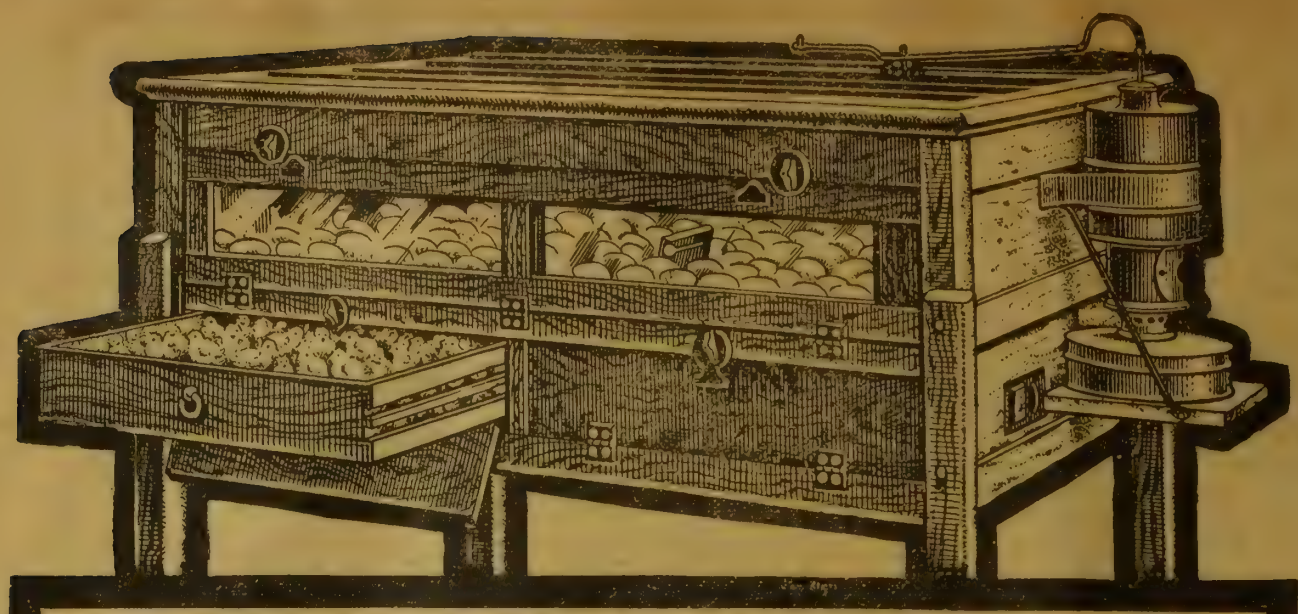
Agricultural Advancement in Newfoundland.

A deputation of the St. John's Agricultural Society waited upon the Board of Agriculture recently and pointed out the need of lime for the land and asked for a grant of $1,500 towards the erection of an agricultural lime-kiln. More sheep and ponies were also needed and a good laboratory for instruction in the science of agriculture, in connection with the Department of Agriculture and Mines; and the Board have promised to do their utmost in these directions at once. Already arrangements are being made by the Board for the securing of lime at a greatly reduced rate from the new lime kiln at Port au Port, so that prospects are brighter for the farmers.



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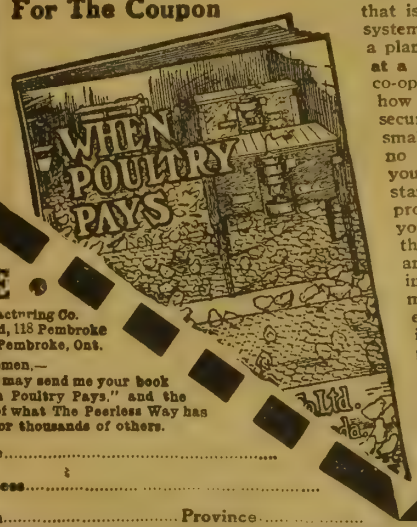
THE book, "When Poultry Pays," tells what hundreds of followers of The Peerless Way have accomplished. It tells why the price of eggs doubled in seven years it tells about a market that exceeds the supply by 200%;—it tells about a plan that is more than merely a system of poultry-raising—a plan that raises poultry **at a profit**; it tells about co-operative marketing—how the highest prices are secured in either large or small quantities; and, by no means least, it tells you exactly how to get started in this field of profits that lies right at your door. You will find this book full of facts and figures and other information that will make you open your eyes to the real profits in poultry. **Do not put it off. There is no time like the present. Send for the book NOW.**

Send For This Book—FREE For The Coupon



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We Will Show You The Best Way To Start.

YOUR start is important; without experience or guidance, you can badly handicap yourself in the beginning. It may take years to overcome a bad start. The Peerless Way will put your first step on the right road to success, will show you the incubator and brooder that meets the climatic conditions of Canada's cold winters, and will furnish you with plans, blue-prints and complete specifications of poultry houses, etc., that are actually being successfully used today in Pembroke at the Poultry Yards of Canada, Limited.

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THIS alone is a valuable part of the service included in The Peerless Way. We guarantee to find for all your poultry products, buyers who will pay you the highest spot-cash prices and who will charge you no commission for the service either. You do not need to be dependent upon the middleman and cold-storage buyer when you understand co-operative marketing. You do not need to give away part of your profits; the last few cents on every deal is your own "velvet"—and goes into your own bank account.

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THE Peerless Way, combined with the free, personal advice of our Poultry Advisory Board, will make poultry-raising profitable for you. If you will take the Peerless Incubator and Brooder and just follow the plain, explicit directions of The Peerless Way, step by step, you cannot go astray. Or if you prefer it, you can come to Pembroke and, on payment of a small tuition fee, take a course of personal instruction at the Poultry Yards of Canada, Limited.

Use the Coupon 40 **LEE** Manufacturing Co. Ltd. 118 Pembroke Rd. **PEMBROKE** ONTARIO CANADA

The Home Vegetable Garden.

(Continued from page 539).

the proper time in spring, very little labor is necessary in the preparation of a seed-bed for the early planting. Soil containing sufficient humus to grow vegetable srops advantageously, can be fitted for planting without the use of hand tools, if the precaution is taken to work it at the exact time it reaches the right degree of dryness. It will then crumble readily, and a seed-bed can be prepared by the use of a disk, harrow, and planker. The use of these tools saves an enormous amount of labor, and is a vast improvement over the old method of using a hoe and rake.

PLANTING.

The actual planting of the garden is a simple matter, provided a definite plan has previously been made, so that no time is lost in deciding which vegetable to plant first, where to plant it, or how much to plant. In the home garden, only a small amount of seed of each kind is planted, so that a seed drill cannot be used to advantage, and the planting is therefore almost invariably done by hand. For the small vegetables, sown in drills, the planting involves four distinct operations: (1) making the drills, (2) dropping the seed, (3) covering, and (4) firming. The most rapid way of making tne drills in a garden to be planted in long rows is to use a marker that makes three or four drills each time it is drawn across the area to be planted. With a medium weight marker, and the soil in proper condition for planting, the marks will be of the proper depth for planting seeds of any of the smaller vegetables usually sown in drills. For peas or beans a deeper drill may be made with the plow attachment of a wheel hoe. After the seed is dropped, it is covered with a rake, or in the case of deep planting, with a hoe, or a wheel hoe. The soil is firmed over the seed by the use of the feet, the back of a hoe, or a garden roller. Whatever the means employed, the firming must be thorough, especially in light soil or dry weather; for unless the soil is brought in close contact with the seeds, they will not germinate.

LABOR SAVING METHODS OF TILLAGE.

Labor saving methods can be employed in the care of the growing crop as well as in the preparation of the seed-bed. Mention has already been made of the desirability of planting the garden in long rows so that horse tillage may be introduced. By the use of a narrow-tooth cultivator, it is possible, with a steady horse, to work fairly close to the rows of even small vegetables. However, for the early tillage close to the rows of beets, onions, carrots and similar crops, there is nothing equal to a wheel hoe; and throughout the season this tool can be largely substituted for the hand hoe. Its use will result in a great saving of labor. Labor will also be saved by cultivating the garden frequently and keeping the soil in good friable condition, rather than tilling at less frequent intervals and allowing the ground to become baked before it is tilled after a rain. Timely tillage means easy tillage and the most favorable conditions for growth, while untimely or infrequent tillage means difficult tillage and less favorable conditions for growth.

HOW TO REDUCE THE LABOR OF HAND WEEDING.

The most tedious labor in the ordinary garden is the hand weeding of the small vegetables. By proper management of the garden a large amount of this labor can be eliminated. One way to avoid excessive labor in hand weeding is to keep weed seeds out of the garden as much as possible, by avoiding the use af manure containing such seeds, and by destroying all weeds in and about the garden before they go to seed, even if they appear after the crops are harvested. But in spite of all that can be done there will always be weed seeds present in garden soil. The way to prevent these from producing weeds that are larger than the vegetable plants and endangering the life of the latter, is to keep them from starting growth before the vegetables have a chance to start. This is done by thoroughly working the soil immediately before the vegetable seeds are planted, thus killing any weed seedlings that are about to appear above the surface, and giving the vegetables an even start with the weeds that may develop from seeds germinating later.

Still another way of reducing the amount of hand weeding is to cultivate very close to the rows with a wheel hoe as soon as the vegetable seedlings appear. In the case of slow germinating crops, like carrots and parsnips, it is wise to sow a few radish seeds along with the other crop, for the sake of marking the row so that tillage may begin before the plants from the slower germinating seeds are visible. This leaves only a narrow strip of soil unstirred, and hence very little space in which weeds can grow. If the weeds which appear in this narrow strip are pulled when they are quite small, little difficulty will be experienced in keeping weeds from interferring with the growth of the vegetables; and the amount of labor involved in the hand weeding will be relatively small. If the weeds are allowed to become large before an attempt is made to remove them, the growth of the vegetables is checked both by the presence of the weeds and the process of removal, and the later involves much more labor than if the weeds are removed at the proper time. Nearly all the vegetables grown in drills require thinning, and if precautions are taken to prevent the early starting of weeds, as above outlined, most of the necessary weeding can in many cases be done at the time of thinning, and thus one operation be made to serve both purposes.

VEGETABLES CLASSIFIED ACCORDING TO CULTURAL DEMANDS.

Although the assortment of vegetables in an ideal garden would include many crops not of the easiest

USE DR. WILSON'S DERBY CONDITION POWDERS

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culture, nevertheless in a farmer's garden it may, under some circumstances, be the part of wisdom to reduce the labor of caring for the garden, by refraining from attempting to grow some of the crops that demand special care or conditions, or an unusual amount of labor. Unless the farmer is prepared to meet the demands of the given crop, the results with that crop are likely to be unsatisfactory, and the labor involved in its care unrequited. It is therefore desirable to know the particular needs of the various crops, in order to determine whether it is advisable to attempt to supply the needs of a given crop in a given garden, or to leave its culture to those more fully equipped to meet its demands.

VEGETABLES REQUIRING RICH SOIL AND MUCH TILLAGE.

While nearly all garden crops respond readily to copious applications of plant food, there are certain crops which are especially emphatic in their demands for a rich soil, and wnich it is impossible to grow to perfection unless the soil is, or can be made, very rich. This group of crops includes cabbage, cauliflower, celery, eggplant, onions and melons. In the case of melons it may be unnecessary to fertilize the entire soil area, if the ground immediately surrounding each plant is made very rich.

There is also a great difference in the amount of tillage demanded by the various crops; that is, in the extent of neglect they will endure, and still produce a fair crop. The crops that require an extra large amount of tillage, and that will likely be utter failures without it, are the same as those already mentioned as demanding an exceedingly rich soil.

VEGETABLES SUBJECT TO INSECT ATTACKS.

The labor of caring for certain crops is also greatly enhanced by the necessity of combating the insects that prey upon them. There are many of our garden crops which are occasionally subject to slight or even severe attacks of certain insects, but with which we do not usually anticipate trouble. There are other crops that are invariably attacked by insect enemies, and usually to so serious an extent that, unless means of control are employed, the crop will likely be a complete failure. The vegetables belonging to this group are the vine crops (including the cucumber, muskmelon, watermelon, pumpkin and squash), the eggplant, late cabbage and cauliflower. Unless careful attention can be given these crops at critical times, attempts to grow them will likely lead to disappointing failures.

VEGETABLES REQUIRING SPECIAL HANDLING.

Some crops demand special training or other manipulation to enable them to grow to the best advantage or develop the most desirable product. Common Lima beans and tall growing peas require artificial support in the form of poles and brush or wire netting respectively. Except in a region where native timber is abundant it may be inconvenient or expensive to provide these supports, to say nothing of the labor of preparing and installing them. Therefore, it may be advisable in some cases to resort to the use of dwarf varieties exclusively.

Other crops demanding special handling are cauliflower, leeks, celery and endive, all of which require blanching to develop a satisfactory, edible product. In the case of the cauliflower, the head must be protected from the sun by tying the leaves or otherwise securing them over the top. Endive likewise is blanched by tying up the outer leaves so that the inner portion of the plant will be protected from the sun. With both these crops, the blanching plants must be closely watched, so tnat they may be used when they have reached the right stage of development. Leeks and celery are usually blanched by hilling up with earth, though an early crop of celery is sometimes blanched by means of boards placed edgewise along the row. When earth is used, care must be exercised to avoid getting dirt down in the "hearts" of the plants, and repeated bankings are necessary. This is a somewhat laborious process unless a person is equipped with special tools, and at best there is much labor and expense involved in the production of a good crop of celery.

VEGETABLES REQUIRING TRANSPLANTING.

The labor of growing some crops is enhanced by the necessity of transplanting. The crops usually transplanted are cabbage, cauliflower, celery, eggplant, pepper, sweet potato and tomato; and an early crop of any of these sorts cannot be secured without it, for the seed must be started under glass long before the weather is suitable for planting these crops in the open. The making and care of the hotbeds in which the plants are usually started entails considerable labor, as well as the process of transplanting. Late crops of cabbage and tomatoes are sometimes grown from seed sown where the crop is to mature, and late cauliflower and celery may be started in carefully prepared seed beds in the open, thus obviating the labor involved in the care of a hotbed, though considerable attention to the seed bed is necessary.

VEGETABLES OF EASY CULTURE.

It would seem, then, that various difficulties are likely to be encountered in the growing of a number of the common vegetables, owing to their special demands as to richness of soil or frequency of tillage, their susceptibility to insect attack, their need of aetificial support or provisions for blanching, or the necessity of transplanting. While the list of vegetables with special demands along one or more of these lines includes a number of the garden's choicest products, nevertheless there are a large ndmber of crops which have no special soil requirements, grow fairly well without much tillage, are usually not subject to serious insect attacks, and do not require transplanting or special handling of any kind. This group includes asparagus, dwarf string beans, dwarf Lima beans of the Sieva type, beets, carrots, chard, sweet corn, garden cress, kale, kohl-rabi, leaf lettuce, mustard, okra, green onions grown from sets, parsley, parsnips, peas, radishes, salsify, spinach and turnips—twenty-one different vegetables. All these are of comparatively easy culture, and can be successfully grown by any one who will give a little attention to the proper time of planting each crop, and a reasonable amount of care during the growing season.

It is true that if a person confined his planting to the group of crops just mentioned, his garden would be far from complete; and such a procedure is not advised. It is well to know, however, what vegetables can be relied upon to produce a crop under almost any conditions of soil and care, and to supplement this list with such of the other crops as can most readily be grown under the conditions surrounding the individual gardener, and with the facilities at his command.

THE Keeley Cure

FOR LIQUOR AND DRUG USING

Over Thirty Years of Success Due to Honesty, Safety, Certainty.

The Keeley Remedies have been administered for more than THIRTY YEARS and are recognized by the public at large, as well as the medical profession, as being the most efficacious treatment known for the diseases which they are designed to overcome.

We have cured thousands of veterans of the War of the Rebellion in the National Soldier's Homes of the country, whose ages range from fifty to eighty years.

We have cured several children under five years of age who were adicated to morphine and opium, such adictions having been acquired through the mother's own addication or direct administration. No constitution is to delicate for the Keeley treatment, as the remedies are perfectly harmless.

We have cured hundreds of soldiers in the Regular army of the United States, and have letters from officials of all ranks, from major generals to lieutenants, commending the Keeley Cure in the highest terms.

We have cured Senators, Congressmen, lawyers, clergymen, businessmen, merchants, laborers, men of all occupations, and of no occupation, to the number of over 400,000. Among them 20,000 physicians.

The treatment removes all craving or desire for liquor or drugs, restores the nervous system to a normal condition, clears the brain and makes a man out of a nervous wreck.

Patients are not confined; there is no irritating or vexations restraint.

There is no Nausea or other Sicknesses attendant upon or caused by our treatment. Improvements begin at once and continues throughout entire course of treatment.

We have special accommodations for ladies, where they can be entirely exclusive, and can be treated as privately as in their own homes.

Printed matter and particulars by mail in sealed plain envelope.
All letters promptly answered and treated strictly confidential.

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We are forced to take immediate delivery of ten carloads of fencing from the Mill within the next two weeks, and our own warehouse being overcrowded, we have decided to cut the price to near cost to clear quickly, rather than rent extra warehouse space.

Note This Special Cut Price

No. 542—5 line, 42″ high; stays 22″ apart, spaced 6-12-12-12, all extra heavy No. 9 galvanized best quality steel wire, in 60 rod rolls **Only 16c.** per rod

This Offer is Good Only for Ten Days.

Also No. 544, 2″ higher at 17c. per rod.

A few other sizes also cheap.

Also enormous stock of Belting, Iron Pipe, Rails, Pulleys, etc. at bargain prices. Send your orders at once before too late.

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N. S. Fruit Growers' in Special Session.

A large and representative number of Fruit Growers met at Kentville, on April 12th, to hear the Report of the Delegates to the Fruit Conference at Ottawa, and to listen to addresses from prominent men on live fruit questions of the hour.

President S. C. Parker took the chair and called on John N. Chute, of Berwick, the "Father of Co-operation in the Valley," to tell of the present status of co-operative work, and what development was looked for.

Mr. Chute took up his subject from a business standpoint, and briefly reviewed the work and growth of the co-operative movement for the last five years. He showed that the question was not a local issue, but a world-wide movement, in which producers everywhere were finding a way to improve their condition, and place their products on the market in the best possible manner. In his own company at Berwick the average price for the seven leading varieties, for the past five years had been as follows:— No. 1, $2.64; No. 2, $1.88 and No. 3, something over $1.00 per bbl. Twenty-five companies were now organized in the "Valley." A Central Association was organized and had started work the past season. Nearly $300,000 worth of business was done this first year, which speaks volumes for what can be done when companies are all working together. The Central Association can handle he question of transportation, can attend to the buying of fertilizers, and other supplies and in many other ways assist the local companies. In fact the Central Association should be to the local companies what the local companies are to the individual.

Mr. Chute's address was worthy of the careful attention it received.

Dr. Cutten, President of Acadia University, spoke on the benefit a Meteorological Station to the Fruit Growers of the "Valley." It was found by experiment that the temperature and rainfall of the preceding year had a great effect on the various crops of the year following, and by keeping a careful record for a term of years, of the precipitation, high and low temperature, frosts, winds, etc., data of great value to farmers and fruit growers could be secured. Some work had been done along this line at Wolfville, and the late government had sent instruments which had not been installed, and the new director from Toronto seemed to be under the impression that the Station was not needed. Dr. Cutten read a letter from the State Climatologist of Ohio, giving an account of the work there, and the benefits derived. After some discussion of the location of such a Station in the Valley the following resolution was carried.

Whereas, valuable results have been obtained in other Countries by ascertaining and recording for future guidance, complete local meteorological records,

And, whereas, the close connection of monthly temperature and rainfall with crop production is a matter for the fullest investigation,

And, whereas, some work of this nature is now being carried on at Wolfville,

Therefore resolved, that this Association respectfully request and urge upon the Federal Government, the expansion of this work and the equipment of a complete station from which daily weather forecasts may be furnished to farmers and fruit growers by mail, telephone, telegraph, signals or otherwise of such a nature as to warn them of injurious frosts or high winds during the growing season, or probable temperatures to be met with by fruit in transit during winter.

Capt. Allen, the delegate from the United Fruit Companies to the Ottawa Conference gave an account of the work in the Conference upon the standard barrel question. "If" he said, "Canada cannot accept one size barrel, would it not be better to adopt two standards, the 96-quart bbl. as used in Nova Scotia and the 112-quart bbl. as used in Ontario?"

G. H. Vroom, the Dominion Fruit Inspector, read the law which called for a minimum barrel as follows:— 26½ inches inside measure between heads, diameter of head, 17 inches, diameter of bilge, 18½ inches. Mr. Vroom then exhibited three sample barrels, of standard length, but varying in diameter of bilge, No. 1, 18½ inches, No. 2, 19 inches, No. 3, 19½ inches. They held 97, 99, and 101 quarts respertively. No. 1 was the right size for the present minumum barrel, but in practice it was found not strong enough, because of the small bilge. He suggested, a head diameter of 16⅝ inches and a bilge of 18½ inches as a better barrel.

The Secretary read some correspondence from Mr. McNeill, Chief of the Fruit Division, quoting the law as to the minimum barrel and saying that this coming season the law in respect to size would be strictly enforced and fruit growers and coopers should take notice and govern themselves accordingly. A lively discussion followed and much old straw was thrashed.

Mr. P. Innis, presented the following resolution which was passed by the meeting.

It is resolved that, the Resolution passed at the last Annual Meeting regarding the Standard of Measure for apple barrels of 96 quarts or 3 bushels, be adherred to.

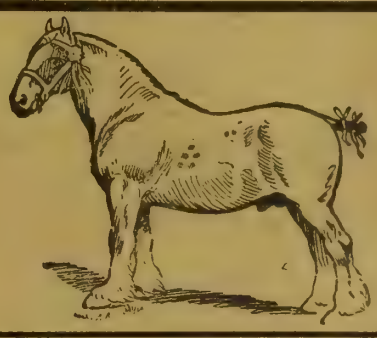
Further that, any change in the shape of the apple barrel that does not increase the capacity to over 3 bushels, and is mutually agreed to, will be acceptable, and

Further resolved that, every person manufacturing apple barrels shall stamp their name and "Standard Apple Barrel" on each barrel, and shall be liable on summary conviction to a penalty of twenty-five cents for each barrel they make of lesser dimensions than the legal specifications.

At the evening session, President Parker on behalf of the Chairman of the Ottawa Delegation, who was not present, gave a report of the work done at Ottawa. The Minister of Agriculture had promised great things for the Experiment Station at Kentville. He spoke of the question taken up at the Conference and asked Capt. Allen, who represented the United Fruit Companies, and J. N. Chute, to also speak on points that had come to their attention.

Capt. Allen, took up the transportation question, and with facts and figures showed up the S. S. lines carrying apples in relatian to three contracts with the Government. To draw their subsidy of $25,000 the Furness line should maintain a twelve knot service, ten days crossing the Atlantic. He had records showing that some boats took as long as 18 days on the way while hardly any lived up to the contract for speed. It was thought that the advent of the C. P. R. would help matters a little, but instead they had only made them worse. The facilities for landing apples in London from the C. P. R. steamers were very poor and they had combined with other steamship lines to keep up freight rates.

Mr. Chute, reported on the Inspection of Apples, and the question of a Minimum Size for No. 1 and No. 2. This latter he regarded as of great importance. The Ontario delegates wished to class the Spy with the larger apples, but agreed to a lower standard. The Conference recommended a minimum size for the different varieties as follows:— Golden Russet and kindred varieties, 2⅜ No. 1, 2¼ No.2; Baldwin, Spy, etc., 2¼ No. 1, 2¼ No. 2; King, Wolf River, etc., 2⅜ No. 1, 2¼ No. 2. The Ontario and



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ALL wise Farmers are now feeding MOLASSINE MEAL, the Horse, Cattle, Pig and Poultry Food.

If you have not used it, your neighbor has. Ask him about it.

New Brunswick is progressing. Catch the progressive spirit and raise better Live Stock by feeding MOLASSINE MEAL. The Farmers who do so are progressing.

MOLLASSINE MEAL is made in England. Your dealer handles it because he knows it is the best Feed obtainable.

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St. JOHN, New Brunswick.

other delegates agreed that the system of instruction as to the place of operation was faulty. If it could be carried on to some extent at the warehouse, people would soon learn how to pack better apples. The Conference had agreed to recommend two sizes of barrel, as legal for the Dominion.

Mr. Gornall, of Middleton, closed the meeting by a very interesting and instructive address on the marketing side as it appears to an observer in England. Wasteful methods were followed and co-operation on this side in packing and marketing was the only solution. He urged the need of special representatives of the United Companies on the other side to look after their interests and to advise as to shipments and state of the markets.

Meeting then adjourned.—Report of the Special Meeting of the N. S. F. G. Association, held at Kentville, April 12th, 1912.—M. K. E.

Potato Scab.

Much work has been done on this malady. A popular presentation was made in Experiment Stations' bulletins may be summarized as follows:

This well-known malady is the result of a fungus infestation, which also causes scab on beets and possibly on the roots of other vegetables. It is probably not a native. Its germs occur in great numbers on scabby potatoes, and may cling to the surface of smooth tubers. Much of the loss from scab is directly due to the use of infected seed. When the fungus is not present in the soil a clean crop is assured if clean seed is used. Soil conditions may be favorable or unfavorable to its development. Certain varieties of potatoes are more liable to scab than others. Prevention or control should aim at the selection of resistant varieties, keeping the soil free from the fungus and disinfecting the seed potatoes. It is cheaper to abandon potato growing upon badly infected soil for a time than otherwise to combat the pest. If the soil is free from the fungus any method of fertilizing is safe, but if infected, alkaline fertilizers are to be avoided. Chemical disinfection of soil is not effective enough to warrant the cost. Seed potatoes are disinfected either by soaking one and a half hours in a solution made by dissolving 1 ounce of corrosive sublimate in 7 gallons of water; or by soaking two hours in a solution made by diluting one-half pint of formalin in 15 gallons of water.

Extensive trials in 1900 led to the statements that:

1. A scabby crop ensued when scabby seed was used on a scab free soil; that
2. A clean crop followed the use of a clean seed on clean soil; that
3. No seed disinfection availed if a badly infected soil were used; that
4. The fungus may persist in the soil for a long period of years, whether cropped with potatoes or not; that
5. While corrosive sublimate and formalin are both effective, the latter is more convenient and non-poisonous to stock; that
6. Formalin should be used but a day or two before planting; that
7. Corrosive sublimate, on the contrary, should be used two months before planting; that
8. Flowers of sulphur as a disinfectant or in the row proved ineffective; that
9. Exposure to sunlight for four weeks before planting greatly reduced the scab and hastened the growth of the tubers; that
10. Sulphurous gas used as a disinfectant gave indeterminate results; that
11. Formaldehyde gas proved superior to either corrosive sublimate or formalin.

SPRAY! SPRAY! SPRAY! SPRAY!

Before the Leaves Come Out

It is safe to apply the dormant spray with the end of the leaves showing fully half an inch, with NIAGARA LIME-SULPHUR and SWIFT'S ARSENATE OF LEAD, using 4 gallons of the former and 2½ lbs. of the latter to a 40 gallon barrel.

The poison will kill the Bud Moth which works such great destruction as the leaves are coming out and later in the summer rolling the leaves up.

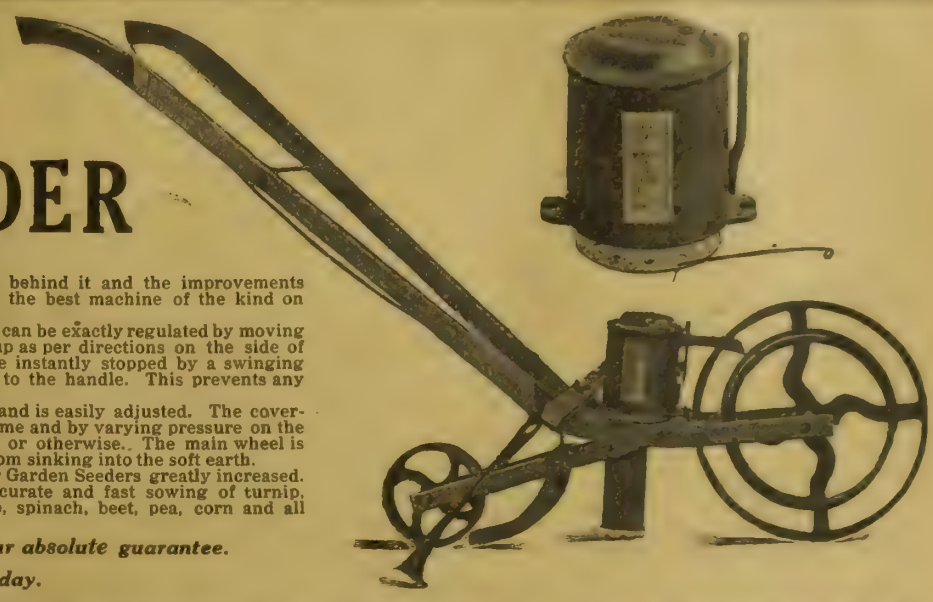
The early spray not only Insures a CLEAN crop of apples but a surer set of fruit.

The Cornell Experiments proved that omitting the early spray cost 16 times the quantity of fruit.

Niagara Spray Co. of Nova Scotia Limited,

KENTVILLE, Nova Scotia.

GARDEN SEEDER



Our Seeder has years of success behind it and the improvements recently added, makes it without doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. The flow of seed can be instantly stopped by a swinging cut-off operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. The covering wheel is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. The main wheel is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our Garden Seeders greatly increased. No better seeder can be built for accurate and fast sowing of turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn and all other kinds of garden seed.

Every machine carries our absolute guarantee.

Send us your orders today.

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ROOT CROPS FOR FARM STOCK

We make a distinct specialty of **ROOT SEEDS,** and are careful to see that our stocks keep pace with all the advancements being made from year to year. Anyone wanting the best should insist on

Steele, Briggs' "Royal Giant" Sugar Beet.
Steele, Briggs' "Prize Mammoth Long Red" Mangel.
Steele, Briggs' "Giant Yellow Oval" Mangel.
Steele, Briggs' "Giant Yellow Globe" Mangel, and
Steele, Briggs' "Giant White Sugar" Mangel.

No other Root crops produce so large an amount of desirable cattle food for winter feeding. **Insist on having them—they're the best—refuse substitutes and others said to be just as good.**

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STEELE, BRIGGS SEED CO LIMITED
WINNIPEG HAMILTON TORONTO

Report of Horticulturist for 1911.

The report of the New Brunswick Horticulturist for 1911 together with the seventh annual report of the Fruit Growers' Association, is issued this year as a separate document and is now ready for distribution. It contains 130 pages of reading matter and 28 pages of illustrations. Fruit Growers should find much of interest in those pages dealing with the demonstration orchards, the orchard survey work, apple insects, and fungous diseases and spraying directions. There is also an interesting account of the work in horticulture accomplished by Francis Peabody Sharp, New Brunswick's pioneer horticulturist. The full and complete list of the prize winners at the 1911 apple show is also given. Copies may be had free of charge on application to the Horticulturist, Fredericton, N. B.

Demonstration Orchard at Westfield.

The New Brunswick Department of Agriculture has taken hold of the orchard of C. R. McKenzie at Lingley, in the Parish of Westfield, Kings County, for demonstration purposes. This orchard consisting of some 58 trees over thirty years of age, mostly of the Fameuse and Alexander varieties, is especially suitable for an object lesson in the renovation and management of old bearing trees, as it is plainly in view from both the railway and the mainroad. The large number of people passing to and from St. John cannot help but bring the work performed in this orchard very much to the public notice. The trees have already been pruned and prepared for the first spraying which will be made early next week.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

FOR SALE—One Yearling Guernsey Bull, Apply to T. D. BLAIKIE, Great Village, N. S.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

BUYERS of Fresh Eggs, Dressed Pork, etc., Reference Bank of New Brunswick. JOHN HOPKINS, St. John, N. B.

EGGS for hatching from Utility Barred Plymouth Rocks—$1.00 per 15. JOSEPH HORSFALL, Annapolis Royal, N. S.

PIGS FOR SALE:—Berkshires, Yorkshires, Chester, Pure bred and Crosses. PETER BRODIE, York, Prince Edward Island.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

FOR SALE.—Registered, Ohio Improved Chester Pigs, five weeks, $5.00. Sire from largest strain and oldest herd in Canada. A. A. H. MARGISON, Centreville, N. B.

FOR SALE:—Pure bred (registered) Shorthorn milking strain Bull, 2 years old, quiet and active. Also common bronze turkey eggs, and pure bred barred Plymouth Rock eggs. LAURIE M. ANDERSON, Sackville, N. B.

FOR SALE 1 Jersey bull 15 months old also several bull calves from four to six months. For particulars apply to ROBT. ROBINSON, Meadow View Farm, Sussex, N. B.

GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

Registered Ohio Improved Chester White Pigs. Five dollars at five weeks. Pairs furnished, not akin. Dam sired by Toronto and London first-prize boar. WALTER S. COGSWELL, Centreville, N. B.

FARM FOR SALE—At Waterford, 190 acres well cultivated with good house and barn. Lighted with acetylene gas, water and sewerage in house. Apply to MRS. J. A. MOORE, Waterford, N. B.

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25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

BERRY BOXES.—$4.50 per 1000 in the flat. In lots of 8000 or more $4.00 per 1000. Tacks free, Forms for making berry boxes on 75c each. Crates and crate shooks supplied. Apply to O. PERCY ARNOLD, Sussex, N. B.

COLUMBIAN WYANDOTTES, one of the best breeds as shown by actual results; Cockerels from my stock last year dressed 5 1-2 pounds in September. Hens, big blocky birds, heavy producers, large rich brown eggs. First pen is headed by second cock Fredericton 1911. Eggs $1 and $2 per 15. C. PERRY FOOTE, Kentville, Nova Scotia.

Will the person who forwarded a two dollar note in payment of subscription, without signature, in an envelope postmarked Fredericton, during the week ending April 20th, kindly notify The MARITIME FARMER office, St. John, N. B. Also the person who sent one dollar in the same way in an envelope postmarked Shediac, N. B. during the same week?

Annapolis Valley Fruit Farm.

228 acres, the most wonderful bargain in the valley; good 8-room house, 60-ft. barn, room for 70 tons hay, cellar under all; 40 acres rich loam machine-worked fields; young orchard, 200 trees; wood and timber will make a man independent; pasture for 25 head; spring-watered and wire-fenced; near neighbors and advantages; the sacrifice price for quick sale is only $1900, part cast, act quickly or you will lose this; for all details and traveling instructions to see this and another with 15 acres in orchard, write THE MARITIME FARMER, St. John, N. B.

SINGLE COMB RHODE ISLAND REDS EXCLUSIVELY

A pen of birds of the same strain as my first pen was entered in an egg laying contest last year. The pen made a record of 217 eggs each for the year, which proves quality is not incompatible with highest utility. Eggs from two pens bred for winter layers, $1.50 for 15 eggs. One pen of birds of extra quality headed by a cock from Lester Tompkins direct, $3.00 for 15 eggs. A few Grey African geese eggs, $1.00 each. Try the Red-Bird for happiness.

SARAH E. MOSES SMITH,
Woodwards Cove, Grand Manan.

Strawberry Plants

Glen Mary, Sample, Williams, Three W's, President, Buster, Springdale Beauty, Stevens Late Champion and others. Prices, 25 plants 50c, 100 plants $1.00, postpaid. With every order for 100 strawberry plants or over we will send free of charge, 1-2doz. "Hiram" Raspberry plants for trial.

Raspberry Plants

Hiram,—A fine large berry of choice quality, 50c per doz. post paid, $1.50 per 100 by express. Herbert,—Very hardy and heavy yielder. 75c per doz. postpaid. Owing to large future orders and increasing our own acreage we will not be able to supply "Herbert" in 100 lots this spring.

Orchard Hill Farm, Brown's Flats, N.B.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 20 to 24 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
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Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 14 months old.
2 Holstein bulls 5 months old.
1 Holstein Heifer 5 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DEYOUNG,
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One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 25 to 40 tons of hay; lots of good pasture, good buildings. near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2. Amherst. P. O., N. S.

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More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in comptition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

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I am offering for sale the typical four-year-old Clydesdale Stallion, Flash Favorite 2nd, by the imported Flash Favorite and out of an imported dam. Flash Favorite 2nd won the fourth prize at the recent Maritime Horse show in a class of eight, the best Clydesdale class ever shown at Amherst. He is of kind disposition, tractable in harness, has been well exercised, therefore is in good condition for a heavy service season. For further information write.

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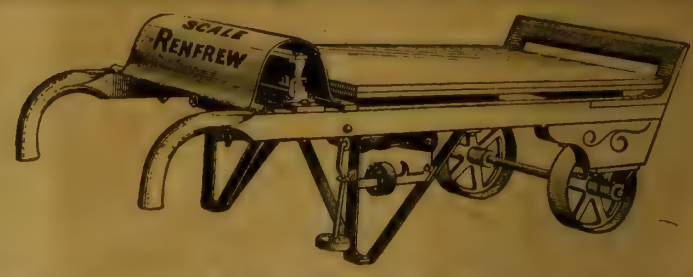

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In Chester White Swine I am booking orders for young pigs.

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Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

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No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

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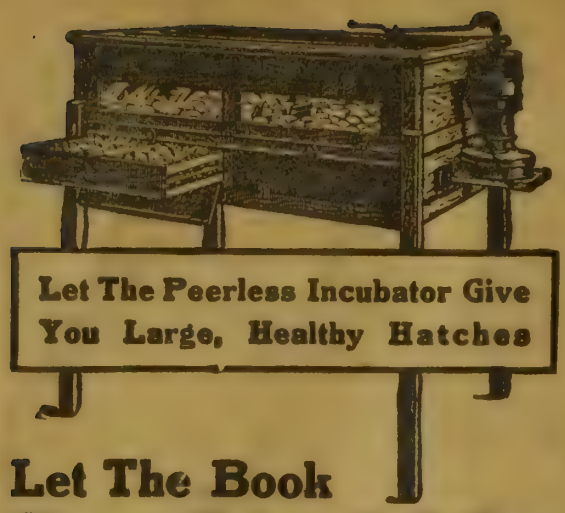

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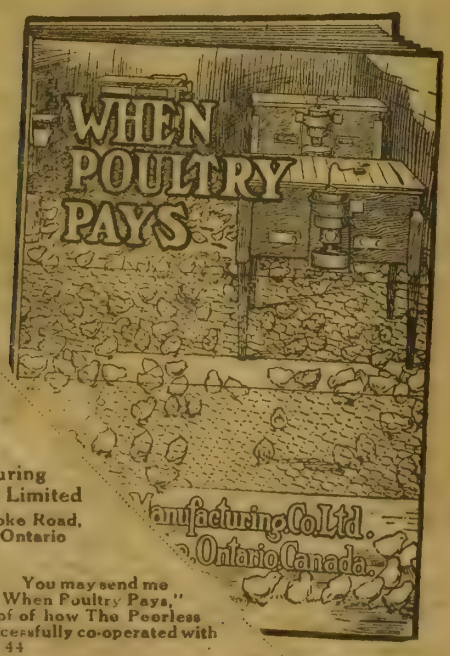

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THE profits in any enterprise don't come from the amount of capital invested; profits come from knowledge of what to do—and, even more important—what not to do. As operators of the Poultry Yards of Canada, Limited, the largest and most successful poultry farm in the Dominion, we are prepared to teach you how to make money in poultry. You can either come to Pembroke and take a course at our poultry farm here by paying a small fee for the course—or we will teach you through the mail free all about the methods we have made so successful.

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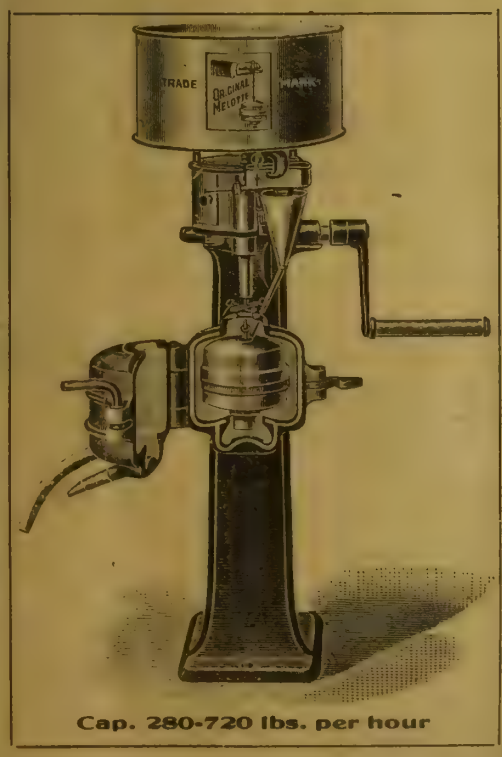

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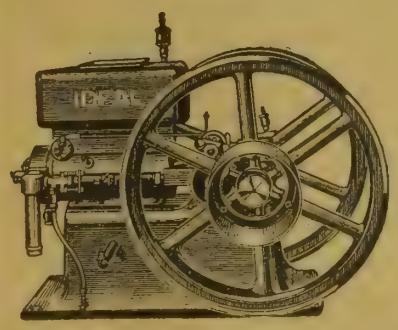

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. ST. JOHN, NEW BRUNSWICK, MAY 14, 1912. Number 15.

Is the Dairy Shorthorn Possible?

By F. M. Chapman, in Farmer's Magazine.

"I SELECTED this tribe of Shorthorns as superior to all other cattle, not only as small consumers of food, but as great gowers and beef grazers, with the finest quality of beef, and also giving a great quantity of very rich milk."

So wrote in 1842 that remarkable man of Shorthorn fame, Thomas Bates of Kirklevington, England, in reference to his justly famed creation of "Duchess" Shorthorns.

And herein lies our subject. Are Dairy Shorthorns possible? Is the Shorthorn cow the best cow for our general farmer on our Canadian farms?

We claim that the general purpose Shorthorn is the only solution for the shortage of beef, and the ills of abnormal farms.

Why? Do not our dairy breeds answer for the dairy end, and do not our beef breeds satisfy our beef consumers?

Let us bring the case into Court. Our readers will form the jury.

Is there anything wrong on the farm? It is admitted on all sides that we are short in good beef.

Our article on "The Fight for Good Beef," in the January issue, answered this question.

The situation is more acute now. Beef cattle are scarce. Stockers are not to be had. Our ranchers are about cleaned out in Canada. The West has, comparatively speaking, no cattle. Mr. Simpson Rennie, of Toronto, the well-known farmer and lecturer, only last week in an interview said: "We have been brought to the verge of famine conditions in beef, owing to the great developments that have been taking place along dairy lines, as well as other factors."

The "Old Kitties" That Won in the 30 Day Test at the Pan-American. Descended from the Importation from England by the Hon. Henry Clay, of Kentucky in 1838.

Rose of Glenside. Record 18,075 Lbs.

NO QUARREL WITH DAIRY BREEDS.

We have no quarrel with the special dairy men. They are doing a good work, and are making money for thousands of farmers. There is no finer settle ment of well-to-do-farmers than live in South Oxford, Ontario, where some $2,000,000 was produced last year from a farm area of about 213,000 acres.

Had the dairy industry not prospered, the wonder would be great. They are assisted by the Canadian Government to the tune of nearly $100,000 a year, as one of the officials at Ottawa remarked during the recent live stock convention.

Their breed societies have pushed an enterprising fight on rational lines. They have gone after the individual cow and made her "show the goods." As a result, they have, under intelligent and expert management, done things.

WHERE THEIR EXAMPLE HAS HURT.

They are open to our criticism in two ways. They have led the general farmer to cross with a dairy sire, his old shorthorn stock. A mongrel nondescript is the result—"no good for beef, and precious little use at the pail," as the average Canadian cow's milk-yield will show.

As we have contended before, the Holstein and the Ayrshire are special dairy breeds. They require specialized men to handle them. The average farmer cannot use them, and especially their crosses, for milk alone. He wants beef, too.

They are not for the indifferent man or the small mixed farmer and in his hands they have been a hindrance to his farm.

Again, in their race for milk yields, the forcing of the breeds to unnatural conditions and tuberculous animals. Dr. Rutherford noted at Ottawa recently that their tuberculous pork was coming largely from those districts where high-class dairying was carried on, and where the milk fed was not pasteurized. He who runs may

read. It is not only in Denmark where there is something wrong. So much for our objections to the spread of the special dairy cow to the mixed farming centre.

Go to the stockyards at Winnipeg or Toronto, and note the stuff that comes in from the average mixed-farming districts. It is enough to cause a lamentation! Such mixtures of colors and shapes. Such uninviting frames for meat production! Must we have a ramshakle skeleton in order to attain milk records?

By no means should a dairy sire be on the shorthorn cows of our country. The big, handsome 1,500-pound cow of our father's day gave the milk—yes, beat out the majority of these be-draggled looking apologies of to-day, and made good beef at the last.

PERHAPS PROOFS ARE WANTED.

But has the Shorthorn cow made good on these farms?

She has, and can still do so!

She was the pioneer cow of older Canada. She gave the settler butter, cheese, rich cream and milk for all his needs. She raised a sleek calf, that later produced the juicy steaks for the pioneer muscles of yesterday.

R. J. Phin, of Moosomin, Saskatchewan, told the men at the Live Stock Conference that the West wanted these pioneer cattle. Thousands of farmers in that wheat country would like the big, old, Durham cows of a former age to assist them in their work, but that they could not get them.

"Had we had these cows," said he, "we would not be bearing so much of a shortage of beef. Our West can easily support 500,000 more cattle and do us good and give to the feeders the kind of stockers they need."

PRESIDENT WHITE'S REMARKABLE ADDRESS.

Mr. Peter White, K. C., the able president of the Shorthorn Breeders' Association of Canada, at its last meeting made a remarkable address. Remarkable for the way he called their attention to the needs of the country to-day. He placed his subject fairly before the breeders. His conclusions were too sound to evoke a single criticism. He said:

"To-day the bonanza beef business is a thing of the past. The settlers all over the North American continent (with the exception of Texas, and even there there is a shortage of 200,000 head) have driven the rancher to the wall. Only a few herds of any considerable proportions remain.

"The beef growing of the future must be done, it seems to me, both in the West and in the East, and this is where the good old red white and roan will come into her own. No other breed can do what the Shorthorn can do, namely, pay her way handsomely in the pail, raise a lusty calf that can be fed off at a good price and she herself, when one of her daughters is able to fill her place in the herd better than she ever did, take on flesh rapidly when dry and go to the block a good carcass, while making profit for her fortunate owner.

"It seems to me to be a policy of wisdom to set our house in order, now, by paying a little more attention to the milking qualities of our cattle and not being satisfied with beef form alone, I mean in the best ones, so that when the demand comes as come it surely will, we will be ready to reap the rich rewards that are our due."

REAL PROOFS FROM ENGLAND.

In order to show what Shorthorn cows can do we have only to look to England where the Dairy Shorthorn produces seven-eighths of all the milk consumed in the great city of London.

And this on the high-priced lands of the Old Country. Are these farmers blind to their own interests?

The majority of us will agree that they are a shrewd bunch of men. They retain the Shorthorn because she is making good. She is doing things. We will instance only a few of the yields from Shorthorn cows in England, but there are sufficient to prove our case. Note also the look of the cow—not the wedge-shaped small-bodied big eating apology seen on many mixed farms of to-day.

Lord Rothschild's Darlington Cranford 5th has a record of 101,746 pounds of milk in 10 years, an average of 10,174 pounds a year. That does not look like a poor producer over a long period. She also produced 11 calves in this time. Eaglethorpe Amy 5th, owned by Samuel Sandy, of Cheshire, produced under test 86 pounds in one day, 568½ pounds in one week and 13,240 pounds in one year besides raising a fine calf and being dry 44 days.

Red Rose A, in the same herd produced 13,188 pounds in 303 days, while Red Rose 11,860 in 277 days. So much for English cows.

Dairy Shorthorns knee-deep in red clover pasture.

The Shorthorn Possesses the Quality of Putting Beef on Quickly. This is the Grand Champion Cow at Chicago, 1911.

SOME ENGLISH RECORDS.

Mr. R. W. Wade, B. S. A., of O. A. C., Guelph, kindly sends me the following yields of milk for a Shorthorn herd at Cranford, England 1910-11. The reader will note the age of the cows so as to refute the argument put up by some that the Shorthorn cow is good only for a few months during her early life.

There was a total of 32 cows in this herd, which averaged 10, 032 pounds of milk.

	Year of Birth	Last Yield in lbs.
Wild Cranford 4th	1902	12,166
Oxford Alma	1902	10,078
Sweetbriar	1903	10,873
Flora Foggerthorpe	1903	11,643
Cranford Beauty	1903	12,113
Wild Queen 13th	1904	12,006
Red Rose A	1904	11,968
Darlington Cran 8th	1905	11,905
Waterloo Lily	1905	11,875
Darlington Cranford 22nd	1905	12,905
Wild Belle	1905	9,928
Red Rose C.	1905	8,976
Barrington Duchess 40th	1905	10,485
Waterloo Cranford 14th	1905	7,975
Barrington Cranford 12th	1905	10,567
Oxford Annette	1905	9,327
Red Rose 13th	1905	10,642

CAN EXCEL IN MILK YIELDS.

One of the greatest names in English Shorthorn breeding, by whom the deep-milking qualities of the breed were fostered, was Jonas Whitaker, a Quaker cotton-spinner near Leeds in Yorkshire. Between 1820 and 1840 he sold many of his cows in America, and many of the Ohio Valley farms' foundation stock were obtained from him.

That the Shorthorn can give satisfactory returns in milk yields as well as in butter is still evident from the report just to hand from the dairy herd of H. E. Crawford, at Ash, in Kent. During last season, which was an unusually hard one, owing to the dought, he kept the milk records for 41 cows. Their average yield was 692 gallons (about 6,900 pounds).
pounds). As the milk was retailed to the consumer direct at 32 cents a gallon, the average cow in this herd gave a return of $221.

The best record for the year was made by a Shorthorn cow, "Snowball," which was 50 weeks in milk, and gave a yield of 1,192.2 gallons. Another Shorthorn, in 55 weeks, gave 1,030 gallons, while still another gave 1,025 gallons in 44 weeks. A cross-bred gave 943.5 gallons in 40 weeks, and another cross-bred 907 gallons in 46 weeks.

The Jersey "Granny" yielded 734.5 gallons in 46 weeks, while a Jersey grade gave 814.7 gallons in 44 weeks. The best Holstein in the herd gave 755 gallons in 35 weeks.

UNITED STATES EVIDENCES.

Mr. A. H. Tryon, manager of the Glenside farm at Granville, Central Pennsylvania, in reply to our inquiry has given us some figures of their herd of pure-bred Shorthorn cows. This farm is the home of the champion producer among Shorthorns, Rose of Glenside making 18,075 pounds of milk in 1909-10, which produced 735 pounds of butter. The records were taken by The Pennslyvania State College. He says:

"Under normal farm conditions, Belle Clare, half-sister to Rose of Glenside made 15,215 pounds in 1910-1911 and Charlotte B, sold to Mr. Knapp of Watervliet, Mich., made a record for the latter gentleman last year of 15,401 pounds and 706.68 pounds of butter.

"Probably the records of Jennie Lee and Margaretta Clay show the most remarkable persistency. Jennie Lee made a record of 10,484 pounds and an average for eight consecutive years of 8,450 pounds, and Margaretta Clay made a year's record of 10,043, and an average for eight consecutive years of 8,426.

"These records have been made almost entirely under normal herd conditions. There is no doubt but that many of our cows could make much larger records if handled along the lines pursued by the strictly dairy breed owners, but we claim that the Dairy Shorthorn is the best general purpose cow for the general farmer and are endeavoring to demonstrate this fact by pursuing the general farm methods which is the only just test."

THE VERMONT STATE WIN.

At the Vermont State Fair, 1911, a competitive two days test of Dairy Shorthorns vs. Jerseys was made. It was conducted under the supervision of Prof. Hills,of the State Agricultural College at Burlington.

Three Shorthorn cows, Red Rose, Doris and Nancy Lee 2nd, made a total of 11,693 pounds of butter as against 9,178 by the next three Jerseys.

The Glenside herd has made 123 records of over 8,000 pounds by their cows and heifers since 1910.

Since March 1, 1910, seven cows and heifers in the herd have completed yearly records over 10,000 pounds, including Rose of Glenside, 18,075 pounds; Belle Clare, 15,215 pounds and three four-year-old heifers.

I quote this herd so far because they have made an attempt to prove to the world that the Dairy Shorthorn is possible and they have done it. That the farmers are waiting for such cattle is evidenced from the fact that demands for them are over two hundred per cent.in advance of two years ago.

PRODUCE BUTTER CHEAPER THAN JERSEYS.

Prof. Carlyle, of Wisconsin, was another witness to the value of Shorthorns for the general farmer. He found that she could produce butter cheaper than the Jerseys and Guernseys and could rear a beef calf besides. In fact the case has been proven a great many times in the United States.

Prof. C. F. Curtiss, of Ames, Iowa, writes me as follows: "Sander's History of Shorthorn Cattle contains two illustrations of Shorthorn cows in the Iowa State College herd. College Moore made practically 1,700 pounds of butter in four consecutive milking periods. I have some of the offspring of this cow in my own Shorthorn herd and the milking quality has been transmitted through a number of generations. I am enclosing a clipping concerning the Shorthorn bull,Scotland's Crown, imported for the College herd a few years ago. While I was in Scotland at the time we made the purchase of Scotland's Crown, I had his dam, Scottish Belle,tested. She was at that time suckling a Shorthorn bull calf that had been put on to her after Scotland's Crown had been nursed for over six months. She was then about thirteen months in milk and tested nearly one-half pound of butter per day after nursing the two calves mentioned."

Many other interesting state contests might be quoted previous to 1910 showing the ability of Shorthorns to excel in dairy production. A glance at Chapter 23 of Sander's History of Shorthorn Cattle will bring evidence that ought to convince the most skeptical.

The Aberdeen Ideals of Beef Form.

WHAT ABOUT CANADA ?

The breeding of milking Shorthorns in Canada has been carried on by individual breeders in many parts but no outstanding breeder has taken the pains to record his work beyond a few at the Guelph show during the past few years. The reason is apparent. The beefing qualities of the Shorthorns have been held up above all other qualifications in Canada of late years and so it was hard to purchase the right kind of cows or to breed them to the right kind of bulls.

Mr. W. C. Good, of Brantford, has a small herd of grades of which he is keeping records to obtain cost of feed He is making a good showing under average farm conditions. He has grade Shorthorns that last year with very little grain feed produced 7,457 pounds, 9,882 pounds and 7,395 pounds. A creditable record indeed. E. C. Drury, of Barrie, is making good account with a general purpose herd.

A. W. SMITH'S VIEWS.

Mr. A. W. Smith says:—"One of the reasons for the pre-eminence of the breed for so many years has been their good milking qualities. And undoubtedly the Shorthorn is the cow for the general farmer. He wants cows that will produce calves that he can make into choice beef and at the same time give as large a quantity of good milk as possible and the Shorthorn unquestionably can fill the bill.

"So much has been said about the dairy form of the good milker that it is difficult for many to get away from their idea that the more angular, ill-shapen and homely a cow was, the better prospects of good milking qualities. Without any doubt one can expect good milking results from a motherly looking cow with plenty of character, but that also is the type of cow from which one expects and gets the best calves.

"To occupy the field open for him and awaiting him, the breeder of Shorthorns must I think keep up the high standard for beef production and at the same time have as good milkers as is possible and it is possible to have very high-class milkers. Not only possible but quite easy and yet retain best beef type.

'A record performance would be a very great assistance as indication to those wishing to improve milking qualities when they could be found."

Mr. M. CUMMINGS' IDEAS.

"The establishment of Record of Performance puts too much premium on the milk alone and not enough on the fleshing qualities." writes Principal Cumming of Nova Scotia.

"The Central Experimental Farm at Ottawa, the Macdonald College, Quebec, and one or two other Stations have, in a small way, conducted some work along these lines, but we are of the opinion that this work should be increased and that larger herds should be established, which would give the private breeder more confidence in himself should he think of striking out along the same lines.

"If we had the ma ter in our own hands, we would establish a new Book for Dairy Shorthorn cows and we would adopt such rules in regard to registration as would admit from England many of this class of cows which are to-day ineligible to our books."

A VOICE FROM MAPLE SHADE.

Mr. W. A. Dryden, son of the late Hon. John Dryden, writes: "I am of the opinion, however, that the time is almost here when our breeders of Shorthorns will actually take a greater interest in the milking qualities of the females in their herds. A most practical and efficient method to employ in that particular is the 'record of performance idea.'

"This is the only definite way in which any breeder may be able to obtain the information which will be of value in the long run. Every breeder owns a number of cows that are good milkers as evidenced by the fat plump calf running at her side but that is not definite and it appears to me that if ever the milking qualities of any breed of animals are to be improved, it must be through a definite system similar to that adopted by special dairy breeds. Even if such a course had a tendency to develop a special type in the breed, there is room in this big country for all and there is no doubt about an insistent demand for such a class of cattle from a certain class of our Canadian farmers."

HON. SPEAKER SPROULE LIKES THEM.

Hon. T. S. Sproule, Speaker of the House of Commons, says: "I cannot shut my eyes to the fact that dairying is one of the best lines the farmer can pursue so long as he can get help and therefore it is most desirable to breed and improve the milking strains. In connection with that it is most desirable to keep a record of the products for every cow so as to enable the good ones to be retained and improved and the unprofitable ones to be cut out from time to time and disposed of. From my limited experience they have given the best results with me,though I never adopted the test as it is usually carried out."

Of course there are breeders who would not mix up the dairy question with the beef question. Mr. John Campbell, of Woodville, in a rather long and vigorous letter, said, among many pertinent things, the following :—

"In my opinion no greater mistake can be made than an attempt to convert our Shorthorns into a dairy breed. The breed is far too useful as a dual-purpose, with beef the first consideration to attempt to make milking records for the breed . . . . . Shorthorn bulls all over the country are the lowest in standard seen for twenty years . . We can have beef producing Shorthorns capable of giving a fairly good account of themselves as milkers but failure will surely result if milking qualities are held of the first importance . . . . We should diligently study existing conditions ahd seek diligently how to restore beef-making propensities which are surely on the wane in sires and stockers."

A REFLECTION ON THE BEEF TYPE.

Now, we find in this letter of Mr. Campbell's the same thing that has startled men all over the country—a decay in the quality of the stockers. And when we consider the fact that for the "last twenty years" the Aberdeen ideals of Shorthorns have been leading at all our shows and have been heading all the various small herds of the country,

(Continued on Page 566.)

Eaglethrope Amy 5th.
The type of the English Milking Shorthorn.

We Have no Quarrel Wita the Dairy Breeds.

What the Old Style Milker Looked Like

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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MAY 14, 1912.

DATES OF ISSUE.

May ..... —28

June ..... 11—25

FARMERS WANT CHEAPER MONEY

A quarter of a century ago the United States was in the heyday of her development. Thousands of Canadian farmers sought her splendid opportunities and generally made good. Returning to their old homes, these men commented much of the ease with which United States money could be had for their ventures.

As everyone knows, the United States was assisted in her development greatly by her system of local and private banks. These advanced money in their local centres and so the local concerns were enabled to progress in harmony with national expansion. Of course this system was loose from a monetary standpoint, nevertheless it served a good purpose in their rapid development.

Contrasted with this, the Canadian system of branch banks stood out in poor comparison, except in certain cases where a local bank did business in the home town. The result is seen in the decay of rural progress in Canada and the concentration of wealth in large centres. Large firms are able to get financial backing for some big undertaking, much more readily than can small undertakers.

To-day we see the logical results. Banks are becoming larger. The tendendy is towards amalgamation. The little bank is being slowly but surely absorbed. The branch bank is becoming more and more a gathering agent for a big financial centre to the disregard of the local needs. In some towns which we could name, there are over a millian dollars on deposit, while the local loans are held down to less than fifty thousand dollars. And these are issued with reuctance only upon sure security and high rates of interest.

It is but natural that this pinch should be felt by the farmer. Agriculture is the greatest industry in Canada. It is not operated by a few magnates; it is carried on by a multitude of indedendent free men. Individually they are powerless to remedy or control such a grievance as they certainly have in their requirements for capital.

However, there are signs outcropping in many sections which it does not take a seer to understand. There is a change booked for, in the no very distant future. Instead of having to pay eight and ten per cent. for money for farm mortgages, for productive improvements, for stock investments, and for kindred farm operations, these men are going to finance their own way either by government guarantee or by agricultural loan association.

Speaking of this tendency to centralization the Toronto Daily Star recently said: "Undue centralization in banking lends toward undue centralization in commerce and industry, and toward the destruction of independence . . . Rivalry in banking is good for commerce and industry and good for the whole country. If the process of amalgamation is carried on until there are only two or three concerns, then there will undoubtedly be an enormous pressure of opinion for strict Government regulation and possibly for Government ownership and operation."

We claim that the farmers of Canada should receive more consideration in the matter of rates in their demands for funds to carry on their undertakings. There is no surer class of credit than the farmer's credit. If government regulation, and possibly for Governments can give bounties to the steel and iron industries and bonus railways handsomely, they can justifiably insist on some form of municipal guarantee whereby farmers can secure credit at reasonable rates for reasonable periods of time.

We are glad to note that the Governments of New Brunswick and Nova Scotia are planning to make arrangements whereby farmers may procure money on easier terms than have been customary in the past.

RURAL PROGRESS.

It is a matter for congratulation that steady progress being made in the development of sanitary conveniences in rural districts where gravitation water supplies are not available and the old- fashioned is rapidly being replaced by chemical closets and the septic tank system.

A noted physician recently said: "Show me a way of abolishing the cesspool in country districts and I will show you a way of avoiding ninety per cent. of the sickness and disease in those communities."

According to statistics complied by the health department of several countries, more than ninety-five per cent. of contagious diseases are contracted by means of outdoor pit closets. A pit closet, however well constructed, remains a cesspool. Gradually seeping through the ground, deleterious matter eventually finds its way to the well from which the family draws its water supply. Distance of the privy-pit from the well does not save the latter from contamination, and the inevitable result is that the average country family is drinking water as deadly to health as if specially prepared to spread the most dangerous diseases. This water may be consumed for sometime with apparent immunity, but let a member of the family be in a run-down condition and the bacteria with which the well simply teems, will find an easy victim.

Apart from the seepage of obnoxious matter into the water supply, it is well known that the exhalations from privy-pit closets are highly injurious, and many cases of infection occur through breathing contaminated air in the neighborhood of cesspools.

It is in summer, however, that the outdoor closet successfully operates in spreading broadcast the seeds of disease and death, and its greatest ally is—the common housefly. From the very nature of its contents, a cesspool must be constantly swarming with deadly organisms and the housefly's mission in life seems to be to convey these organisms to where they will best accomplish their fatal work, i. e., to human beings. A fly that has merely alighted for a moment in a cesspool will deposit wherever it walks, some thirty thousand bacteria at each step. The possibilities of a fly carrying such a freight, walking upon, say, a dining-room table, are ghastly to contemplate. When we consider that not one fly but hundreds of them, are constantly engaged in this awful carrying traffic in many homes, it is not difficult to imagine the result. "Swat the fly" is neither a craze nor a fad. It is the cry of those who are fully awake to the fatal agency of the house-fly as a propagator of disease. If the fly were a clean insect, there would be no need of its extermination, but deprive a fly of dirt and you deprive it of life.

TWO BAD EGGS IN EVERY DOZEN.

The Toronto Globe says: The sale of rotten eggs is one of the causes contributing to the high cost of living, and local produce merchants are hopeful that the deliberate marketing of bad eggs will be made a criminal offence. A communication received from Dr. J. G. Rutherford, Veterinary Director-General and Live Stock Commissioner, contains the rather startling statement that seventeen per cent. of the eggs marketed in the provinces of Ontario and Quebec, are not fit for human food. As the wholesale merchant must increase the selling price of the remaining 83 per cent, the consumer is really paying for eggs he does not even have the privilege of using.

In his campaign to stop the sale of bad eggs, Dr. Rutherford invites the co-operation of the trade, and it is not improbable that legislation will be enacted to prevent the marketing of diseased produce.

A petition recently forwarded to the Department of Agriculture the Toronto wholesale men cited as a good example for this country the successful operation of a pure-food law in several of the States across the border. In Iowa, Missouri, Kansas, Nebraska, Minnesota, Pennsylvania and other Eastern States it is made a criminal offense to place on the market impure food products, such as rotten eggs.

The Commissioner bases the following estimate of useless eggs recently marketed in the Province of Ontario and Quebec upon data which the department has been gathering during the past three months. Chick development, 5 per cent.; shrunken or held eggs, 5 per cent.; rotten eggs, 2 1-2 per cent.; dirty, 2per cent.; cracked or broken, 2 per cent.; bad flavored eggs, 1-2 per cent.

The experience of local egg merchants is that the Government's estimate is conservative, as deliveries here contain on an average of 7 to 9 per cent. of cracked or broken eggs at 5 per cent. of "dirties."

Economic Production.

The Farm Superintendent of the N. S. A. College Farm, Truro, gave a few figures relating to the production and profit of the College dairy herd for the past year, to a class on Live Stock, during the last Short Course. I thought that these figures were worthy of more thought than could be given them there and so I made a note of those figures relating to the cost of production and give them herewith. I think every dairyman will find it to his advantage to give these figures a little careful consideration.

In the College herd the cost of producing 100 pounds of milk was as follows: Holsteins ranged from 56 cents to 96 cents; Ayrshires from 44 cents to 95 cents and Jerseys from 57 cents to 72 cents.

The cost of producing a pound of butter was: Holsteins, 11 cents to 24 cents; Ayrshires, 10 cents to 20 cents and Jerseys, 9 cents to 12 cents.

Profit per pound of butter ranged as follows: Holsteins, 13 cents to 5 cents; Ayrshires, 15 cents to 4 cents and Jerseys, 15 cents to 12 cents.

These are just the round figures. It will be noticed that the Jerseys have a marked advantage in each particular, notwithstanding the fact that the milking herd of Jerseys comprised only four cows, the best cow being accidentally killed the previous summer. The other breeds were represented by much larger herds, therefore more likely to contain extra high-class individuals. And further, the Jerseys were, to say the least, in such condition as to make a Jersey breeder rather ashamed of them. Evidently they were putting their feed where the ordinary dairyman wishes to have it put. Under these circumstances, this little herd of Jerseys made a remarkable showing and has added another quota to the vast numbers of proofs, that, along the line of profitable production the Jersey cow stands without a peer.

Economic production in dairying is not given the attention it should be given. If a cow gives a large flow of milk, she is classed as an extra good cow, while at the same time her yearly net profit may not be as large as another cow giving less milk and only classed as an ordinary cow. A few cents difference in the cost of producing a hundred pounds of milk, may appear to be rather insignificant, but applied to a herd of cows during a period of years, it will make a difference in the bank account, that would enable the hard working dairyman to rest from his labors during the latter years of his life. The dairying industry while the most profitable branch of farming is not so firmly established in this country as it should be. Every year shows a variableness in the total production of the different provinces. Part of this can be accounted for by good and poor years, drought, etc., and part by the fact, that many dairymen go out of the business, or, at least, reduce their herds to a large extent. The reason for this lies in the fact that dairying entails more constant hard labor than any other branch of farming and sooner or later the man engaged in it goes out of business contenting himself with an easier method of farming although less profitable.

To put the dairy business on a firmer basis, we must increase the profits to recompense for the labor involved. The way to increase the profits of the dairy is to keep the breed of cows that have proven, beyond a doubt, that they can produce dairy products at the largest net profit possible.

It is a popular idea with nearly all farmers that if they intend to sell milk they must fight shy of the Jerseys; but why, in the name of the first principles of economics, should this be so? If the Jersey cow can produce a hundred pounds of milk at a lower cost than say the heavier milking Holsteins, what is to hinder the farmer, keeping a few more Jerseys, to make up the amount of milk? These extra cows would be paying him a handsome profit; he would need no more feed than if he kept a smaller herd of larger cows, and he would be putting his dairy business on a firm economic basis. At the same time it must not be considered that the Jersey is a shy milker. She is constantly demonstrating the fact that she can produce a large flow of milk. I have before me the report of the dairy show in England, which says: "It is generally supposed that the Jersey is a butter cow and of comparatively little use for the milk trade. But the breed's performance at the dairy show indicates this to be a mistake. The best nine cows in the Jersey class averaged 42 lbs. milk per day and this at an average period of lactation of over 140 days, or, nearly half way through. Considering the fact that they are small cows and consequently consume less than the larger breeds, it is not surprising that they are found profitable for milk-selling dairying."

Cows that yield 40 lbs. of milk daily cannot be considered shy milkers. The modern up-to-date manufacturer is constantly studying how he may reduce the cost of producing his manufactured goods by the use of improved machinery and more skilled labor; but at the same time he must be very careful not to lower the quality of his goods and thereby lose his market. In the dairy business, when we lower the cost of production by the buying of the most economic milk producing machines in existence in the shape of Jersey cows, we have the happy effect of not only reducing the cost of production, but at the same time increasing the quality of the product and widening the market for the same.

Great strides have been made of late years in increased yearly production of milk per cow; but in these efforts for large production it must be remembered that it is but labor in vain unless the yearly net profit is increased also.

These few facts, I think, will interest farmers who are thinking of starting in the dairy business and also those who are already engaged in this business but who find their profits are not large enough.—W. R. Clark, North Wiltshire, P. E. I.

Must the Sheep Industry go Unprotected.

Editor Maritime Farmer:—

Would you kindly change my adv. again? I do not know your rates for the space I have taken, either by the year or half yearly. I want to hold the space until I have disposed of as many turkeys and geese as I will be able to place through the medium of your paper. I would like to know your rates for advs. running some months.

Before closing I simply cannot refrain from saying something about the article by Matthew Lamont in your Spring Number. We do not keep sheep, and believe there is more money and less risk raising geese, all things being equal. But I do not know when I have read anything that stirred me so deeply as this article in question. It has the quality of simplicity and directness that has made the Scotch powerful as writers, that subtle something at once the admiration and despair of all who attempt to write.

Mr. Lamont has made a strong case for sheep. He has struck a note of tragedy too, that must have stirred intense indignation in all who read it, still he has written with remarkable dispassion. We are struck with wonder at the magnanimity of the man who has contended honestly and with more than average intelligence in the interests of a great and important industry and it all ends in what seems to me an infinitely pathetic wail, "I cannot get my flock to increase, the dogs are bound to keep the numbers down." Tnis following the bloody tragedy on the lake shore when his entire flock of Southdowns were destroyed. When I recall the flocks of these beautiful animals seen at some of the big fairs, my heart aches for the man. The sight must have been enough to crush him, and the simplicity with which he tells the story, makes it more effective than if he had tried to drive it home with stronger language. The most astonishing thing about the whole business is—this nuisance is old as our civilization and still exists. That a source of wealth and affluence is crippled and held in check by dogs, in nearly every case worthless curs, beside of which the "houn' dorg" of the South is a gentleman, is simply astounding.

A man driven from an industry for which he is filled by disposition and training into doing that he admits is to him a laborious and distasteful task, because the neighbourhood insists upon maintaining a pack of domesticated wolves called dogs by courtesy, by which the country is made poorer every year. The shame of it!

The wolves were driven from these Provinces years ago, pity up to the people to follow up the good work with a grand massacre and a burnt offering to the harmless creatures that have bled and died where the unmitigated nuisance has flourished. If any one has anything to say in favor of the sneaking sight provoking dog, let him come forward and speak up if he dares. That a source of wealth, meaning happy homes and a contented population is menaced and rendered risky and uncertain because of a nuisance absolutely within the will of the people is unbelievable.

If sheep were attacked by some strange and unheard of parasite, and died by hundreds every year, how long do you imagine our Experimental Farms and Agricultural Colleges would be providing the means by which its ravages might be checked? I'll warrant you thousands of dollars would be spent, if need be, and agents despatched to remote corners of the earth that a remedy might be found, because the people have abundantly endowed these institutions and authorized them to safe guard the agricultural interests of this country. The same authority could equip a man in every neighbourhood with a good Winchester repeator and a few rounds of ammunition, the cost of which would be practically nothing, and these Provinces would be thousands, yes, in years to come millions of dollars richer. Depend on it, it won't be long before the people will say, "The dog must go."

I some way cannot refrain from writing this, surely everybody who reads the article must feel like "speaking out in meeting."—Sarah E. Moses Smith.

Maud E.

First Prize Roadster Mare, over 15-2 hands at the recent Maritime Horse Show. Owned and exhibited by A. E. Trites, Salisbury, N. B.

Use of the Land Roller.

Rolling the land may be of great benefit to the crops, but it may also be of harm. We roll to pack the ground around the roots of young grass, to level the ground for mowing, to crush clods, warm the soil, make the ground moist. Rolling may do some or nearly all of these at one time.

It is a good practice to roll the young grass in the early spring. The action of the frost and animal life during the fall and winter has left the ground in an uneven state, and much of the grass may be heaved out so that its roots no longer have a close hold in the soil. Rolling will level the land and also press the ground firmly about the roots. The field must not, however, be rolled when wet, especially if the soil is heavy; for a crust may be formed on the surface that will prevent the entrance of air into the soil; and air is most necessary for the life processes of the nitrogen, fixing bacteria and also of all higher plants.

Oats are rolled primarily to level the field, but there are also other good results. In the first place the soil is made warmer. King, of the Wisconsin experiment station, has found as great a difference as 10 degrees at 1.5 inches below the surface in favor of rolled, in comparison with unrolled ground on similar and adjacent soil, and a difference of 6.5 degrees at a depth of 3 inches. This difference of temperature is due to the greater conductivity of the rolled soil on account of its finer texture, and the closer contact of the particles.

Rolling also makes the soil more moist. It does this through increased capillary attraction, due to the closer contact, the compacting of the soil

(Continued on page 562).

HORTICULTURE.

The Pruning of Trees and Shrubs.

The writer was recently presented with some beautifully colored Spy apples, grown in an orchard near Lake Ontario, which orchard has been pruned most scandalously.

Pruning is as necessary in the production of high-class apples as is spraying and it requires the exercise of even more judgment; but I would much prefer that my trees be never pruned to having them pruned in the thoughtless and destructive way these trees were treated. As a result of the very bad pruning these fine old trees had received, scarcely any fruit was borne less than fifteen feet and most of it from twenty to thirty from the ground. There were very long bare branches towering away up into the air offering splendid opportunity to the winds to knock the fruit off and necessitating great difficulty in the picking. If any of the readers have been unfortunate enough to have had their trees thus pruned by professional quack pruners, I would advise that they prune them back at the ends of the branches causing them to throw out water sprouts from the larger branches down near the trunks, and then each spring cut back these sprouts to four or five good buds of the previous year's growth and thus cause them to develop fruit-spurs and re-clothe the large branches with fruiting wood, that they that are strong and sturdy may bear the major part of the crop where they are less affected by the winds and where the fruit is more easily gathered. But in order to be able to develop these fruit-spurs in the centre of the tree it is necessary to keep the outer part open so as to admit the light and air freely all through the head, otherwise the absence of a reasonable amount of light in the centre of the tree causes all fruit-spurs to die off.

ANNUAL BEARING IS ENCOURAGED.

A properly pruned tree is one that has been continuously kept thinned towards the outer ends of the branches so that light and air has always been freely admitted all through the head so as to preserve in good health a goodly number of fruit spurs all along the large, strong branches, right down to the trunk, and to keep the fruiting wood near the ground. In the cases of trees that are inclined to overbear on alternate years it is a a good plan to thin the fruit spurs especially out towards the ends of the branches, that they will not set more apples than they have energy enough to bring to the highest state of perfection and this will often cause the trees to become more or less annual bearers.

Then if the tree has become improperly balanced it is well to cut back the branches on the heavy side to permit the growth on the light side to catch up and make a better proportioned tree.

In all cases the cutting should be done close to the main trunk or branch that there is no stubs left to prevent treating over of the wounds.

If large branches must be cut out it is advisable to paint the wounds a day or two after made, the delay of a day or two being necessary that the fresh wound get a chance to dry that the paint may adhere better than it will to a fresh and moist wound.

IMPROPER PLANTING CAUSES LOSS

There are more losses with newly set trees due to improper planting than to all other causes combined.

Many planters desire large trees, thinking that they may get a bearing tree quicker with such than with younger trees. This is a very great mistake. The fact is the older the tree is when planted the longer it will take to make a good orchard tree and the greater is the risk of loss. A two year old tree is, in the writer's opinion, a much more satisfactory tree to plant than an older one and will make a much better tree in three or four years than the same tree would make if not transplanted till three or four years of age. The longer the tree stands in the nursery the farther out the fibrous root growth will have gone and the less digging.
feeding roots will be taken up in the

It required all the roots the tree had before digging to maintain its trunk and branches and make a reasonable growth, so we cannot expect a tree with large top and trunk which has lost most of its roots, to live and thrive after transplanting. The trunk and branches are continually evaporating the moisture, its life blood, which standing in its new location for two or more weeks while the roots are getting hold of the soil to enable it to draw on the earth for new supplies and this means a severe weakening if not indeed killing of the tree before it starts at all. In order that the tree may not suffer this drain on its vitality while it is forming its new feeding cells on its roots it is necessary to cut back the top and it is not likely to be cut back too severely.

I would first trim the top to a desirable form, leaving from three to five strong branches to form the future head of the tree and then cut these branches back to three or four buds each, and even to one good bud if the tree has not good roots. I would prune off all broken and mangled roots and prune off the ends of all the large roots, leaving a smooth wound which readily callouses over and sends out a mass of fibrous roots while the torn or mangled ends left in the digging never heal over and are a detriment to the future health of the tree.

In planting care should be taken to see that nothing but fine, fertile soil is placed in the hole and that it is well packed in among the roots that capillary attraction may bring the moisture up rapidly among the roots from the earths reservoir below, and it is advisable to maintain a good earth mulch about the trees to preserve that moisture in the soil. I very much prefer the mulch of earth, frequently stirred during the early part of the growing season to a mulch of manure as used by many planters. But I would discontinue cultivation by about the first of July that the tree will stop growing and ripen up its wood before winter sets in.

I would never plant young trees in an old orchard or in grass land, as they have a very poor chance to succeed in such places, and usually prove but a disappointment. I would severely prune back any young deciduous tree or shrub before planting, except possibly such decorative trees as cutleaf birch, in whose case such pruning back may mar its future beauty. —W. J. Kerr, in Farmers' Magazine.

What a Spray Nozzle Should Do.

A great many men treat their nozzles something like this: A spray nozzle should give a fine spray with the same disk used all last season; it should never need new disks; never need new packing; it never needs cleaning, but should do perfect work, even though stopped up with leaves, twigs, straw and other things that got in because the top of the tank wasn't covered, or that would have been caught by the strainer, only the strainer had a hole punched in it last winter and wasn't mended yet.

Don't expect a neglected nozzle to do good work. It can't. It should be washed out with clean water every night. The best way to do this is to pull the suction hose out of the tank, stick it in clean water, and then run the pump until clean water comes through the nozzle.

A spray nozzle should have a disk with a small hole, if a fine spray at reasonable pressure is expected. Disks will wear out. Have plenty of extra ones and use them. Keep the tank clean and strain the solutions into it. It is easier to keep sediment and trash out of the tank than to pick it out of the nozzles.

The nozzle is the business end of the whole outfit. For it we have engine, pump, and hose. It determines the pressure to be carried and the pressure determines the size of the engine, the grade of the hose, the wear of the disks. High pressures are responsible for a good many of the troubles of the spray rig. Are nozzles now available giving good sprays at as low pressures as they should?

The whirling spray nozzle attains its results by using centrifugal force to send the liquid into the air in a thin, conical sheet, when the resistance of the air tears this thin sheet into a fine mist. This nozzle gives little or no spray in the center of the cone. Attempts are being made to put a center into the cone, the general plan adopted being to interfere with the smooth whirling liquid inside the nozzle, churn it into a froth, and blow it by main strength sputtering into the air.

The throat passage is put there to direct a jet into the eddy chamber. There is needless loss of pressure in getting the liquid into this passage if the edges of the opening are not rounded.

The jet should be smoothly turned so it will be directed into the eddy chamber in the direction in which the liquid must whirl. Pressure is lost in throat passages with sharp turns. The shape of the jet after leaving the throat passage must be rectangular, in order to fit into the spiral in which the liquid whirls.

Now suppose there are two throat openings into the eddy chamber, and that this chamber is a true circle inside. What becomes of the stream shot in from the throat? It follows the outside of the eddy chamber, of course, until it comes to the second throat opening, and there if the opening is not protected in some way it strik es squarely into the stream coming out at that point. Result? Eddy and froth, stoppage of the whirl and loss of more pressure. The same thing is going on at the other side of the nozzle.

To sum up the points I wish to emphasize as essential to the design of a successful low pressure nozzle are: 1, Easy entry into the throat passages: 2, gradual turning of the stream in these passages toward the eddy chamber; 3, a rectangular stream; 4, spiral sides to eddy chamber. Lastly, no nozzle will do good work unless treated right.—Prof. H. W. Riley, N. Y. Col of Agri.

Pollination of Orchard Fruits.

Prof. C. I. Lewis and C. C. Vincent of the horticultural department have done some excellent work in the line of cross-pollinating the orchard fruits. The pollen producing powers of the Oregon Experiment station af eighty-seven varieties of apples were worked out and of this number fifty-nine were found to be more or less self-fertile, and from these were selected pollinizers for twenty-nine varieties that are more or less infertile. It has been proved that the Yellow Newtown and Esopus Spitzenburg, which are two of the most important varieties for Oregon, both need outside pollen to cause proper development of their fruit. Fortunately, however some of the other most valuable commercia' varieties are good pollenizers for them, notably the Jonathan. Grimes, Ortley and Arkansas Black. The pollen of Spitzenburg is not very effective on the Newtown or that of the Newtown on the Spitzenburg; this latter is rather unfortunate, for it is sometimes desirable to plant these two varieties in the same orchard. It was also found that even the self-fertile varieties were materially benefited by the crossing of their flowers with the pollen of others. The apples were larger, better formed and contained more and plumper seeds, showing the invigorating effects of the foreign pollen.

Very careful experiments were made by the Oregon station in determining the effect of wind as an agent in distributing pollen. Glass plates were covered with vaseline and placed at different heights and distances from the trees when in bloom and afterward examined with the microscope for pollen grains. Very few were found outside the limits of the branches. One apple tree seven years old that bore 1,500 blooms had every petal and stamen removed before the pollen began to escape. Watch was kept during the whole time that the stigmas were in a receptive condition in daytime, which lasted about ten days and only eight bees visited the tree, because there were no petals to attract them. Only five apples were set, or one in three hundred. More than twice that number of honey bees visited a tree twenty feet distant in thirty minutes that had perfect flowers and bore abundantly.

The conclusions derived in the Oregon station from their work were as follows: Much of the unfruitfulness of orchards is directly chargeable to lack of proper cross-pollination.

Mixed planting of varieties will afford the greatest possible opportunities for fruitfulness. Even self-fertile kinds are benefited by it in increased size and color of fruit.

The pollen of almost any variety will be potent upon the pistils of any other variety, although not upon those of its own.

Winds cannot be depended upon to carry pollen from tree to tree.

The blooming period of orchard fruits for each species lasts from ten to fourteen days. No spraying should be done on any tree when in bloom, because of danger to bees and of injuring the reproductive organs.

The distance apart from trees for purposes of cross-pollination should not exceed that of blocks five or six rows in width. The benefits will be reciprocal between the varieties.

It is imperative that the varieties next each other bloom at the same time to effect cross-pollination.

Cross-pollination does not transmit the color or any other chacteristic of one variety to another.

In planting our orchard of 370 acres, mindful of our experience in Nebraska, we do not plant more than four rows of any one variety together and then alternate with another. Notice in the Oregon experiment work that Jonathan and Grimes Golden and Arkansas Black are good varieties with which to pollenize others. In our orchard we plant four rows of Jonathan, then Winesap, with an occasional row of Grimes Golden. We have also planted a small percentage of Delicious, King David and Winter Banana. Perhaps 10 per cent of the orchard in these minor varieties, the major portion of the orchard, were Jonathan, Winesap and Rome Beauty.

Why plant Rome Beauty ?

It is a later bloomer than some others, or perhaps we will say a continuous bloomer for quite a number of days. It sometimes yields a crop of fruit when other and earlier bloomers are injured. In planting Rome Beauty it may be alternated with Jonathan.—E. F. Stephens, in Twentieth Century Farmer.

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Injury by Bud Moth—Its Control.

A demonstration of effective control of what is probably one of the worst pests to apple orchards in Maine has been given at Highmoor Farm the past season. Material from Highmoor Farm submitted to the entomologists of the Maine Agricultural Experiment Station, both the spring of 1910 and 1911, contained the larvae of the bud moth in sufficient numbers to indicate a serious infestation. At the close of the season (1911), however, the station horticulturist is able to say of the situation that what leaf and bud eating insects were present were brought under control.

Remedial measures: Arsenical sprays (either alone or in combination with bordeaux) should be applied as soon as the buds begin to swell in the spring. In cases of severe infestation, additional sprays at the middle and end of May are sometimes necessary. It is also very desirable to pull off and burn the withered clusters of leaves containing the caterpillars and chrysalids early in the spring.

The caterpillar of the bud moth works in the unfolding flower and leaf buds of orchard trees, often doing great damage to the crop, besides attacking nursery stock and young trees. It is an European insect but is now widely distributed in the northern United States and Canada. Besides the apple, it feeds upon the pear, plum, cherry, quince and peach trees, and in Maine has been bred from blackberry plants.

The half-grown, brown, hibernating caterpillars usually emerge from winter quarters about the time the buds begin to expand, their first appearance depending on the advance of the season, and ranging over two or three weeks. When they are out early, they gnaw into the buds. If the buds are open, they crawl inside. They attack both flower and leaf buds, fastening the parts together with silken threads, forming a nest, within which they feed upon the enclosed tender flower or leaf parts. They do not confine their depredations to a single leaf or flower in the bud, but increase the injury done by sampling nearly all. They sometimes bore down the stems a few inches, killing the terminal shoots. The bud attacked turns brown, making the nest conspicuous. The caterpillars feed mostly at night for six or seven weeks and moult several times. When full grown, the caterpillar forms a tube out of leaves which it lines with thin, closely-woven silk, and within it soon changes to the pupa. In about 10 days the pupa works its way nearly out of the tube by the hooks on its back. The skin splits open and the moth appears. The moths are on the wing during the latter part of June and the first of July. They fly mostly at night, resting on the trees during the day time, when they may be easily recognized by the white bands on the ash-colored wings. The moth has a wing expanse of 3-5 of an inch. They live two or three weeks, during which time they mate and the eggs are laid. Eggs, which resemble small fish scales in shape, are laid singly or in clusters, mostly at night, on the under side of the leaves. The eggs hatch in seven to 10 days. The young larva feed upon the epidermis of the leaf, forming a silken tube for protection. After the fourth moult, which occurs the last of August or the first of September, or before the leaves fall, they leave the silken tubes and form a silken winter home (hibernaculum) on the smaller twigs near the buds, in which they spend the winter. The appearance of the hibernating larva in the spring completes the cycle of life.—Chas. D. Woods, Director, Orono, Me., in Maine Farmer.

An IHC Manure Spreader Saves Valuable Fertilizer

THE farms of Europe have been worked for centuries, yet the average production of wheat from those farms is nearly 30 bushels per acre; more than double the average yield of American farms. What is the reason for this tremendous difference?

The reason is that European farmers know the value of stable manure as a fertilizer. The average European soil is not as fertile as the average American land, but the European grows heavier crops because the fertility of the soil is kept up constantly by the liberal use of stable manure.

While there is not so much stable manure in this country, what there is can be used to far greater advantage when an I H C manure spreader is used to distribute it.

I H C Manure Spreaders Corn King, Cloverleaf

make one ton of manure go as far as two tons spread by hand. By pulverizing the manure and spreading it in an even coat, light or heavy as may be needed, all over the land, they insure a perfect combination of the plant food elements with the soil. There is no over fertilizing in spots, to produce an uneven stand of grain. Each square foot of ground gets the same treatment.

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DAIRYING.

Soilage vs. Silage for Dairy Cows.

During the past two summers the Animal Husbandry Department has compared the value of soiling crops and corn silage as a means of supplying summer feed to the dairy herd. Soiling crops sown from April to June furnished a continuous supply of green forage during the dry season from July to September. In 1910, green clover, a mixture of peas and oats, sweet corn, sorghum, and field corn were used, but in 1911 green clover and sorghum were discontinued.

Half of the dairy were fed corn silage, and half, soiling crops, each lot being kept on scant pasture and receiving equal amounts of concentrates. Silage was greatly preferred to the early soiling crops, such as green clover, sorghum, and peas and oats, and the silage fed animals produced a greater amount of milk. Larger yields of corn than of soiling crops were secured. Another important factor is that the soilage system required much more time daily, that too, during the busiest season of the year.

A consideration of all the factors involved indicates that the farmer can well afford to have corn silage available for summer feed up to the time the corn crop reaches the milk stage, when he can perhaps better afford to feed green corn than to continue feeding silage.—Wisconsin Bull. 218.

"Old Spot" in Court.

Imagine the following case being placed on trial in the Circuit Court and possibly you might learn a lesson from it:

John Jones swore out a warrant against his cow, Old Spot, charging her with consuming more food than she produced in milk, or than her milk could be sold for. This being a capital offense by statute law, the poor cow was in desperate straits, for a conviction meant the loss of her life. She consulted a good lawyer, and after an interview he advised her that John Jones had no case against her at all, but she told her lawyer confidentially that the charge was true and she had no way of getting out of it. He informed his client that he would attend to that part of it and that she would not even be called upon to testify.

The case being called for trial, Old Spot through her attorney entered a plea of "not guilty"; the jury was selected and sworn. Old Spot was very nervous and restless and wondered that her attorney should be so cool under the circumstances.

John Jones, being complaining witness, was called to the witness stand and duly sworn. He testified on direct examination that he fed Old Spot good feed and plenty of it, but that she did not produce enough milk to pay for her feed and therefore, according to the statute law governing such cases, should be condemned and sold to the butcher for immediate slaughter.

When the witness was turned over to Old Spot's attorney the poor old cow had completely lost her nerve, but she gradually recovered her composure as the cross-examination progressed, as follows:

"You say, Mr. Jones, that this old cow has not been giving enough milk to pay for her keep?"

"Yes, sir."

"You have been feeding her well?"

"Yes, sir, her condition shows that."

"What have you been feeding her, Mr. Jones?"

"Good timothy hay and corn."

"How much?"

"All the hay she would eat and about twenty ears of corn a hay."

"You milked her regularly every night and morning?"

"Yes, sir."

"Did you ever weigh her milk or plenty of water?"

"Yes, sir, she had a pond in summer and I watered her in the horse trough in winter."

"What did you do with this cow's milk, Mr. Jones?"

"Made butter from it."

"How much butter did you make a week from this cow's milk?"

"I don't know; never weighed it separate."

"How much milk did she give in a year?"

"I don't know."

"How much did she give in one day?"

"I don't know exactly."

"Did you eper weigh her milk or try to find out how much butter she made?"

"No, sir."

"Then, how do you know she did not pay for the cost of her feed?"

"I never thought she did."

The last we heard of Old Spot she was still eating her timothy hay and corn, glad she was living, and Mr. Jones hadn't yet gone to the trouble to prove her character and condemn her.—Kimball's Dairy Farmer.

Standard

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There is no cream separator in the world made from finer materials than the **STANDARD**. For instance, the gear spindles are made from a special grade of tool steel, ground and polished—a steel so hard and wear-resistent that tools are made from it for drilling through ordinary steel. This special tool steel costs five times as much as steel in ordinary separators, but ten ordinary spindles wear out before one **STANDARD** spindle.

The **STANDARD'S** Discs are made of steel, heavily and smoothly tinned. Stand on one and test its strength in comparison with aluminum or tinned iron discs. The Bowl Bottom is made from special steel forging. If the **STANDARD'S** bowl falls on the floor it won't bend or break.

But why go further. You've already learned enough to know that the **STANDARD** is built to last long. And it has been given a test equal to skimming 100 pounds of milk every day for six years. At the finish there was no wear visible on the working parts. It was easily good for 20 years more. The test is fully described in our booklet. Write for a copy today.

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Ask for booklets giving detailed description of the **STANDARD** and records of skimming tests.

Abnormal Milk.

Milk abnormalities are important owing to their secondary action in producing disease in man.

Watery Milk—This is distinguished by an absence of fat and caseine, and an excess of water. It is bluer in color and of a relatively higher specific gravity. It is caused by poor, watery food, by disorders of the stomach or bowels.

Curdling Milk.—Premature coagulation of milk is of common occurrence in cows' milk. It may be caused by any of the following conditions:

Digestive disorders, sour foodstuffs; from diseases of the udder, especially inflammation and swelling in advanced pregnancy.

Nympomanical Conditions.—Overheating of the body from movement or exercise.

Non-buttering, Fermenting, Frothy Milk.—This is to be found in digestive disorders, also in udder diseases and in the presence of micro-organisms. Always presupposing, of course, that the fault does not lie in the method of making the butter.

Slimy and Stringy Milk.—In this condition the milk can be drawn out in long, tough threads. It is the result of bacterial infection. The casual organism seems to be bacillus lactis viscosus, a form first found by Ademetz in surface waters. Ward has found this germ repeatedly in water tanks, where milk cans are cooled, and under these conditions it is easy to see how infection of the milk might occur.

Soapy Milk.—A soapy flavor in milk was traced by Weigmann and Zurn color-producing bacteria that are able to grow in milk, but their action is presence of blood, which is most frequently caused by some disease of the udder.

Blue Milk.—Blue milk has been known for many years; it appears on the surface of milk, first as isolated particles of bluish or grey color, which later become confluent. It is from bacterial origin.

Foreign Matter in Milk.—Of foreign substances in milk, the most important are: Dirt, abnormal flavoring matter, scents, pigments, drugs and poisons, also morbid substances such as blood, pus and various bacteria already named.

Dirt.—This comes from the cow's udder, which is often smeared with manure and urine, and consists therefore almost entirely of this filth. If the cow be diseased (diarrhoea, entitis, tuberculosis) infection may be conveyed to those drinking the milk. —Dr. E. F. Jarrel, Forth Worth, Tex.

Ropiness in Milk.

The appearance of ropiness in the mixed milk of a herd several hours after milking is due to the growth of bacteria, which, as a general rule, gain access to the milk after it has left the udder of the cow, though in a few instances they may exist in the udder before milking. It is not to be confounded with what is known as "garget" milk, which is probably due to the presence of fibrin and white carpuscles from the blood forming masses of slimy material in the milk, and is it not propagated by transference into another sample of fresh milk. The various organisms which cause ropiness in milk are very numerous, and more or less acid-producing. The ropiness is due to the production by these organisms of a slimy protein substance which is harmless from a dietic point of view. Moreover, the acid they produce precipitates the casein, which in that state helps to thicken the slimy substance produced and is not afterwards dissolved. With one exception these organisms are harmless, the exception being the bacillus Guillebeau, which comes from diseased udders. Some, in fact, are prized as "starters" in the making of certain kinds of cheese.

PREVENTION OF ROPY MILK.

(1) As water is a frequent source of the trouble, special care should be taken in washing the milking pails, strainer cloth, etc., after each milking. When thoroughly clean these should be well scalded, and should not again be rinsed with cold water. It is well to scald the pails, etc., shortly before milking. (2) Great care should be taken to see that no water is splashed into the milk after the process of cooling, etc. (3) As dust is sometimes a carrier of these germs, the pails, etc., after washing should be kept upside down, and the milk wnen in the pails should be kept covered as much as possible. (4) The rooms where the milk is kept should be well cleaned. Wooden, cement, or stone floors may be cleaned with a mixture five parts sulphuric acid to ninty-five parts of water, but care should be taken that this does not get on the clothes of the person using it. (5) Wooden vessels should not be used, as they may persistently retain the ropy milk organisms. It is not well even to use wooden troughs for washing milking vessels, but when they are used special care should be taken to clean them on all such occasions. (6) Dilute solutions of washing soda favour the growth of the organisms, and it would be better to use sodium hypochloride or some other cleanser or disinfectant in cases of an outbreak of ropy milk. (7) Straw has been shown to hold ropy milk organisms, and the custom of wiping the udders of the cows before milking is very bad. After washing their hands for milking, milkers should not handle straw or fodder, nor should any such material be brought into the cow-byre just before or during milking. (8) The cow should be kept clean, and the udders should be washed and disinfected with a very dilute solution of formalin, especially if the cows have been standing in dirty water or wading through mud. (9) Ponds and streams should be fenced off, so that the cows cannot wade in them. (10) On the first indication of an outbreak of ropy milk the cows should, if possible, at once be turned into another pasture.—John Golding Esq.

Cause of Spongy Butter.

Spongy butter is due chiefly to storing the cream in too warm a place during the ripening period, which renders it practically impossible to make butter having a nice granular texture. It is sometimes quite impossible to churn it into grains at all, and when removed from the churn the butter is in a soft spongy condition, and very wet indeed. In such cases it is impossible to remove the superfluous water from the butter by working it, or any other means.

Make Better Cheese By Using Better Salt

The secret of good cheese-making is—the salt you use.

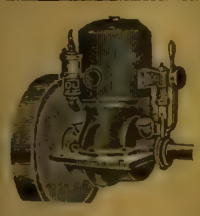
The smoothness, richness, color and keeping quality—all depend on the salt you use to salt the curd.

WINDSOR CHEESE SALT

Makes Smooth, Rich Cheese

For years, the prize winners at all the big fairs, have used Windsor Cheese Salt.

It dissolves slowly, salts the curd evenly, and makes a deliciously flavored cheese that "keeps." 74C



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4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., Hamilton North Ont.

Care of the Freshening Cow.

Many a good cow has been lost by ignorance or lack of care at freshening time. Having had a sad and costly experience of this kind when I first began dairying, I now watch my cows closely for signs of trouble and take prompt measures to check any tendency to fever. There is seldom any trouble with cows at pasture. The green feed keeps the bowels free and conditions are natural and right. But with highly fed cows in winter there is a liability to milk fever. The scrub cow poorly fed never has this disease. It is the cow that yields a good flow of rich milk that is most liable to it.

The symptoms are not very noticeable at first. The first thing noticed is that the cow is not eating her feed. She picks at her hay, tosses it about, making a little lowing sound, often mistaken for her call for her calf. This occurs within the first twenty-four hours after calving, usually within twelve hours. Upon examination her horns are found to be cold, her nose hot and dry, she does not eat or chew her cud. The uneasiness increases and in a few hours, eight or ten at the most, often less, she goes down in a kind of stupor. Death ensues in about twelve hours after this.

Prevention is much better than cure and to this end I feed no heavy grain for the last month before freshening. Shorts are laxative and vegetables are cooling. These are good feeds. I do not wish my cows to be fat at this time. After calving, if they do not take hold of their hay briskly, I give a tablespoonful of cayenne and soda in warm milk or water. If this does not start the appetite I call a veterinarian at once. It will do no good in a day. I waited once to see if she would not get any better, and lost my cow. The oxygen treatment of milk fever has been very successful, and is used by nearly all veterinarians, but some rely on a cure by giving medicine to reduce the fever through the stomach. One of the principal points in the prevention of this disease is to see that the bowels and kidneys are freely active previous to coming in, and to guard against taking cold afterward.

Many dairymen feed oats both before and after freshening. These are good, but the main point is not to feed either before or soon after freshening, any heavy, indigestible feed like cornmeal or cottonseed. My cows relish a warm drink soon after freshening, and I give them a good supply of this. Milk fever is always fatal when allowed to run its course unchecked and one should be on the lookout for it at all times.—A. E. Vandervort in Hoard's Dairyman.

A New Dairy Cow.

The managers of the farm at the college of Hawkesbury, in Australia, are making an attempt to produce a new variety of dairy cow. The Jersey has been crossed with the Dexter Kerry with success, and in consequence the small herd which has been formed of the cross-bred stock is to be used in the experiment in the hope of fixing the type, which has given so much satisfaction. One of these cows was exhibited at the Sydney Cattle Show, her butter record for the year reaching 433 lb., while her milk was varied from 4 to 5.2 per cent. of fat. She is regarded as representing the actual milk and butter-making value of the herd, each member of which gives a similar average result. These cows retain the chief character of the Dexter, their colour being almost black, while the skin within the ears, on the escutcheon, and beneath the thighs is rich yellow, similar to the Jersey. The udders are of excellent form, and the general type is that of a first-class dairy cow ,without the slightest approach to the form of the recognized beef-producing breeds. They are said to be hardy and thrifty.

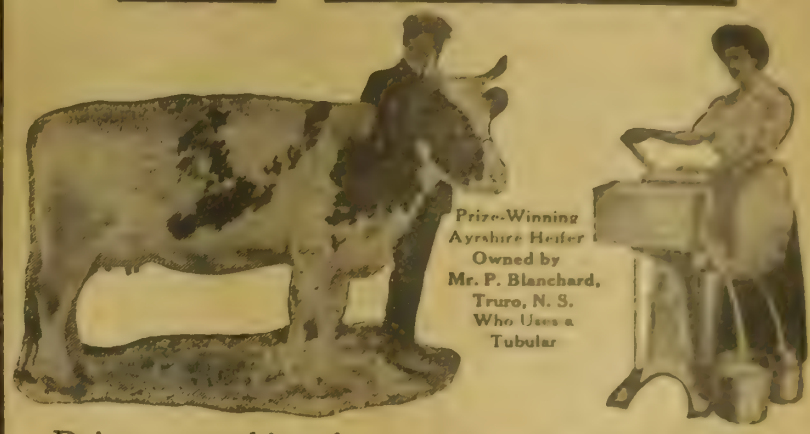
Notes.

Stand your cows around gently. Most always they will obey if you just press carefully on the right hip. Begin to push and crowd and holler and you have trouble on hand. Cows are quite like you and me; we don't like to be compelled to do things. We can be coaxed, but try to drive us—well, the fur will fly, that's all.

There may be certain lines of farming in which it is difficult to keep a definite account of the cost and profit but dairying is not one of these. There is no excuse for ignorance on the part of the dairy farmer.

Some people have an idea that dairying is an easy job and can be done without much effort. Dairy work is just like any kind of work. If it is going to be done profitably, it requires thought and care.

THE WINNERS



Prize-Winning Ayrshire Heifer Owned by Mr. P. Blanchard, Truro, N. S. Who Uses a Tubular

Dairymen making the most money realize that it pays them well to use only high producing cows and the highest producing cream separator. That is why Mr. P. Blanchard, successful dairyman and popular agricultural speaker of Truro, N. S., who owns the prize-winning Ayrshire heifer shown above, uses and recommends the

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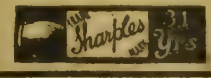
By producing the best cream and the most cream, Tubulars make a profit no other separator gets. This extra profit is simply Tubular "velvet" which Tubulars make for other kinds, but which farmers and will make for you.



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LIVE STOCK.

The Hill Grove Farm Dispersion Sale.

The Hill Grove Farm dispersion sale of pure-bred Ayrshire Cattle, advertised in recent issues of the Maritime Farmer, took place at East St. John on May 1st. The stock was brought out in excellent condition and reflected a great deal of credit on their owners, Messrs. James Barrett & Sons, who have been so successful in their breeding operations during the few years they have been engaged in the business.

J. A. Telfer, Markhamville, N. B., acted as auctioneer and in his initial attempt at this work in the Maritime Provinces,was highly successful.

The proceeds of the sale totalled $3275.00, an average for 28 head of $116.96. The highest price paid for a bull was $180 while the lowest price was $70. The highest price paid for a female was $300 and the lowest $30. The five bulls averaged $104.00 and the 23 females averaged $119.78.

"Hill Grove" tops the list of Maritime Province Sales; its nearest competitor being 41 Ayrshires sold in 1906 for $3305.50, when 8 males averaged $91.43 and 33 females averaged $78.00. The highest priced male sold for $300.00 and the highest priced female sold for $175.00. The lowest priced male sold for $23.00 and the lowest priced female sold for $20.00.

Following is a record of the Hill Grove Sale giving names and breeding of the respective animals, prices and parties to whom they were sold.

FEMALES.

Maggie of Silver Falls—25550—calved 24th August, 1906; bred by S. Creighton, Silver Falls, N. B.

Sire—Castle Glen of Ste. Anne—18582; Sire of Sire—Castlehill—14890; Dam—Maggie of Springvale—12055; Sire of Dam—Matchless 2nd—8250—$80.00 Clifford Creighton, Silver Falls, N. B.

Pearl of Silver Falls—25549.

Sire—Castle Glen of Ste. Anne—18582; Sire of Sire—Castlehill—14890; Dam—White Heather of Ste. Anne—8727; Sire of Dam—Glencairn 3rd (imp.)—6955—$190.00 Clifford Creighton, Silver Falls, N. B.

Floss—23464—calved February 21st, 1906; bred by McIntyre Bros., Sussex, N. B.

Sire—Blanco—19108; Sire of Sire—Golden Rule of Ste. Anne (imp.)—13135; Dam—Queen—23446—$115.00 C. P. R. Stock Farm, Fredericton Jct., N. B.

Stadacona Lady Mary Stewart—28905—calved August 22nd, 1908; bred by William Stewart & Son, Menie, Ont.

Sire—Queen's Messenger of Springhill—21164; Sire of Sire—Lessnessock King of Beauty (imp.)—16768; Dam of Sire—Garclaugh Queen of the Soncies—16765; Dam—Scotland's Best of Dentonia (imp.)—13672; Sire of Dam—Traveller's Heir of Holhouse (imp.)—2903; Dam of Dam—Dewdrop of Hillhouse (imp.)—12511—$150.00 McIntyre Bros., Sussex, N. B.

Scottie of Stockwood—24114—calved September 1st, 1906; bred by D. M. Watt, Allan's Corner, Quebec.

Sire—Lord Rifton—7985; Sire of Sire—Saladin—6059; Dam—Lily of Kelso—13045; Sire of Dam—Kelso Lad—8327—$180.00 J. Fielding.

Stockwood May—29170—calved January 25th, 1907; bred by D. A. MacFarlane & Sons, Kelso, Quebec.

Sire—Wexford Chief of Ste. Anne—21806; Dam—Vera of Kelso—17222; Sire of Sire—Glencairn 4th of Ste. Anne—14896; Dam of Sire—Wexford Blood (imp.)—16720—$175.00 C. P. R. Stock Farm.

Southwick Kate (imp.)—28116—calved August 27th, 1907; bred by Andrew Mitchell, Barcheskie, Kirkcudbright, Scotland.

Sire—Barcheskie Randolph—5987; Sire of Sire—Netherhall Proudfoot—5395; Dam of Sire—Nellie of Hillhouse—12023; Dam—Southwick Kate 8th (imp.)—26336—$300.00 McIntyre Bros., Sussex, N. B.

Lady Marguerite of Hill Grove—23889—calved September 30th, 1908; bred by James Barrett & Sons, Crouchville, N. B.

Sire—White Heather's Matchless—23889; Dam of Sire—White Heather of Ste. Anne—8727; Dam—Maggie of Silver Falls—25550; Sire of Dam—Castle Glen of Ste. Anne—18582—$100.00 C. P. R. Stock Farm.

Lady Minto Third—29690—calved September 20th, 1908; bred by J. M. Donovan, Coldbrook, N. B.

Sire—Jamie of Springvale—18525; Sire of Sire—Commander of Ste. Anne (imp.)—13130; Dam of Sire—Louise of Glenord—12603; Dam—Lady Minto 2nd—22106; Sire of Dam—Marquis of Springvale—11045; Dam of Dam—Lady Minto—22105—$110.00 J. T. Hamilton, Charlo River, N. B.

Nora of Silver Falls—25555—bred by S. Creighton, Silver Falls, N. B.

Sire—Castle Glen of Ste. Anne—18582; Dam—Pearl of Springvale—25554—$170.00 C. P. R. Stock Farm.

Dora—23343—calved September 20th, 1905; bred by J. M. Donovan, Coldbrook, N. B.

Sire—Marquis of Springvale—11045; Sire of Sire—Matchless 2nd—8250; Dam—Lady Minto—22105—$150.00 C. P. R. Stock Farm.

Crouchville Lass—25553—calved August 29th, 1906; bred by S. Creighton, Silver Falls, N. B.

Sire—Castle Glen of Ste. Anne—18582; Sire of Sire—Castlehill—14890; Dam—White Heather's Beauty—25346—$260.00 C. P. R. Stock Farm, Fredericton Jct., N. B.

Reda of Maplehurst—31144—bred by Victor Begg, Moose Creek, Ontario; calved April 25th, 1910.

Sire—White King—27754; Sire of Sire—Sir Oliver—22365; Dam—Maud of Maplehurst—20115; Sire of Dam—Chieftain of Elmshade—13285—$115.00 J. Fielding, Hoyt Station, N. B.

Hill Grove White Heather—34141—calved September 12th, 1910; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Pearl of Silver Falls—25549; Sire of Dam—Castle Glen of Ste. Anne—18582—$100.00 S. Creighton, Silver Falls, N. B.

Hill Grove Lily—34139—calved August 28th, 1910; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Scottie of Stockwood—24114; Sire of Dam—Lord Rifton—7985—$115.00 L. J. Donovan, Coldbrook, N. B.

Hill Grove Dairy Queen—calved September 15th, 1910; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Dora—23343; Sire of Dam—Marquis of Springdale—11045—$85 M. A. Smith, Hoyt Station, N. B.

Hill Grove Maggie—34140—calved October 28th, 1910; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own—20726; Dam of Sire—Pansy 5th of Carston—22431; Dam—Maggie of Silver Falls—25550; Sire of Dam—Castle Glen of Ste. Anne—18582—$80.00 J. Fielding.

Hill Grove White Floss—35528—calved September 7th, 1911; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Floss—23464—$55.00 J. Fielding.

Hill Grove Orange Blossom—35530—calved October 15th, 1911; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Maggie of Silver Falls—25550—$50.00 J. Frank Roach, Sussex, N. B.

Hill Grove Dairymaid—35527—calved September 15th, 1911; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)— 22431; Dam—Dora—23343—$60.00 L. J. Donovan, Coldbrook, N. B.

Hill Grove Lady Mary—35534—calved August 28th, 1911; bred by R. R. Ness, Howick, Quebec.

Sire—Morton Mains Sensier (imp.)—30768; Sire of Sire—Morton Mains Monte Christo (imp.)—6795; Dam of Sire—Morton Mains Emathla—16347; Dam—Stadacona Lady Mary Stewart—28905—$50.00 McIntyre Bros., Sussex, N. B.

Hill Grove Pansy—35533—calved March 15th, 1912; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Lady Marguerite of Hill Grove—28470—$35.00 John York, Black River, N. B.

Hill Grove Snowdrift—35532—calved Sons, Maxville, Ont.

Sire—Lessnessock Durward Lely (imp.)—24758; Sire of Sire—Bargenock Durward Lely—5559; Dam of Sire—Blossom 3rd of Bargenock—13074; Dam—Susan of G. F.—15141; Sire of Dam—Johnnie Cope—10634—$180.00 C. P. R. Stock Farm.

Hill Grove Victor Hugo—35529—calved September 20th, 1911; bred by James Barrett & Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Pearl of Silver Falls—25549—$75.00 Fred Scott, Markhamville, N. B.

Hill Grove Milkman—35531—calved December 20th, 1911; bred by James Barrett &Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own—20726; Dam of Sire—Pansy 5th of March 20th, 1912; bred by James Barrett &Sons, Crouchville, N. B.

Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own (imp.)—20726; Dam of Sire—Pansy 5th of Carston (imp.)—22431; Dam—Nancy of Stockwood—28114—$30.00 S. L. T. McMackin, Havelock, N. B.

BULLS.

Cherry Bank Sunrise—26605—calved August 21st, 1907; bred by P. D. McArthur, North Georgetown, Quebec.

Sire—Barcheskie King's Own (imp.)—20726; Sire of Sire—Imperial Chief of Hillhouse—4601; Dam—Pansy 5th of Carston (imp.)—22431; Sire of Dam—Sir William of Carston—3550—$125 J. Fielding.

Springhill Prince—33391—calved May 15th, 1910; bred by Robert Hunter & Carston—22431; Dam—Nora of Silver

"Flies on Your Cattle Cost You Thousands. Keep them off."

As an experienced farmer you know how animals suffer from flies. You can keep the animals free from all insects by using

COW COMFORT

Inoffensive and efficacious. Has a soothing, healing effect that hastens the cure of skin affections. Sold in gallon cans at $2.00 each, but as the contents is to be diluted in four gallons of water, the price is really 40c. a gallon.

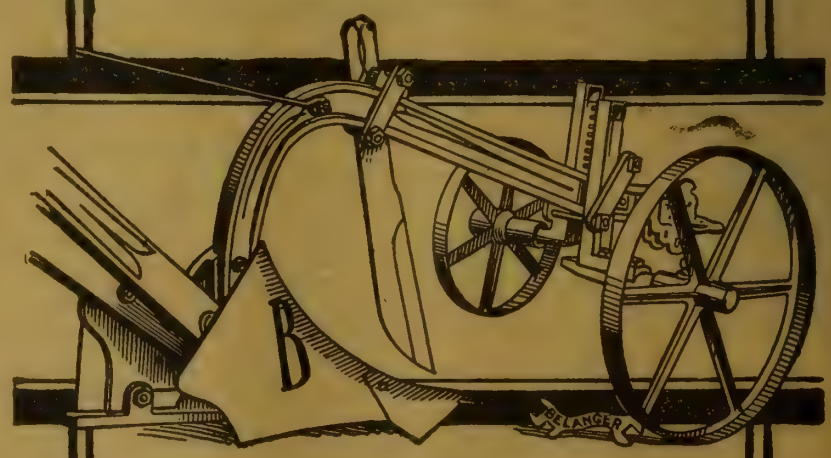
Descriptive circular sent upon request.

Agents Wanted Everywhere.

The Sapho Manufacturing Co. Limited

586 Henri Julien Ave. MONTREAL.

YOU DON'T NEED A SULKY PLOW—GET THIS TRUCK.



THIS truck under the beam makes an ordinary plow as solid as a sulky—takes the strain off the plowman's arms—makes it almost unnecessary to hold the handles—keeps the plow working at an even depth—makes the draught easier and more regular on the horses—makes it possible for a boy to plow as well as a man could. Anyone can put this truck on ANY plow in 5 minutes—you don't need to have one of our celebrated "B" plows to work it. The large 18-inch wheel runs in the furrow, regulating the furrow thickness and width; the small 12-inch wheel supports the plow when the plowing is too deep and the plow has a tendency to overthrow.

Remember, $5.00 will put this truck on YOUR plow—isn't that cheaper than a sulky? What's more, that price includes free delivery anywhere in Ontario, Quebec or the Maritime Provinces. Write to us for Catalogue No. 100 5

A. BELANGER Established since 1867 at MONTMAGNY Que

SEVERE COLD

DEVELOPED INTO

PNEUMONIA

DOCTOR SAID HE WOULD NOT LIVE.

Next to consumption there are more deaths from pneumonia than from any other lung trouble.

There is only one way to prevent pneumonia, and that is to cure the cold just as soon as it appears. Dr. Wood's Norway Pine Syrup will do this quickly and effectively.

Mr. Hugh McLeod, Esterhazy, Sask., writes:—"My little boy took a very severe cold, and it developed into pneumonia. The doctor said he would not live. I got some of your Dr. Wood's Norway Pine Syrup and he began to improve right away. He is now a strong, healthy child, and shows no signs of it coming back."

Do not be talked into buying any oth Norway Pine Syrup, but insist on getting the original "Dr. Wood's." It is put up in a yellow wrapper; three pine trees the trade mark; price, 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Gates' Life of Man BITTERS

is made of the fresh Roots, Herbs, Buds, Barks and Plants.

THE PEOPLES' MEDICINE

Expressly to cure disease, and in chronic cases the INVIGORATING SYRUP is used in connection to regulate the bowels. Everyone should take a few Bottles

SPRING and FALL

to purify the blood.

The cheapest and best on the market, and has been in use in Nova Scotia for over 70 years.

EMPIRE LINIMENT

NONE BETTER.

Just you try it. Sold by

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MIDDLETON, N. S.

FITS CURED Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits. Simple home treatment. 25 years' success.

Testimonials from all parts of the world. Over 1,000 in one year.

TRENCH'S REMEDIES, LIMITED
107 St. James' Chambers, Toronto

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your appetite. Thousands have been benefited by taking these Tablets. Sold by all Dealers.

Falls—35553—$70.00 A. E. Schofield, Hampton, N. B.

Hill Grove Bonnie Scotland—35535—calved February 20th, 1912; bred by Duncan McLachlan, Islabank, N. B. Sire—Cherry Bank Sunrise—26605; Sire of Sire—Barcheskie King's Own—20726; Dam—Crouchville Lass—26605—$70.00 H. B. Parlee, Sussex, N. B.

Exercise and Sunlight for Pigs.

What little pigs need almost as much as they need their feed is sunshine and exercise. Even if they have to be driven out they should be gotten out for a nice sun bath and for a run in the yard every day. If a sow is a good mother she is a heavy milker and the pigs get lots to eat. If they just lie around in the pen and eat their fill they soon become overburdened with fat on the inside, and do not expand on the surface as they should. A pig's business in its early days is to develop and make surface for future use, rather than to lay on fat either externally or internally, and the condition is to be deplored when instead of doing this it fills up with fat. This it will not do if it uses up some of its energy every day in exercise. Its digestion and its bodily tone in general will also be much better if it uses its muscles in walking and running about.

A WALLOW FOR HOGS.

The modern farm ought to be equipped with a wallowing tank for the hogs. Nature prompts them on a hot day to seek comfort and relief in a mud hole of some sort—no matter how dirty. This mud sticks to their body and bakes it onto it, causing a big, thick crust to form, and it not unfrequently is the carrier of all sorts of foul skin and other germ diseases. Is it not far better to have a nice clean wallowing tank filled with a strong dip solution instead of foul mud, where they can fulfill the call of nature, and at the same time be relieved of scab and lice and similar diseases and pests instead of acquiring them?

Some Pointers in Sheep.

Mr. W. J. Malden contributes to the "Journal of the Bath and West Society" a discursive article on sheep breeding, which contains several useful points. His first is that too little attention is paid in the showyard to the teeth of the sheep. The length of the ewe's period of usefulness is determined by the condition of her teeth. If these keep sound and she be a good breeding ewe, the matron of the flock may live to a green old age, but no matter what her other merits may be, if her teeth indicate that "she cannot go round again," she must perforce join the ranks of the "culls" or the cast ewes. Now, bad teeth are preventible. They are the result of careless breeding. The proof of this is the fact that there is no uniformity in the ages of the broken-mouthed contingent, and when they are "cast" no pains are taken to ensure that those which take their place will be any better. Mr. Malden's point is that the character of the teeth in sheep should be made a point in judging them in the showyard.

Every flockmaster knows the value of twins. A ewe which brings twins with regularity is a great addition to the revenues of the farm. But current theories regarding the multiplication of twins, in Mr. Malden's opinion, stand much in need of revision. The theory seems to be that the results are determined by the weather during winter. The matter, however, is determined at tupping time. The question is settled when the ewe goes to the ram, and everything depends on the condition of the ewe at that juncture. There is, of course, a something in Nature's secrets regarding the fecundity of the ewe, but her condition is an element not to be overlooked. The "flushing" of the ewes on the eve of turning out the rams indicates the opinion among the better-informed flockmasters. The breeds which lamb comparatively early in the year generally are the more prolific. They get the best food in the late autumn, and come to the mating season in the best heart. Care should be taken that ewes do not get too fat in the late summer or early autumn, because such ewes are falling back by the time the rams and they are together, and are in a condition the very opposite of being "flushed." The same thing is proved by the well-known fact that a smaller flock of ewes has usually a higher percentage of lambs than a larger flock. The smaller flock gets the better treatment and a wider range of fresh pastures.

Mr. Malden has quite a number of good hints on the feeding of ewes. Turnips are good food for ewes in lamb, provided sufficient flesh-forming food is added. Such food may take the form of good clover hay, or any of the nitrogenous cakes, corn, &c. Starchy foods with little nitrogen are of little use in motherhood. They may fatten the ewe, but they do not help to replace the drain upon her involved in the carrying of her lamb or lambs. But nitrogenous foods should be judiciously used, especially in the form of linseed cake and cotton cake. The natural food of the ewe is grass, and a combination of foods which best stimulates the composition of grass will bring her to the lambing in best condition and ensure the production of lambs that will thrive and be profitable.—Scottish Farmer.

Prolific stock for breeding should be chosen wherever possible. A mare or cow that has reproduced annually for fifteen years or more is sure to leave this valuable quality with some of her offspring. The same is true of a stallion, a bull, a boar or a ram. If they are sure breeders they are of considerable value even if they do not possess all the fine points looked for in show ring animals. The first function of an animal is reproduction. After that it is up to the breeder to mate so as to bring this to the end desired.

SAVE YOUR HORSES

WHEN a wagon is designed for light draft, and the workmanship carries out that design, you have a wagon that is easy on horses. You need not be afraid to make your I H C wagon work. That's what it's built for. Loads and roads that make hard hauling are expected conditions for I H C wagons. I H C wagons have every advantage that first grade material and skilled labor can give them. They back up with actual results every claim we make for them. They haul heavy loads, with least strain on horses. Ask any farmer who has driven one of them. I H C wagons:

Petrolia
Chatham

will do all the work you would ask of any wagon.

I H C wagon wheels—the foundation of wagon service—are built from selected, air-dried wood. Hubs, spokes, felloes and rims are designed for strength and service, and the workmanship on them carries out the plans of the designer. Hubs are accurately bored and mortised. Boxes are forced to position in the hubs by hydraulic pressure. Therefore, they fit accurately, and, the skeins and skein boxes being paired, easy running is assured. The wheel has the proper amount of dish to make it as strong as a wheel can possibly be made.

The care and thought given to wheel construction and tire setting is evidence of equal thoroughness in the building of all parts of I H C wagons. Let the I H C local agent show you the extra value of other strong I H C points of construction. You can get literature and full information from him, or by writing the nearest branch house.

EASTERN BRANCH HOUSES

International Harvester Company of America
(Incorporated)
At

Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.

THE HORSE.

Handling the Stallion.

Many men are buying stallions this spring who have had no experience in handling them. Unless they make a careful study of their new business they are likely to feel the force of the old adage: "Experience is an expensive teacher." A short time ago I met a newly-purchased Percheron stallion in the public highway. The manager of a stock farm had bought the horse and placed him in the hands of one of his most trusted men. The man may have been trustworthy enough for ordinary farm work, but he certainly did not know the first essential in handling stallions. During the few minutes that we were stopped in the road the stallion made no less than half a dozen circles around his groom. During the same time he announced his masculinity by fully a dozen loud squeals.

All of that is unnecessary, and it is extremely annoying and a positive nuisance. The case mentioned is not an isolated one but what is very common. How is the trouble to be remedied? Simply by putting a "man" in charge of the horse. Man was created ruler over the lower animals. He must show and exert that power or else the stallion, most mighty of domestic animals, will assume the role of ruler. In most cases the man in charge is capable enough but does not know how or what to do. In the case already mentioned, when the horse was stopped the leader should have selected a favorable location. Then he should have turned to face the horse holding the lead rein in his left hand instead of the right. After squaring the horse up properly he should have held him with his head erect and his carriage at attention in every respect. Any force necessary to keep the horse from squealing might well have been exerted on the jaw chain without attracting any great amount of attention. The old custom of leading the horse on a long rein and allowing him to be continually cutting circles should be avoided. When I was working in an importing barn American-bred horses or imported ones that had been out for a few years were often taken on trade. It was seldom, if ever, that one of them could be handled or led or exhibited. Every boy in the barn tried to be absent when a horse of that kind was to be shown. Every man who handles a stallion should be a genuine horseman. He must be such if he is to succeed.

At the time of service is another time where real horsemanship is necessary. Naturally the horse is very excited. It requires a clear head, cool judgment, a steady and a strong hand to control him. There is no reason why a stallion should go about the lot rearing and charging and squealing. It is unnecessary and a positive discredit to the man in charge. While not advising brutal whipping or punishment in any way, I am frank to admit that the use of the free end of the lead rein, if done judiciously and with some force, will have a soothing effect upon an otherwise too amorous stallion. He should be required to approach the place arranged for trying steadily and quietly. His work there should be done without undue display of activity or masculine powers. If it is decided that the mare is not in heat, he should be quieted and led away at once. On the other hand if the mare is to be bred the most perfect control should be exercised over him. A strong vigorous masculine stallion is certain to be amorous, yet there is not one stallion in a hundred that cannot be perfectly controlled. Many stallions are practically ruined for satisfactory service by careless handling. Often one season with an incompetent or inexperienced man will practically spoil the horse for the rest of his days. Owners who find it necessary to hire a groom cannot place too much emphasis upon this point. It will pay them to invest a few dollars more in monthly wages and secure a competent and dependable man.

The matter of exercising a stallion seems to be a threadbare subject, yet it cannot be agitated too much. It never will be out of place to advise it until every stallion is worked regularly in harness in a rational and sensible manner. We have men in this locality who have some of the best mares in the country and who are good feeders and all-around horsemen, who refuse to breed to local stallion because through lack of exercise is necessary to keep up the ercise is becessary to keep up the health, tone and potency of the horse. Stallions deprived of it usually become practically impotent after a very few years.

Another way by which a groom may raise the real efficiency of his horse is in the wise selection of mares. Breeding a diseased mare endangers the usefulness of the stallion for the season, or possibly his lifetime. It is a serious menace to other mares that may be bred later. An authentic report was made a short time ago of a stallion becoming infected from one mare and he in turn infected more than fifty others. The loss incurred from the damage thus done is incalculable. The groom needs to know a diseased condition when he sees it. He needs to have enough sense and resolution to refuse to allow his horse to serve diseased or doubtful mares.

The use of the impregnator or the capsule is now an important factor in efficient stallion management. Artificial breeding is no longer an experiment; it is an assured success. By it the energies of the horse may be saved and at the same time the number of mares bred increased. Several mares may successfully be bred from one service. By this method it is also more certain that conception will take place than when no assistance is given from man's intelligence.

Improper feeding is another old and much threshed subject. Yet it is a partner with insufficient exercise in ruining and killing hundreds of good stallions every year. The most common mistake is in feeding too heavily. The next most common is the use of too rich feeds. A few years ago I was working as second man in a barn where four stallions were kept. There I won unpopularity by stating that the method of feeding was certain to kill the stallions. The head groom was accustomed to feed very heavily, keeping the feed boxes well filled from one week end to the other. Not more than one of the horses proved a sure breeder that year. One was almost totally impotent. Within a year the highest-priced of all died

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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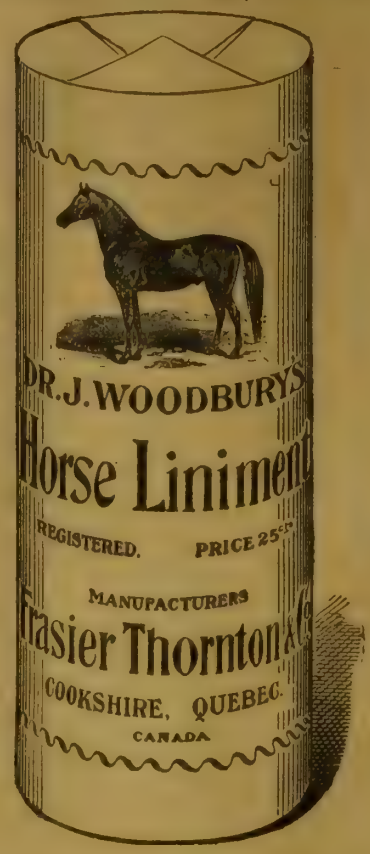
Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

The Currie Horse Collar

Quality remains long after price is forgotten. This is a true saying regarding all lines of goods, but doubly true regarding horse collars. What matters a trifle, in price, when you are buying a satisfactory article. The Currie Collar can be obtained at very little more cost than the machine made collar and when you purchase one of these, you buy a collar, that will give perfect satisfaction. It is the great long straw, hair faced collar, of Eastern Canada. Second to none and no other its equal.

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Specialist in the manufacture of Horse Collars.

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You Can't Cut Out A BOG SPAVIN, PUFF or THOROUGHPIN, but

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will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. $2.00 per bottle, delivered. Book 4 E free.

ABSORBINE, J.R., liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Goitres, Wens, Cysts. Allays pain quickly. Price $1.00 and $2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by

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Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

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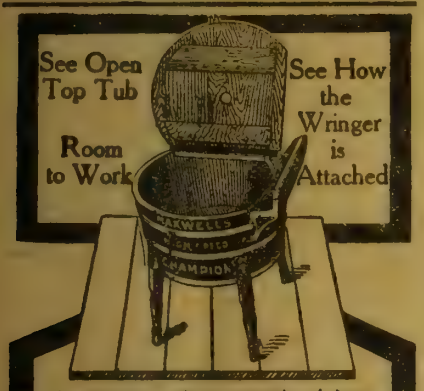


MAXWELL'S HIGH SPEED CHAMPION

The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

DAVID MAXWELL & SONS, ST. MARY'S, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

at a comparatively early age. Post-mortem examination showed that fatty degeneration of the internal organs was the cause. Overfeeding had brought it on. The plain simple feeds in rather limited amounts, coupled with work or liberal exercise, will prolong the life and increase the health and usefulness of the stallion. —H. E. McCartney, in Breeders' Gazette.

The Horse and His Sensitive Foot.

"No foot, no horse," is as true to-day as it was when this aphorism first passed the lips of a wise horseman. Domestication of the horse, known in ancient days as "companion of the wind," has caused him to be subjected to many uses, and thus the constant reproduction of hereditary defects has changed him into a very short-lived, finely-strung piece of machinery, easily and constantly put out of repair, especially in his limbs and feet.

Susceptibility to ills is one of the penalties our live stock has to pay to domestication; none more than the horse, and with man he is of all the animals the greatest sharer in the accidents and dangers incident to a civilized life. Whilst travelling he may pick up a nail or slip on an icy road, and there is no hour in which he is not constantly incurring danger. It is because the foot is the seat of very sensitive parts and because the horse owes his great usefulness to the strength and soundness and durability of these members, that if the feet are bad, the whole beautiful body above is practically useless except for breeding purposes, and even then hereditary may play a very prominent part and the offspring may be useless on account of poor extremities.

The hoof is a box of horn consisting of a wall frog and sole, and contains a very sensitive layer of cartilage, called the laminoe, and a cushion to take the concussion of the roads, etc. The sole of the foot incloses the box on the ground surface and is shaped like the foot, except that a V-shaped opening is left for the frog. The frog is that triangular-shaped body divided into two equal parts by a deep fissure extending from the point in front to the spread behind. This is made of horn of a soft character and moist and elastic to a remarkable degree.

You will understand that such a complex organ as the foot must be susceptible to a great number of ills and accidents. Thus the horse's feet are his value, and he should receive every attention in order that he may be worthy of his food. A good horse is generally known by the feet he carries. A good set of hoofs generally carries a good body above. Strict attention should be paid to the feet night and day and an examination for sores, nails, etc., should be given the animal before and after driving.—W. M. Phillips.

Percheron Brands.

Percheron horses imported from France bear several brands, the meaning of which is not altogether clear to many. A monogram of the letters "P" and "S," the "S" placed over the "P" so as to resemble the dollar mark ($) of United States, is branded high up on the neck of colts by many breeders in the district of La Perche where the Percheron is bred. This monogram is high enough to be concealed by the mane and about half the distance between the ears and withers. The horses are not all branded, however, and the absence of a brand does not necessarily mean that the animal has not been imported, or that it is not a good one. Among other brands used by the French is a star on the neck, denoting that the stallion may stand for public service in France. Very few of these are sold out of the country. The letter "R" means that the stallion has been rejected because of moon blindness or thick wind. There are very few of these that are exported either. Hoof numbers are also used to identify imported horses, but these are not permanent because of the natural growth of the hoof. Some of the leading Canadian breeders have devised some schemes of marking and branding their Percherons that have called forth the praise of Secretary Dunsmore of the Percheron Society of America. These will probably be given readers of The Maritime Farmer in a later number when we have an opportunity to see the systems in actual practice in these studs.

The LOUDEN WAY To Prosperity
Louden Tools put farming on a scientific basis and make it a business of certainties. They stop waste of time, labor and feed and bring value of stable manure. They increase the output of your herds and your acres.
Louden's Sanitary Steel Stanchions
are flexible chain hung tubular steel. They are scientifically designed to make cows give more MILK PER YEAR. They allow the cow perfect freedom of movement and comfort, either standing or lying down. Cows are clean all the time. No corners or crevices; easy to keep clean. May be hung on homemade wooden frame if desired.
LOUDEN'S SANITARY STEEL STALLS make every part of the dairy barn light, airy and fresh—increase the cow's contentment and flow of milk and decrease the danger of disease.
Louden equipments include Louden Feed and Litter Carriers, Hay Tools, Fire Proof Barn Door Hangers.
Send for catalog.
LOUDEN MACHINERY CO., Dept. 315 GUELPH, ONT.

Gasoline Engine BARGAINS

We have a number of rebuilt engines of other makes, that we have taken in trade for our Waterloo Boy Gasoline Engines.

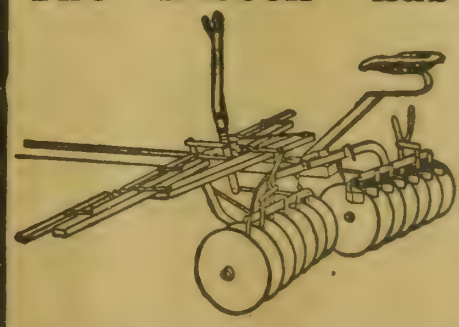
These engines are from 11-2 to 16 h.p. and have been thoroughly over-hauled in our shop and are in first class running order.

Write for particulars and prices to

Sussex Motor Co. LIMITED

SUSSEX, N. B.

The "Bissell" has the capacity



Because of its capacity, time after time the "Bissell" Disk Harrow has done DOUBLE THE WORK in field competition against all competitors, under the same conditions.

The special shape of the "Bissell" plates cause them to enter the ground naturally and TURN THE SOIL EASILY. Steel scraper blades meet the Disk Plates chisel fashion and keep the plates clean of trash by movable clod irons—the only Harrow that has this feature.

Anti-friction balls (40) are used in the bearings, on every "Bissell" Disk.

The seat is placed back on the Harrow so that the weight of the driver when riding balances over the frame and REMOVES NECK WEIGHT. The hitch is well back, MAKING LIGHT DRAUGHT.

Search the Continent over and you will not find a Harrow with such cutting capacity, easy draught and correct proportions as the "Bissell." A postcard to Dept. M will bring you a free catalogue 64

T. E. BISSELL CO., LTD., ELORA, ONT.

Address BLIGH & PRINCE, General Agents, TRURO, N. S.

POULTRY.

Infertile Eggs and Dead Germs.

Although still early in the season, I have already heard a good many complaints regarding the infertility of eggs, or else the death of the embroys during the three weeks of incubation. There are many reasons which might account for this unsatisfactory state of affairs. There is, however, one factor which must not be overlooked, since it probably goes to the very root of the whole question. In these days of the abnormal layer, are we not weakening the bird's constitution, and thus paying the penalty of the forcing system which is so much in vogue? Trap-nesting to select the most prolific layer, and breeding from her, and the same system continued with her progeny, and so on through many generations of hens, may possibly go too far, and an increased yield of eggs be secured at the cost of stamina. Thus is a weakened constitution handed down to the offspring, which will neutralise the laying qualities that they should have inherited.

This question is one that deserves the careful consideration of all those interested in the scientific aspect of poultry-keeping—we might say, the physiological side. How far can forcing of the laying powers go without causing bodily weakness? How many eggs may a hen lay and yet retain her stamina sufficiently to breed robust chickens, in which their parents' laying qualities will be perpetuated? Laying competitions have undoubtedly done a lot of good and aroused a great deal of interest throughout the entire country, and have given an outlet for the competitive spirit that is inherent in most English poultry-keepers. But are the competitions conducted on the lines most likely to ensure perpetual benefit to the industry? It has been repeatedly proved that the most prolific layers do not necessarily produce equally prolific stock; especially does this apply when pullets that have given a good account of themselves by taking a prominent position in a winter laying competition are bred from early in the year.

It is not, however, only among those birds that have been highly bred to increase egg-production that the trouble of infertility and dead-in-the-shell have to be contended with. It is often due to lack of forethought in the general management of fowls at a very critical period in their lives. As stated above, there are several causes. They may be briefly stated as follows:—Breeding from immature stock birds, over-feeding upon the wrong kinds of food, insufficient warmth and shelter during the winter. When the first of these causes is given as the reason for the failure in the hatching operations, the poultry-keeper frequently exclaims indignantly that he certainly does breed from pullets, but he is careful to get a two-year old cock.

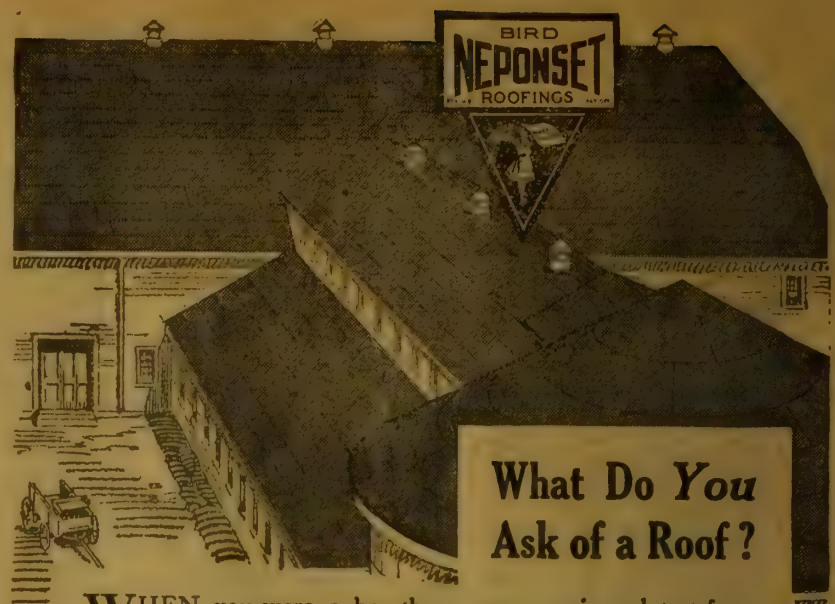
This may be perfectly true, and a most necessary proceeding, but the male bird's age must not be relied upon entirely to balance the evils of breeding from very young pullets.—E. T. Brown.

Soft Food for Breeding Stock.

A writer in a contemporary has made the definite statement that soft food is unsuitable for breeding stock, as it tends to force egg production at the expense or fertility and of vigor in the germ. Without committing ourselves to a complete acceptance of the thesis, we cannot but feel that under modern breeding conditions, with all the intensiveness apparently inseparable from methods necessary to profitable poultry keeping, and to the greatly increased production essential in these days, every aspect of the question should be studied to stop the leakages, one of which is the loss arising from the two causes named. A little reflection will show that there is probably more in this suggestion than at first would appear, and that, at least, it should receive careful investigation. Everyone will admit that the birds which give the most fertile eggs, containing the most vigorous germs, are such as are kept under natural conditions, and which have nothing in the way of special foods to induce egg-production. We have inclined to the opinion that this was mainly due to the greater amount of exercise and of oxygen, as a result of which the bodies are in harder condition. And, further, the majority of poultry-breeders will agree that soft food tends to overlay the internal organs with fatty deposits, which in their turn lead to infertility and germs deficient in vigour. On the other hand, breeders hold to the opinion that without soft food laying would be delayed, and consequently the period at which the chickens are hatched correspondingly retarded, which in itself would be harmful. But there is this much to be considered, namely, whether even if the period of laying be somewhat delayed the eggs would not be more fertile, the germs stronger, and the chicks when hatched grow more rapidly, so that the gain would be ultimately the greater. To obtain winter eggs for consumption it would appear that soft food is almost indispensable, but for breeding stock it may be altogether different.—E. T. Brown.

Backyard Poultry-Keeping on the "Philo" System.

In some of the poultry journals there has been much controversy as to a new kind of intensive poultry-keeping styled the "Philo" system, because it was originated by a man of that name, an American, who claimed to be able to keep fowls in strict confinement and still obtain the same good results as though they were allowed free range. For the benefit of those who may have little knowledge of the system I would point out in the first place that the fowls are never liberated from the moment they enter the house until killed off, so one decided advantage is that no ground rent, or very little, will have to be paid. The houses are 7 ft. by 3 ft. approximately, and built in two storeys. It is distinctly amusing to see the birds walking up a miniature ladder to the top storey, then hopping down again every few minutes, and this exercise keeps them healthy. Under the new system feeding arrangements have to be varied a little. Sprouted oats are given—i.e., oats moistened and allowed to grow 5 or 6 in. high. Dry bran is also given in fairly large quantities. Apart from this the feeding methods are on the ordinary lines; animal food has to be supplied, as none can be obtained indoors. Although we had a very hot summer, which was entirely against keeping fowls in confinement, the birds exhibited at the Crystal Palace, varying in age from a few weeks old to moulting hens, at the time of my visit all appeared in robust health, and I was given to understand that the system had worked better even than was anticipated by the promoters. The breeds to be kept in limited quarters will certainly puzzle some people, but so long as no great outlay is made at the start there will not be much to lose even if the affair ends in failure. Light colored varieties will do almost as well as the darker kinds, so there is nothing to dirty them so long as the floors are kept clean, and under such a system absolute cleanliness is imperative. Supporters of this new method believe that breeding operations can be conducted even on such a small scale, but I do not think they will be successful. When fowls have free range there is often a lot of trouble in getting fertile eggs and hatching strong chickens, but it looks as though this trouble will be much aggravated when the stock birds are kept in absolute confinement. Still there will be no harm in trying. If these artificial methods of poultry-keeping are successful there will be one of the greatest booms ever witnessed in poultry history, but I think that the system is one that will require expert management in order to bring about good results.—Farm & Home.



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WHEN you were a boy there was *one* universal test for a roof:—"will it give protection against storm?" Shingles gave that protection, they were cheap—good shingle timber was plentiful and everyone was satisfied.

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you do not need to change; but if you have not, and want a range that will

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Indian Runner Ducks.

For ten years I have been raising Rhode Island Red chickens, and I have always enjoyed raising them, and thought it impossible for anything to come nearer my heart than the little red hen, but I want to say that the Indian Runners have won out, as they have a way of getting into one's good graces at a very early age.

After the first day or two, you can almost see them grow. They gain so fast that at seven or eight weeks they are full grown to four and a half pounds. Where is the broiler that you can put four pounds on in that time?

Last year I hatched fifty-four ducklings, and raised fifty-two of them, so you can readily see that they are not hard to raise. I coralled them in a pen with twelve-inch poultry netting. Pen so constructed that it could be moved from place to place, as desired.

Their house was a piano box cut in two and covered with two-ply paper, using a screen door for the front, so that no animal could get to them at night.

A piece of tarred paper the size of your coop with strips of lath at each end makes a good cover for the bottom- and when this is covered with straw or coarse litter, it is easily kept clean. Pull out the paper, dump litter, and use water with broom to scrub the paper. This must be done every morning.

They are a contented bird, stand confinement well, and with ordinary care never learn to fly over a twelve-inch fence.

They are also intelligent and soon learn to scamper into the coop at night when you call, "To bed; to bed with you." Their heads pop up, they swing around a circle, and in they dart while you stand laughing at them.

One never tires watching them, especially when they have fresh water to play in. Although they are dry land ducks, they enjoy the water. A swimming pond or bath tub is easily made by getting a good tight box, warm it and pour melted paraffine into the cracks and crevices. This makes a water-tight tub, which is easily washed. Fill it and watch them play. You will have ample sport to pay for your trouble.

If you want to give them extra pleasure, give them green sprouted oats or lettuce. Swiss chard also is an excellent feed for ducks. This is grown in beds like lettuce, and heads cut off it will sprout up again from the root.

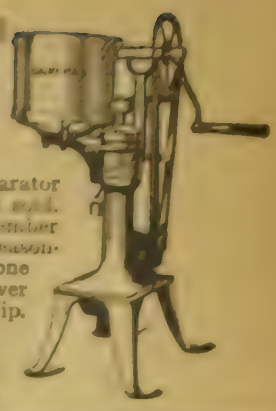
I have had more enjoyment and profit from my ducks than I anticipated. Mine are the 220-egg strain, almost solid fawn in color, and the eggs are pure white, weighing two pounds to the dozen.

If you want large eggs and plenty of them, if you want ducks of rare beauty, that are robust and hearty, if you want meat, sweet, tender and juicy, if you want a hatch that shows its worth, if you want a fun-maker on the farm, if you want a thing of beauty and a joy for ever, if you want to make a good round profit from a small investment, try Indian Runner ducks.—Avery Poultry Yards Manager, in Successful Farming.

If a drawn carcass has any distance to go, it may mould inside; or if a fly does not "blow" in it, there is a large exposed surface hidden from sight, which may become infected by some means during transit. If mouldy, sour, or fly blown, it is no longer saleable, at least for anything like a fair price, and it is not safe as food.

Dry-picked poultry will stand longer shipment than those that are scalded.

The Best Cream Separator is the Cheapest in the End



THE cost of manufacturing a cream separator determines the price at which it may be sold. Therefore, when selecting a separator, remember that the machines which are offered at an unreasonably low price can be offered at that price for one reason only—they are built to sell at prices lower than the cost of good material or workmanship.

Such separators are costly at any price. Only a good separator is cheap; not because of a low first cost, but because it will last for years and save enough butterfat from the milk of four or five cows every year to pay for itself. The best workmanship and material that money can buy are used in making

I H C Cream Harvesters Dairymaid and Bluebell

You will find an I H C the cheapest separator you can buy, because it will do better work and last longer than any other separator.

Go to the nearest I H C dealer who handles these separators and see how carefully they are made. You will find that they have phosphor bronze bushings—that the gears are spiral cut—are entirely protected from grit and milk, and at the same time are easily accessible.

The neck bearing is trouble-proof. The patented dirt-arrester chamber removes impurities before separation begins. These separators are made in four sizes. Ask the I H C local agent to show you one, and give you a catalogue, or, write the nearest branch house for catalogue and any other information desired

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Your credit is perfectly good with us. You can equip yourself fully for successful poultry-raising, and you don't need ready money to do it. We trust you; and we will make the terms so easy for you that you will never feel the outlay. In fact a Peerless Outfit pays for itself and quickly, too

Let us ship you this. We will trust you with it, show you how to succeed, and give you a 10-year guarantee.

Within a month or so from this very day, you could have a poultry-for-profit business well under way.

Write and ask us to prove to you that success with poultry, The Peerless Way, is possible for anybody of good sense in any part of Canada. Get the facts about it. They are facts that will probably be new to you. Send for them—it's for your own benefit we suggest that you send for them at once, without another day's delay. Just use a post card, if you haven't a stamp handy—put your name and address on it—say 'Show me'—that's all that's necessary.

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Besides finding a buyer for our [illegible] poultry products [illegible] we do that at any time we want to, our Board of Experts stands ready always to [illegible] practical suggestions [illegible] to Peerless users. These practical men have given [illegible] the greatest [illegible] business in Canada. The Poultry Yards of Canada Limited [illegible] experimenting in the [illegible] ries of the great plant [illegible] the Peerless [illegible] and proved it [illegible] the most [illegible] in use [illegible] for use in every section of the Dominion

More than 20,000 PEERLESS users are successful —

Poultry-raising with the difficulties taken out of it—that is the reason why The Peerless Way has proved profitable for over twenty thousand people scattered all over Canada. There is not a reason on earth why it would not be just as successful for you as it has been for the many successful of them. No matter where you live, farm is, and what you want, The Peerless Way—and we will help you beyond mere [illegible] in poultry farming either

Send right away for interesting offer and FREE very valuable information.

You will know why The Peerless Way is the best to get profit from poultry when you have read the big and [illegible] free book we want you to ask for. When the book will come [illegible] to tell you for poultry profit on terms that will meet your wishes and fit your means. Please write and ask for this now—make your start now—it will pay you to.

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I Will.

I will start anew this morning
With a higher, fairer creed,
I will cease to stand complaining
Of my ruthless neighbor's greed:
I will cease to sit repining
While my duty's call is clear;
I will waste no moment whining,
And my heart shall know no fear.
I will look sometimes about me
For the things that merit praise;
I will search for hidden beauties
That elude the grumbler's gaze.
I will try to find contentment
In the paths that I must tread;
I will cease to have resentment
When another moves ahead.
I'll not be swayed by envy
When my rival's strength is shown;
I'll not deny his merit,
But I'll strive to prove my own.
I will try to see the beauty
Spread before me, rain or shine,
I will cease to preach your duty,
And be more concerned with mine.

Love's Barrier.

(Continued from last issue).

CHAPTER XXIII.
BREAKING IT.

"Audrey, if Lady Adela comes to us next month, I think I'll give a ball."

"What for, mummy?" asked Audrey, looking across the table and poising a bit of biscuit between her fingers. They were at a tete-a-tete luncheon, and, if the truth must be told, Audrey had very much enjoyed her solitary morning. There were times when she felt that she would like to get away from her lover—when his attentions were somewhat irksome. Audrey had not paused to analyse this feeling, which was certainly unusual in a newly engaged girl. She only knew that it existed.

"Why, just to let her see what can be done even in the savage north," said Mrs. Hayes impressively. "And I'll have Gunter down and do it properly. The county will come in now, of course. I wonder whether I could put it on the cards, 'To meet the Lady Adela Hunt?' "

"Why, mother, no; I'm sure you couldn't. I never heard of such a thing."

"I'll find out; one can't get to know everything in a place like this. I wish I had asked her more at Marienbad. I had lots of opportunities. I flatter myself I made a good deal of them, but, of course, there are always things that slip one's memory."

"I don't think I particularly want Lady Adela to come here, mummy. One would never get away from her; and, of course, though she was quite nice most of the time, it used to enrage me when she patronised you so openly."

"You must not say that, Audrey. Lady Adela is too well bred to do anything of the sort, even if I would stand it. Yes, a ball; we have plenty of room. I think it would be a success. Gerald was speaking to your father last night. He would like the marriage to be before Christmas."

"But I shouldn't, and it won't be," replied Audrey unexpectedly. "Why should I be hurried like that? He has nearly nine months' leave yet. Anything might happen in nine months."

Mrs. Hayes did not like the words, but decided not to take them seriously. Since they had come home Audrey had developed a kind of petulance, an unexpected rebelliousness, which incited her to unusual self-assertion. The time had gone for sharp measures with the child; she was almost a woman, and had become a person of the greatest importance.

"I'm not surprised at Gerald, I must confess. A man who has knocked about so long naturally wants to have a home. Don't be too hard on him, Audrey, or keep him waiting too long. Remember, he is not a boy, and that a certain amount of deference to his wishes is expedient."

"In this case it is my wishes that have to be consulted, and I'll marry him when my own time comes—if I ever do," Audrey said coolly, as she rose from the table.

"Don't be silly, child. Have you and Gerald quarrelled that he went off in such a hurry this morning?"

"No, we didn't quarrel; but Gerald doesn't like my dearest friends, and he talks as if it were a matter of no importance, as if I could forget or drop them to order. He will find I'm not like that. And he laughed at dear Miss Jane when we met her out yesterday; and sometimes I think him perfectly horrid."

"You must not forget that Gerald mixes in very different society than ours, dear. His point of view would, of course, be very different."

"It need not make him horrid and sometimes vulgar. The Duchess was not like that; Sir Anthony Brede isn't; Mrs. Secretan isn't; and all of them are quite as well bred as Gerald, or his aunt—and very much nicer."

Audrey, with colour a little high turned to leave the room. The outburst had relieved her of something that had been pent in her heart for several days.

"Where are you going now, Audrey?"

"To the Rectory; I've simply seen nothing of Mrs. Secretan. She never seems to be at home now. I am going to take Firefly in the cart; and you needn't expect me home to tea, for even if Mrs. Secretan isn't at home, I'll go on to the Court and have tea with Miss Jane."

"Gerald will not be pleased if he should happen to come up by the three o'clock train. He will expect to find you at home. Won't you go to the station, in time to meet that? And then, if he is there, of course, you will drive him back and not go to the Rectory."

"Mummy, I won't do that; it would be running after him. It's his duty to run after me, though I don't want him to. Try not to be angry with me, and do please leave me alone just a little. I'm so tired of it all."

Tears of something uncommonly like mortification were in her eyes; in truth, Audrey did not know what was the matter with her.

"I want a long talk with Helen, mummy. I shall be better after I've had it, so good-bye."

She kissed her mother rather quickly, and disappeared as if fearful lest she should be detained by fair means or foul. Mrs. Hayes, however, suffered her to depart without further protest, and, sitting down to her desk in the boudoir, proceeded to make out a preliminary list for the ball. The boudoir was a very gorgeous place, all gilding and blue silk brocade; but it was not an apartment suggestive of homeliness, and her husband seldom entered it. He had a little den of his own, where he often retired to smoke the comfortable pipe, and where Audrey was only too pleased to join him. Mrs. Hayes never went to the den. She protested that the odour of it made her head ache. She had not finished her list, and was regarding it with great satisfaction, when, about four o'clock, greatly to her surprise, her husband entered the room.

"Why, Geoffrey, you are home very early, surely! I suppose Gerald brought you back. Where is he? Audrey has been rather tiresome today. I'm afraid they have had a little tiff, and now she has gone off to the Rectory. You didn't meet her, I suppose?"

"No, I didn't meet her," he replied, and relief was evident in his face.

He stepped back and carefully closed the door. Mrs. Hayes, leaning back in her chair with her gold-tipped pen in her fingers, now observed that her husband looked rather worried. "Where's Gerald?" she repeated. "Hadn't I better go down and explain about Audrey?"

"He isn't here, Maria. He is not coming back. Everything is off between him and Audrey."

Mrs. Hayes gave a small scream.

"Everything off! Whatever are you talking about, Geoffrey? It's impossible. They've had a lovers' quarrel, that's all. I saw there was something the matter with Audrey this morning. But he'll come back, and she'll apologise, and everything will be all right. Where is he? I must try to see him. How dare you stand there and torment me like that?"

"It is nothing of that kind, Maria; so far as I am aware there is nothing wrong between Hunt and Audrey—at least, he said nothing. I've found out something to-day which makes him, in my eyes, an unsuitable husband for our girl. I have told him so, and that's the end of it."

"Geoffrey, what was it? Tell me at once. How terrible! I can't believe it. He has been a perfect gentleman to me—to us all—ever since we have known him."

"I am sorry I can't tell you the whole story. I'm afraid I must ask you to trust me absolutely in this, Maria. Surely you may rely upon my judgment, and trust my love for the child?"

"You must tell me at once, and everything, Geoffrey," she said firmly. "It is my due. I shall be satisfied with nothing less."

"I can't, Maria. I have passed my word. So far as I am concerned the story I heard today is dead, and I am the grave of it."

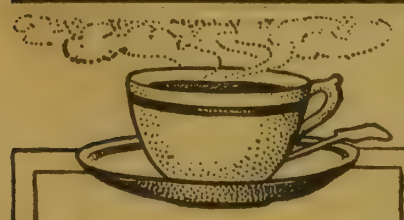
"Was it a man or woman who brought the trumped-up thing to you, Geoffrey? You know what you are! Any baby could take you in. I assure you I have no intention of sitting down under this, or of breaking off such a desirable match for Audrey for such a trifle."

Geoffrey Hayes made no reply.

"Was it a man or woman?" she repeated; but he ignored the question.

"You spoke to Gerald, then?" she went on, her voice becoming more shrill and harsh in her desperation and chagrin. "What did he say?"

"He denied nothing, and when he saw that I was fully determined he simply aquiesced in my decision. He went off to London by the three-ten, and his things must be packed and sent down for the evening train."



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Red Rose Coffee

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From 40 to 50 Years of Age. How It May Be Passed in Safety.

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If you have the slightest doubt that Lydia E. Pinkham's Vegetable Compound will help you, write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass., for advice. Your letter will be opened, read and answered by a woman, and held in strict confidence.

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The Arlington Collar Co. of Canada, Limited

TORONTO CANADA 1

Mrs. Hayes collapsed in her chair; chagrin, disappointment, bitterness were all expressed there, but no concern or relief. Geoffrey Hayes' heart ached as it had often ached through the somewhat empty years, because there was no sympathy or understanding in the woman who had walked by his side so long. Her thoughts were not his thoughts, nor her ways his ways; even the child of their love was not the bond she might have been between them.

"And will this be the end of it, Geoffrey? Think of the scandal, the disgrace! And what will Lady Adela say? She was so gracious and so kind."

"That has nothing to do with the case, Maria," he answered wearily. "All we have to concern ourselves with is that Hunt is not the husband for Audrey, and that, thanks to the disinterested and loyal affection of a friend, we have discovered it in time. I have no room but for thankfulness in my heart."

"Who was the friend?" she asked quickly, hoping even yet to catch him unawares, though she recognised in his quietly determined manner the mood seldom shown, but against which she was powerless to assert herself.

"I am not at liberty to tell you. Audrey has had a narrow escape from what would most assuredly have been an unhappy and disastrous married life. I am very thankful, and it will be a lesson to us, I hope, to keep in our own station, among the folks we have known, and in whose lives there is nothing to hide."

In these words Maria Hayes heard the death knell of all her ambitious hopes. She burst into tears, which were very real, but the tears were for herself. Her husband knew that, and did not seek to wipe them away. For once a little hardness towards her crept into his heart, and he turned away.

"Audrey is at the Rectory, you say? How did she go?—on her bicycle?"

"No, she is driving Firefly in the cart. I must say you are behaving in a perfectly horrid way, Geoffrey. You don't seem to realise what this means for us; how it will humiliate us everywhere. I shan't be able to hold my head up for ever so long."

"I shall be able to hold mine higher than ever. Try to look upon the merciful side of the thing. You would not have wished Audrey to marry a man and be unhappy ever after."

"No, of course not; but she would not have been. He was such a perfect gentleman. And, Geoffrey, don't forget that your standard is very narrow and provincial. People who move in Lady Adela's sphere don't take quite the same view of things. I could gather that from lots of things she said. And, after all, even if he has done something wrong, he ought to be forgiven, even the Prayer Book says that. He was so fond of Audrey, too; she could have made him a better man supposing he needed to be made better."

Geoffrey Hayes merely shook his head, and, after regarding her for a moment with a sort of wistfulness, quietly left the room. His own heart ached intolerably, though he could not have told why. Most of all, perhaps, he felt for Helen Secretan.

Presently he looked into the boudoir again.

"I'm going down to the Rectory to fetch Audrey. I'll tell her on the way up. Try not to let it worry you too much, and keep uppermost the thought that we have saved our girl from an unhappy married life."

But Mrs. Hayes refused to be comforted; and while her husband struck across the fields on foot to Midcar Rectory, she, sitting among the ruins of her ambitious hopes, sought eagerly for a way out. She began a letter to Lady Adela, begging her intervention and her help to clear up the strange mystry which had culminated in such disaster.

He arrived at the Rectory only to be informed by Bates that Miss Hayes was not in the house, and that his mistress was lying down.

"Yes, sir; the Rector is in. Please come in," he said; and Mr. Hayes followed him to the study. Secretan was there alone, sitting in his armchair at the desk, apparently lost in thought.

At sight of the visitor he rose, and tried to appear cordial and interested. Geoffrey Hayes thought he seemed pale and out of sorts.

"I'm seeking Audrey. Her mother told me she had come here, but the page tells me she has gone off again."

"She called about three, but I did

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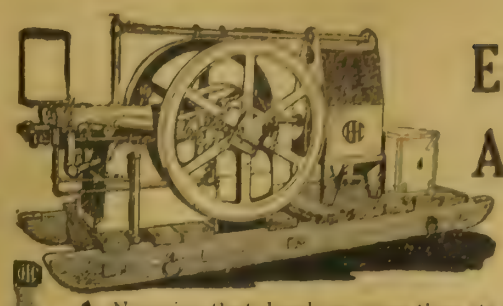

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Ocean Limited Early on Route.

SUMMER TIME CHANGE ON INTERCOLONIAL RAILWAY JUNE 2.

The summer change of time on the Intercolonial Railway will go into effect on June 2nd, when the famous Ocean Limited will be placed on the route between Montreal, St. John, N. B. and Halifax, N. S. with connections for and from the Sydneys and Prince Edward Island in anticipation of an early rush of summer travel. The time schedule is expected to be practically the same as last year, which means that the "Limited" will leave Montreal at 7.30 p.m. reaching Levis at midnight, and giving through passengers the opportunity of seeing the famed Matapedia Valley during the earlier hours of the morning and a view of the Restigouche River and the blue waters of the Baie des Chaleurs. The beautiful valley of Wentworth, N. S. will be seen in the more mellowing light of early eventide, and the train will reach Truro at 8.00 o'clock connecting with the through night express for the Sydneys and arriving at Halifax at 10.00 p.m.

The Maritime Express under the summer schedule will leave Montreal at 8.15 a.m. and through passengers will have the daylight journey through Quebec, and a view of the majestic St. Lawrence as it widens in its course to the sea. Making connection at Moncton with morning express for St. John the Maritime continuing eastward will reach Halifax at 13.30.

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not see her, and my wife was not at home then. Won't you sit down, Mr. Hayes? It is unusual to have an afternoon call from you."

"Oh, quite. A most unpleasant thing has happened with regard to Audrey, Secretan. Her engagement with Major Hunt is off."

Secretan started, and his furtive eyes eagerly sought to read the expression on the face of Geoffrey Hayes.

"Off! Off!" he repeated. "Why, what has happened?"

"I have learned that he is an unsuitable husband for my girl, and I've told him so. He accepted his dismissal, and has gone off to London. I need not say more; perhaps you can fill in the blanks. I wish to Heaven we had never seen them. It was my wife's doing, Secretan. I wonder how it is that women are so seldom pleased with the station to which it has pleased God to call them, but torment themselves and everybody else by fighting and struggling for something different."

Secretan made no response. His heart was beating dully; and the cloud, at first no bigger than a man's hand, was now threatening to obscure his whole horizon. He was in torment; had been, indeed, since he had seen his wife and Gerald Hunt in Mardocks Wood; and now, more than ever, he was at sea.

"Now I have to tell Audrey," continued Hayes dully. "I'm hoping her native good sense will come to her aid, and that she won't mind. Ghastly business, isn't it?"

"Oh, very," replied Secretan vaguely, then turned away. There was a moment's awkward silence, then it suddenly flashed upon Geoffrey Hayes—and he could have cursed himself for the stupidity which had prevented him seeing it before—that there were wheels within wheels; and that probably Helen Secretan's heroic frankness would cost her more than any of them knew. He had never seen Secretan look like that; his face had lost its frank, pleasant outline; his very tone was morose and sullen.

Hayes almost shivered as he withdrew into himself. It was a ghastly situation. Bound to silence by Helen, not knowing how much or how little the Rector knew of her story, he could do nothing, nothing at all, except take himself off, and pray that these tangled threads might be unravelled by some more skilful hand than his. He would see Helen again one day, of course, and, if he dared, would question her about her husband. But it was a task little to his liking. He was a shy man, and cherished the old-fashioned ideas about the sanctity of married life. To lift the veil even for a moment to the prying eye was, in his estimation, to change it from a sanctuary to a vulgar place.

"I expect Audrey went straight home again, then," he said awkwardly. "I must go and find her. Goodbye, Secretan; sorry I intruded with my troubles. Life doesn't seem to get easier for us as we grow older."

"No," said Secretan dully and hardly. "It gets harder—much harder."

For the first time in his life, perhaps, Hayes felt himself at a loss; he could not find the fitting word. More than most men, he possessed that fine large gift of personal tact which can always throw itself into the breach. But to-day it deserted him. He felt glad to shake hands rather quickly and to leave the Rectory. He was conscious of an awkwardness; he did not know what to do or say. He must continue to feel this, he was aware, until he had seen Secretan's wife again. He remembered, now, that he had been selfish throughout that trying interview at the Mills; he had not once thought of Helen really, or of the possible difficulties the position she had taken up might create with her husband.

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Secretan did not offer to accompany him even to the gate, and as he passed through it alone, the sharp click of a pony's hoofs on the hard road and the tinkle of belled harness filled him with sudden exhilaration. He hoped it was Audrey's turnout, and it was. She drew up sharply, surprised at sight of him; but filled with an evident joy.

"Papa, whatever are you doing here at this hour of the afternoon, and where is Gerald?"

"I had to come home earlier. I may get in, I suppose? I am so glad to find you are driving alone."

"Get in, of course. This is the first bit of luck I've had to-day, positively it is. I called here when I came down first, and Mrs. Secretan was not at home. Then I went out to the Court Farm to find myself de trop there. Get in quickly, you lazy daddy! I have the most wonderful news for you. It will positively make mother's hair stand on end."

Hayes hardly smiled. He feared the shadow that must quickly descend on that bright, speaking face. If he could have spared her he would.

Before he stepped into the cart he asked her to move down and let him take the reins.

"But why, daddy? I like driving myself, and Firefly likes it, too. I'm not at all sure that he will approve of your hand on the reins.

"I'd like to try him, dear, for a mile or so."

Audrey obeyed, but betrayed her surprise and dissatisfaction.

"Well, for my news. When I got to the Court Farm, who do you think I found there drinking tea with Miss Jane?"

"I don't know, I'm sure."

"Why, Sir Anthony Brede, and I'm nearly certain he has asked her to marry him and that she has said 'Yes'! They as good as told me. Did you ever hear of anything so delightful? I shall positively love telling mamma; and don't you agree that it will make her hair stand on end?"

Hayes faintly smiled. It was rather an astonishing bit of news, but he was too preoccupied to estimate it at its full value.

"Well, when you come to think of it, it isn't at all an unsuitable match; and Sir Anthony shows his good sense."

"I think it's too lovely for anything. I'm simply dying to hear what Mrs. Secretan thinks about it. Well, and what have you done with Gerald?"

"Gerald," said Hayes slowly, "has gone to London."

"To London! But why? He didn't say a word about it this morning."

"No, he would not, for he did not know then that he would be going. Steady boy! Don't ask me any more questions till we get beyond the village, dear. What a nuisance these stray curs are! The place is infested with them."

Audrey looked puzzled, and in a few seconds they cleared the last house in the village and were out upon the open moorland road.

Then Geoffrey Hayes slackened his hand on the reins and turned to look Audrey full in the face.

"My little girl," he said unsteadily, "you believe, don't you, that your old dad loves you, and that he would lay down his life for you, if need be, cheerfully?"

Audrey did not answer immediately; a sort of slow apprehension gathered in her eyes.

"You will believe that he would not willingly do anything to hurt you or to make you unhappy, don't you, Audrey; and surely you can trust him, can't you?"

"Why, yes daddy. But what does all this mean? Something has happened. What is it?"

He turned once more to look her quite fully in the face.

"Gerald has gone to London. I have sent him there, and he will not

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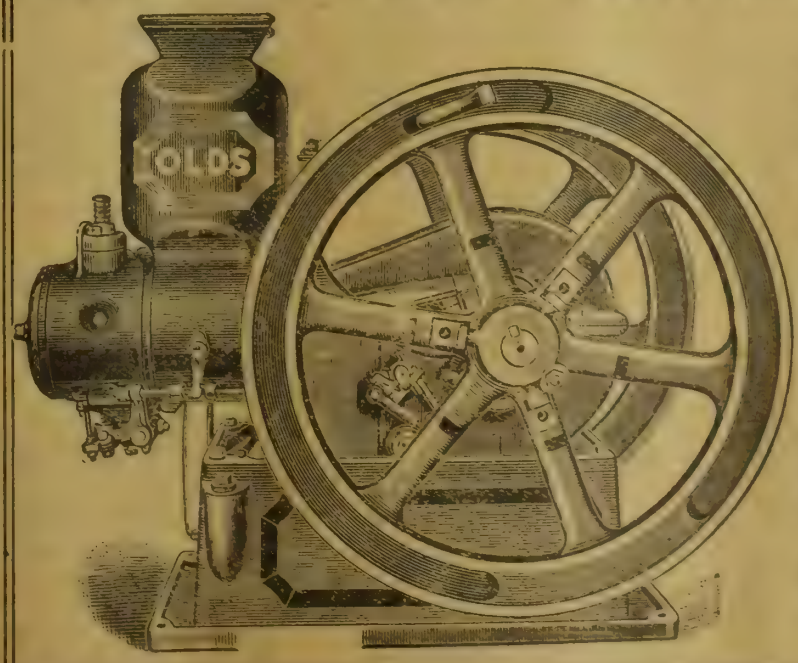

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come back. The marriage will never take place. You will be a brave girl, won't you, and meet it in the right spirit? Because—because it is going to be the best thing for you."

"Has he—has he tired of me, then?"

"No, no. It is hard for me to explain. Indeed, I can't explain, my darling, except this. He is not worthy of you. I have learned that. He would never make you happy. Better—far better—a little heartache now than years of misery. You will not make it harder for me, Audrey? I have to ask you to trust me to the uttermost. I can't answer your questions."

She was so long silent, looking across the purple shadowland of the moor, that presently he drew up and put an anxious arm around her.

Then the floodgates of her heart were opened, and she sobbed upon his shoulder unrestrainedly.

"I—I don't want to marry anybody, daddy. Keep me beside you always. I don't want anybody but you." And before they reached High Ridges, Geoffrey Hayes knew that relief was the uppermost feeling in his girl's heart.

(Continued in next issue).

"Moses in the Bulrushes."

"Oh, mamma, look-a-here! look-a-here! cried a childish voice, shrill, yet half chocked with laughter. "Mamma, where are you?"

"Here on the porch," called the mother, smiling in sympathy with the merry sound. A moment later two girls came rushing through the long hall to where she sat in the cool shade.

It was the first Monday of the summer vacation, and all the time while the mother was toiling over the "week's wash," that hot June morning, she had been thinking how good it was to have the girls—aged seven and nine—at home to care for year-old baby Dene. The hard, hot work was all done now, however, and she settled herself for a good rest ere getting dinner, when May's merry call aroused her.

As they came into view, a wave of vexation swept over the mother, but she could not help smiling at the forlorn looking object Daisy, the oldest, was holding towards her at arm's length. It was baby Dene, but so wet and bedraggled, so covered with black mud, as to be utterly unrecognizable,—not much like the clean, white-robed child the girls had taken with them to the meadows back of the garden three hours before.

"This is Moses, mamma," giggled May, and the baby swung his arms and chuckled in concert. "The Jiption Princess found him in the bulrushes." Here all three shrieked with laughter, and the baby wriggled from Daisy's hands into his mother's lap.

"What are you talking about, May," demanded Mrs. Smith, trying to be stern—but the dimple in her cheek betrayed her shamelessly as she began taking off Dene's wet clothes.

"Well, you see, mamma," began May apologetically; "it was like this: We played with baby till he went to sleep, and everything we could think of till he woke up. Then in poking around the big bunch of rushes on the edge of the cowslip patch, I found an old basket. Then I thought of our Sunday school lesson and I said to Daisy, 'Let's play Moses in the bull rushes.' She said, 'All right,' so I was the Hebrew mother. I put Dean in the basket real nice, hid him in the bulrushes, and then laid down in the tall grass and watched the way the mother did in the story."

"But, my dear," interrupted Mrs. Smith, "wasn't it wrong to have baby there in the water? He might have drowned."

"Oh, mamma, there wasn't any water—not so much," and May measured a fraction of an inch on her finger, while Daisy took up the story.

"That was so, mamma, for I was the 'Jiption Princess, and as I came down to the river to bathe I said to my maids—I played there was a lot of them with towels and soap and things—I said, 'There isn't much water here,' and they said, 'If your gracious Highness will come beyond the rushes, your imperial grace will find more.' So I went on and I found the infant Moses in the bulrushes, and—"

"Oh, mamma," interrupted May, again convulsed with laughter at the remembrance, he had crawled out of the basket and was playing in the mud, just tickled to death. He had dug his hands in it and rubbed his face, and he was so mad when Daisy rescued him that he just kicked and squealed. But we laughed so hard he had to laugh too, and oh, Mamma, didn't he look cute? How I wish papa could have seen him!"

Two of Mrs. Smith's neighbors had come up in time to hear the whole laughing recital. One listened with a cross, disappointed look, the other smiled broadly.

"I'd give both those girls a good whipping if they were mine," declared the one, as she eyed the disreputable-looking baby, who was smacking his lips over his dinner, pausing now and then to giggle his enjoyment of the situation, and wiggle his muddy toes out from beneath his mother's enfolding apron.

"Not I," declared Mrs. Smith, with a merry laugh. "This is the best joke that ever happened to baby Dene. To be Moses in the bulrushes' and rescued by a princess, with a mud bath thrown in, is an experience that doesn't come to many infants of his tender age. The mud bath was an accident, and without punishment, the girls will see that it never happens again."

Mrs. Grant looked disgusted with such soft-heartedness, but the other neighbor, Mrs. Sawyer, nodded approval. The girls, who had listened with shocked faces to Mrs. Grant's suggestion, gave their mother a hug and kiss, then ran merrily off to prepare baby's bath and clean clothes.

Which mother's idea was best?—Mrs. Rye Johnson.

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"O, you're not a mother, you don't know anything about this"

So said one sister to another while the two were considering a troublesome question in the family who made this remark.

"True, dear," was the reply, "yet do not forget that I am a child, though grown up, and shall always remember how I felt in experiences at our old home when the same principal was at stake as in this case now between you and your boy who just left the room, showing that he rebelled against your

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authority. Our beloved parents never had, as you have, the opportunity to learn that each child has an individuality of his own, and that if this is ignored or disregarded by parents, the child is discouraged or angered. If naturally timid and yielding, he is wounded and finally discouraged ; if independent and high-spirited, he is made resentful and hard-hearted.

"Further, in either case,,an estrangement sorely to be deplored, is sure to come between the heart of the child and the grown-up, and the implicit confidence, which the child must have in the parent if the right relations are to exist, is being destroyed by every such manifestation of defective insight and good judgement.

"Do you not think that you should in a kind way reason with the boy, not arguing, but giving him a chance to tell how he sees the matter, and, then guided by the spirit of God, explaining to him the principle involved? If he understands fully that he is to choose, reason, decide some things and then take the consequences, will he not soon become more willing to desire your opinion and to get you to tell him what is best? Often it will require more time, more forbearance, more seeking wisdom from above, than it does to give hasty, peremptory commands and then with harshness force outward compliance—for you know yielding is not obedience unless it is from a willing agreement with the parents and true confidence in them. Surely you do not wish to drive your child from you ; but a small gulf has begun and it will widen if you continue this way of doing.

The harm done can be counteracted, however, if you truly do as you would be done by, even though it is humiliating to you."

After a short silence the mother said, you are right, sister. I believe you have a true mother-heart and that you have received the teaching of Him, who is all-wise. I shall seek Him as I never have and do differently."—Sarah A. Bowen.

In the Kitchen.

A little nutmeg should be grated and mixed with the stuffing intended for a turkey or a goose. It will greatly improve the flavor.

If, when baking brown bread, a teaspoonful of treacle is added, it will be found that the loaves will cut quite easily without crumbling.

To remove inkstains from linen, put melted tallow on the mark, then wash out, when it will be found that both the ink and tallow have disappeared.

While frying Spanish onions always put a saucepan lid over the top of the frying pan, so as to keep in the steam and flavor. It will also make the onions cook quicker.

Knives should never be dipped in hot water, as is loosens the handles. The blades may be placed upright in the water in a jug, by which plan the handles will be kept dry.

Eiderdown quilts are apt to lose their lightness after being used for some time. To restore them, beat well with a cane beater, and hang on the line on a dry day for a few hours in the wind.

To beat the white of an egg quickly so that it will be stiff, be sure that the basin or plate is perfectly dry. If the process is carried out in the open air it is quicker.

To boil eggs for invalids or children bring the water to a boil, take the saucepan off the fire, and place the egg in it for five minutes. This will cook the egg perfectly without making the white hard and indigestible.

It would surprise you to know of the great good that is being done by Chamberlain's Tablets. Darius Downey, of Newburg Junction, N. B., writes, "My wife has been using Chamberlain's Tablets and finds them very effectual and doing her lots of good." If you have any trouble with your stomach or bowels give them a trial. For sale by all Dealers.

CONCRETE

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your Post Office your Province

WRITE your name and address in the lines above, clip out this ad, and mail it now. We will send, by return mail, a book that tells how to make yours a "Twentieth Century" farm.

You wouldn't be satisfied to use a scythe to cut your grain, when a modern harvester can do it so much better, would you? Nor to use the old soft-iron plough-share that your ancestors walked behind, when you can get an up-to-date riding plough? Every Canadian farmer realizes the advantages of Twentieth Century Implements.

The next step is

The 20th Century Material—Concrete

Concrete is as far ahead of brick, stone, or wood as the harvester is ahead of the scythe or the riding-plough is ahead of the old iron plough-share.

Concrete is easily mixed, and easily placed. It resists heat and cold as no other material can; hence is best for ice-houses, root-cellars, barns silos and homes It never needs repair; therefore it makes the best walks, fence-posts, culverts, drain-tiles, survey monuments, bridges and culverts. It cannot burn; you can clean a concrete poultry-house by filling it with straw and setting the straw afire. The lice, ticks and all germs will be burned, but the house is uninjured.

It is cheap—sand and gravel can be taken from your own farm. Cement, the only material you must buy, forms from one-seventh to one-tenth of the whole volume.

Do you want to know more about Concrete on the Farm? Then write your name and address in the lines above, or on a postcard, mail it to us, and you will receive by return mail a copy of

"What the Farmer Can Do With Concrete"

Not a catalogue, but a 160-page book, profusely illustrated, explaining how you can use concrete on YOUR farm.

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CANADA CEMENT CO., Ltd.
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WOOD

Pride in Your Garden

will be natural, and justified, if you plant Ewing's Reliable Seeds and give them proper care. The bumper crops which, for forty years or more, have been grown from

EWING'S Reliable Seeds

are explained by the care which we take to give our customers only specially selected seeds that are clean, fresh, healthy and true to type—seeds that produce grains, roots, vegetables and flowers of which the growers may well be proud. **Write for our handsome illustrated catalogue,** and if your dealer hasn't Ewing's Seeds order from us direct. 22

EWING'S RELIABLE SEEDS

Wm. Ewing & Co.
Seedsmen
McGill St., Montreal.

The Advertising Pages of the Maritime Farmer Will Help You to Get the Best Value for your Money

Suffered With Nerve Trouble For Two Years.

WAS IMPOSSIBLE FOR HIM TO SLEEP.

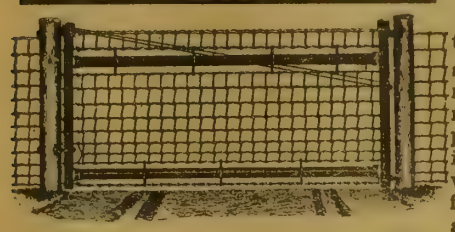
Mr. Chas. W. Wood, 34 Torrance Street, Montreal, Que., writes:—"For two years I suffered with nerve trouble, and it was impossible for me to sleep.

It did not matter what time I went to bed, in the morning I was even worse than the night before. I consulted a doctor, and he g .ve me a tonic to take a half hour before going to bed.

"It was all right for a time, but the old trouble returned with greater force than before.

"One of the boys, who works with me, gave me half a box of Milburn's Heart and Nerve Pills. I took them and I got such satisfaction that I got another box, and before I finished it I could enjoy sleep from 10 p.m. until 6 a.m., and now feel good."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, or 3 boxes for $1.25. They are for sale at all dealers, or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.



BUY NO FARM GATES UNTIL UOU KNOW ALL ABOUT CLAY STEEL FARM GATES---the strongest most durable. best farm gates made. If you have

Clay Gates

On Your Farm

you will have easy gates to work---Clay Gates will never need re-hanging; cannot burn, rot or blow down; will not bend or break and will swing over snow in winter. Made of

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free of cost any parts or the entire gate giving out for such reasons.

H. Ralph Steele,
Manager.

high carbon steel tubing---far superior to gas pipe. May cost more than some gates but worth more. Made in many styles and sizes a gate for every purpose.

60 Days Free Trial

We will send one or a dozen Clay Gates for 60 days free trial. Prove them before you buy them. 20,000 Clay Gates sold last year on these terms.

Send today for illustrated price list. Read guarantee above.

Canadian Gate Co., Ltd.
54 MORRIS ST. GUELPH, Ont.

MUMFORD BROS.
Produce Commission Merchants
MUMFORD'S BUILDING, ARGYLE ST.
Halifax, N. S.

Personal attention given to sales of u tter, Eggs, Hogs, Beef, Poultry, Fruit. Vegetables, etc., Consignments solicited. Proceeds of sale remitted promptly, Halifax prices sent on application.
TELEPHONE 906.

Lame back is usually caused by rheumatism of the muscles of the back, for which you will find nothing better than Chamberlain's Liniment. For sale by all Dealers.

FLORICULTURE.

A. M. C., Sussex Corner, writes:—Last year my Sweet Peas were covered with small green bugs; would you kindly advise me what to do, if they come this year?

Procure from the cigar factory three or four pounds of tobacco stems and steep them, in say, a gallon of water. After cooling, dilute to color of ordinary weak tea and syringe plants on both sides of leaves. A few applications will suffice. Do not allow this to come on the bloom or buds. The first few cold nights will effectually dispose of these pests and a good heavy rain is apt to destroy them.

S. E. G., Dorchester, N. B., writes:—I have several Tea Roses that were in pots, about five inches across, when I planted them. They have not grown much this summer until about a week ago when red sprouts seem to be coming out all over them. When should I repot them? What size pots should be used? How should they be treated after potting? Should some of the sprouts be picked off?

Repot the Roses as soon as there is the first appearance of frost, use as small a pot as you can getthe ball of roots into without shaking off any more soil than you can help. After potting, water thoroughly and place in a cool, shady place out of doors, where they can be protected from frosts and sprinkle the foliage twice a day, for a week. Every fine day as soon as the nights get cool take them in the house (this is fall treatment). Spray frequently, especially the under side of the leaves. By all means leave the sprouts untouched as upon these you depend for your blooms. Roses treated thus should bloom for at least, two months.

Begonias, flowering varieties, like a temperature of say 60 degrees at night and plenty of sun and moisture,

The Rex type requires the same temperature at night, no sunshine but strong light. Do not spray or sprinkle foliage or handle any more than necessary. Keep soil just moist. Use light soil and have perfect drainage. The Tuberous rooted Variegated, likes plenty of sunshine or will do out of doors in partial shade. It does best during the spring and summer and should be dried off during the winter.

The Parlor Asparagus, likes plenty of water on its foliage and only a moderate amount on the soil, partial shade and a warm room. It requires repotting frequently and if root bound is apt to lose its foliage.

H. A. M., writes:—What shall I get for my garden that I can have to cut for table use?

Hardy plants bloom earlier than most of the annuals and last from year to year. For annuals Rubena Asters may be cut freely and they will bloom again in a few weeks.

Live Stock Improving in Cumberland County.

Editor Maritime Farmer:—

Spring has come and the maple sap is running freely.

Last season, being very dry, crops were not so good as usual.

Our Agricultural Society is in a flourishing condition.

There has been a great improvement in the quality of live stock in these parts during the past few years. Well-bred Shorthorns, Guernseys and Jerseys are in evidence in every direction. There are also a few Ayrshires that are able producers at the pail.—Isaac Gray, New Annan, N. S.

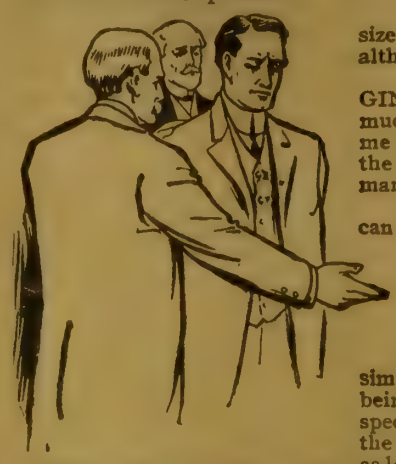
DOCTORS AFRAID TO OPERATE

Could Not Remove Stone From The Bladder. Gin Pills Enabled Him To Pass It.

JOLIETTE, P. Q.

"During August last, I went to Montreal to consult a specialist as I had been suffering terribly with Stone In The Bladder. He decided on an operation and was assisted by another doctor. They said the calculus was larger than a bean and too hard to crush, and that they could not take it out.

I returned home suffering greatly, and did not know what to do, but was recommended by a friend to try GIN PILLS. I bought a box and found relief from the pain at once. I took a second and third box of GIN PILLS after which I went back to the specialist.



THEY COULD DO NOTHING FOR HIM

He told me the calculus was reduced in size, still he could not relieve me of it, although he tried for two and a half hours.

I returned home and continued to take GIN PILLS as they reduced the pain very much, but I did not expect they would relieve me of the stone, but to my great joy, I passed the stone on October 3rd, and am now a well man and very happy.

I am sending the stone to you so that you can see for yourself what a great work GIN PILLS did for me. GIN PILLS are the best medicine in the world and because they did so much for me, I will recommend them all the rest of my life".

J. ALBERT LESSARD.

Isn't it wonderful? Just think of these simple pills, that even children can take, being able to perform what the greatest specialists in Canada could not do. Surely, the days of the miracle have not passed away, as long as we have Gin Pills. These wonderful pills dissolve stone in the bladder or kidneys because they are a natural solvent for uric acid, which causes calculus. If GIN PILLS are not sold in your neighborhood, send us 50c. for a box or $2.50 for 6 boxes. Sample free if you write us mentioning this paper. National Drug and Chemical Co. of Canada Limited, Dept. M F Toronto.

MANGA-TONE BLOOD AND NERVE TABLETS are especially for women and girls to make them well and strong and rosy. 50c. box. 113

SALES HAVE INCREASED MORE THAN ANY OTHER

It is a well-known fact that, during the last three years, the sales of

EMPIRE

Cream Separators

have increased more than the sales of any other cream separator. There must be some reason or reasons for this great showing. These are some of the reasons:

Empire Separators skim to a trace. There isn't a machine made their equal for close skimming under difficult farm conditions.

They are easy to clean. They don't spatter oil. And they have anti-splash steel supply tanks.

So nearly frictionless they almost run themselves. Children delight in operating them, and can easily do so with perfect safety.

They are durable. Years of service have proven their true worth. Their cost per year of service is less than any known separator. Years in advance of competing makes.

Your choice of the two standard methods of cream separation. We make both cone and disc machines. Both are fully explained in our latest catalogue. Send for a copy. Get reliable, accurate information on the subject. 31

EMPIRE CREAM SEPARATOR CO. OF CANADA, LIMITED.
Winnipeg, Toronto, Montreal, Sussex.

Agents everywhere in Canada—Look for the Empire Sign.

Marsh Hay.

There are many things written for the farmer, showing the best method of doing things, but still we find many men all around us working in the same way as their fathers. I suppose farming is like many other callings, for instance, religion, law, medicine, &c. We have colleges, libraries, and great staffs of men preaching and teaching the different departments; yet, the most of us do not know very much about those questions, so I suppose the best we can do is as the poet says, "Sing them over and over again."

The following points I think are well worth our attention.

We often hear it said, "do not feed the stock any Marsh Hay; it is a very poor article, and no thrifty farmer can raise good cattle with it."

They say, "feed good, upland hay and then the stock will be worth more." I have fed both marsh and upland hay, and I believe I can make as much out of the marsh hay stock and perhaps more than I can out of those fed on upland hay, considering cost and value of the upland hay. Now, I say this, raise all the upland hay and stock you can, and then in addition to that raise all the marsh hay and stock with it, that you can. You can do it in nearly the same time.

The marsh hay will make second class manure; it will raise two or three good crops, and will help you to get more upland hay.

We keep the young stock in pens during winter. We throw in the hay broadcast and they seem to eat it up better than when tied in a stall, especially, if you feed a little sparingly at first. The cattle keep clean and do better than when tied. The liquid is absorbed and makes the manure good. But you need a number of pens for the different ages. We open the door for them to go to watering place and close it on return, so you see there is not much extra work, when tending the other good stock.

Here is the main point: Cut the marsh hay early, when it is worth as much again as when cut late. You see most marshes grow as soon as upland and if it is left late, it becomes over ripe, woody and fibrous, and the mornings are getting short, the marsh will not get dry until late in the day and the hay will get a swampy and disagreeable odor, and will then be a very poor quality of feed, as we know clover or timothy cut late in the fall is a very poor article of feed as well. It is said that if marshes are cut early, they will not bear as much, though I do not see much difference. If even so, we would do better to have less and get it a good quality.

A dam should be kept at the foot of the meadow and the flood gate should be closed to over-flow it early by catching the fall freshet, and in spring as well. The wash from the highland is a great fertilizer for the marsh. If no dam, the wash from the hills would mostly run down the brook and be lost. Do not drain a marsh very much as it will not grow as much hay, unless dry enough to be cultivated. Drain just enough to keep the water off the surface, then a while before making the hay open the drain. Now, we know it costs to raise upland hay, but very little to grow marsh hay. All we have to do is to go and get it. I would say, get all you can of both marsh and upland hay and you will find that the marsh will help to increase the business of the farm.—W. A. Hebb, Bridgewater, N. S.

Seed Corn Testing.

The first essential of successful Corn Growing is the planting of good seed. Good Seed Corn is scarce this spring. The wet fall resulted in much soft

"I want to Tell You a Big Secret of Building"

DEAR FRIEND:

I am sitting here at my desk, thinking how I shall write many people. I am an old man now—70 years old. 50 long years of my life were given over to making a perfect roof for any kind of building (for everybody has to use roofs), and the right roof works day and night to help a man's daily work.

A roof on a building is the weak link in a chain. Good foundations and good timbers rot—good products stored under a poor roof are spoiled because the roof doesn't protect. I want to stop that big waste. After years of work, I now know how to do it.

I worked for a long time to get a roof that could be easily laid by anybody. It had to be neither too heavy nor too light. It had to be smooth and clean. It had to be a real water shedder, no matter how long it was laid. It had to be proof against ice, snow, lightning, sun and time.

My Oshawa Shingles are the result. I worked for years to find a metal that wouldn't rust. I worked on an iceproof lockjoint. I have a shingle to-day that is the best ever put on the market. People buy it from me all around the world, it is so good. These people see how worth-while a good roof is.

I know my Oshawa Metal Shingles so well, and anybody can lay a roof in them so well and easily, that it makes the safest and best roof you can get. But I have a new 100-year metal now. My Oshawa Shingle is Perfected. A 100-year roof is a mighty good article—far better than even old-style, hand-shaved cedar shingles. I know my roof is four times as good—and it won't burn.

Not only that—when you get a roof, get the best you can find. Here is fireproof and lightning-proof protection for you for a century. Yet the roof costs a common, every-day price.

My "Roofing Right" book lets you dig down into my Oshawa Shingle proposition. I want you to send for it. You can get all the facts. Even if you do not use my roof this book is worth money because it gives valuable building hints. My Oshawa Shingles are on the best and most modern buildings. These are pictured in the book. You can get it for a post-card. Send that card to-day. My book will help you in your plans.

Yours truly, G. A. Reed

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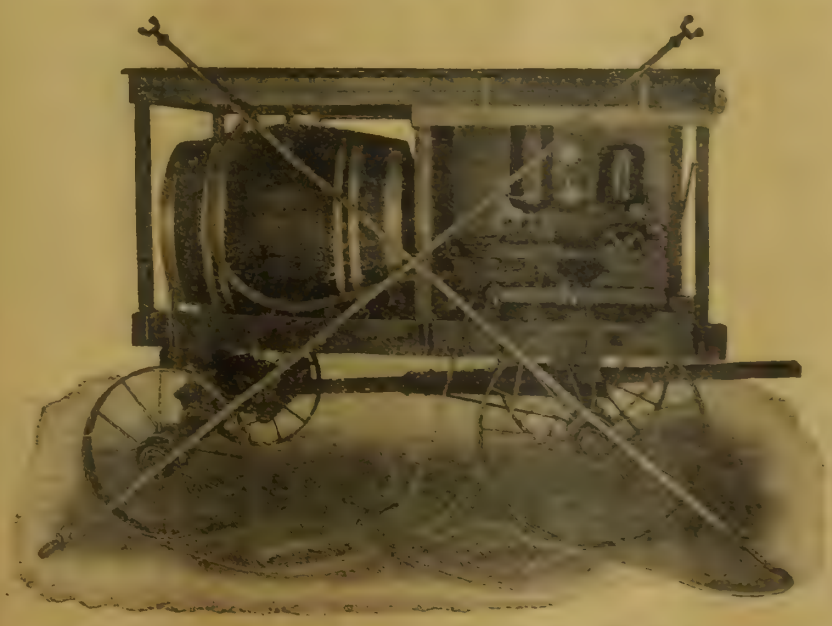
The PEDLAR PEOPLE Limited, of Oshawa Established 1861

OTTAWA	WINNIPEG	QUEBEC	REGINA	EDMONTON	VICTORIA	CHATHAM	LONDON
423 Sussex St.	76 Lombard St.	127 Rue du Pont		563 Third St. W	434 Kingston St.	200 King St. W.	86 King St.
VANCOUVER	TORONTO	CALGARY		ST. JOHN, N.B.	PORT ARTHUR	MONTREAL	HALIFAX
108 Alexander St.	111-113 Bay St.	1112 First St. W.		42-46 Prince William St.	45 Cumberland St.	321-3 Craig St.	16 Prince St.

"Direct your inquiry to the Pedlar place nearest you. They will answer you promptly and save you time.

"Simplicity" Power Sprayer



If you want satisfaction in a Power Spraying outfit buy a "Simplicity." It is compact, simple and the most durable machine on the market.

Not Better than the Best, But Better than the Rest.

Also a complete line of Hand Sprayers and Parts.

Manufactured and Guaranteed by

Illsley & Harvey Co.,
Limited
Port Williams, N. S.

Catalogue Sent on Application.

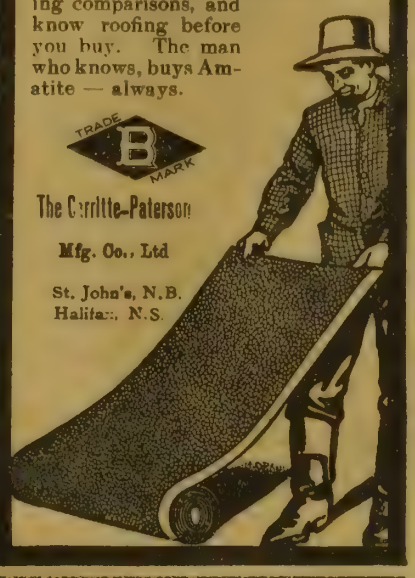
Amatite ROOFING

Mineral Surface Needs No Painting

IF you intend to build, use Amatite. You will do away not only with all roofing troubles, but with all unnecessary roofing expense, because Amatite *needs no painting or attention after it is laid.*

It has a wear-resisting *mineral surface* on top instead of paint. Amatite is easy to lay, fire retardant, attractive and absolutely waterproof.

Send for sample and make roofing comparisons, and know roofing before you buy. The man who knows, buys Amatite — always.



TRADE B MARK

The Carritte-Paterson Mfg. Co., Ltd

St. John's, N.B.
Halifax, N.S.

corn that failed to dry out properly, and the extremely cold weather of the past winter injured much of it, so so that a large percentage of it is unfit for seed purposes.

The Essex Branch of the Department of Agriculture this winter tested large quantities of Seed Corn. Samples were taken from the farmers' wagons at the elevators, from the cribs, or in some cases the Corn was brought to be tested. Of all the samples tested, not over 50 per cent. germinated strong and quick. From samples that were well dried and kept in the house, from 8 per cent. to 95 per cent. germinated.

MAXWELL'S

JEWEL FOOD-CUTTER

is a daily necessity in every home.

You are always cutting up meats and vegetables for stews, etc.

A knife is awkward and dangerous —a chopping bowl is cumbersome.

"MAXWELL'S JEWEL" cuts everything as you wish—fine, medium or coarse because it has five cutting plates.

Easily cleaned—easily worked—very strong, durable and handsomely finished.

Insist on your dealer supplying the "Jewel" because this is the only food cutter made in Canada—and is superior to anything imported.

DAVID MAXWELL & SONS, ST. MARYS, ONT.

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No Corn Grower can afford to plant corn this spring that has not been tested. Ten or twelve ears will plant an acre. If you plant only two ears that will not grow out of ten or twelve, that means that you are working and cultivating ten acres of Corn, but in reality harvest but eight acres. This loss would pay for testing many times over. With poor seed you often get but half a crop, but by testing every ear before planting and discarding the poor ones you can be absolutely sure of getting a good stand. You should not only plant corn that will grow under favorable conditions but you should plant strong seed so that it will grow if the weather conditions are unfavorable.

With our late spring, it is essential that you plant this season only Seed Corn that will germinate quick and strong.

HOW TO TEST SEED CORN.

It is easy to test Seed Corn, and it takes but little time. Make a shallow box 30 inches long by 20 inches wide by 3 inches deep, inside measurements. Any size box will answer but the above size is very convenient. Fill the box abodt 1½ inches deep with damp sawdust or sand. Over this sawdust place a cotton cloth ruled into spaces 2 x 2 inches. Number the spaces along the top of the box from 1 to 15 and along the left hand edge from 1 to 10. In this way each square can be located readily.

Having selected the Corn to be tested, take each ear, in the butts drive a nail to hold small pieces of cardboard numbered from 1 to 150. Take ear No. 1 and remove two kernels from near the butt, two from the middle, and two from near the tip, from opposite sides in each case. Do not take all the kernels from one place or from one side of the ear. Place six kernels in space No. 1 with the germs upward, and the tips pointing down. After all the spaces have been filled, place a cotton cloth over the kernels very carefully. Then put on another large cloth that laps over the box a foot or more in all directions. Fill up the box with sawdust or sand, fold edges of cloth over top, and dampen with warm water. Place in a warm place and keep moist. In about five days the test will be complete. Lift out the top cloth containing the sawdust and then lift the next cloth off very carefully. Start at No. 1 and throw out all ears that did not grow. Keep only those ears in which every kernel of corn grew, and that germinated strongly. If seed corn is limited, keep those ears in which five kernels out of 6 grew, and in no case plant for seed, corn of poorer germination or that germinated weak.

By testing 150 ears at a time, seed sufficient for 12 to 15 acres may be tested at once, if seed is good. By having more boxes larger amounts may be tested quickly. After testing and throwing out all poor ears, remove the tips and butts of the ears and plant the remainder.

The only way to be sure you have good Seed Corn is to test it. As a rule replanted Corn amounts to very little. You cannot afford to have to replant it, especially this year, as the spring is backward and the season likely to be shortened.

Smut in Oats.

From the calculations received from several hundred inquiries, it is a safe estimate that a large per cent. of the oat crop is annually destroyed by smut. Figure the loss that smut causes on your farm at your average oat yields and average price per bushel. To prevent this loss would cost about $1.00 in formaldehyde and $1.00 in labor for each forty acres. The prevention of this loss is a very simple proposition.

Oat smut is a minute plant that grows in the tissue of the oat plant. The only parts that are visible to the naked eye are the masses of seeds (spores) by which it reproduces. These ripen and are ready for their period of rest just about the time the oat plant is in flower. The chaff is then loose and open and the wind blows these spores over the field, allowing them to lodge on the young berries that are forming. Here they stick fast until the seed is planted and the young oat plant begins to grow. At this time the smut spore starts to develop, sending its filaments into the young oat plant and taking up its nourishment.

The time to kill the smut is while it is in the granary. The simplest method is to use a poison that will not injure the oats, but is fatal to the little spore. Formaldehyde gas is such a poison.

Commercial formaldehyde is a water solution of formaldehyde gas. This solution comes in varying strengths, but the one commonly sold and the one upon which all calculations are based is 40 per cent. Care should be taken that the bottles and cans in which this solution is kept are always corked tight, as the gas escapes very readily and the solution loses strength.

TREATING SEED OATS WITH FORMALDEHYDE.

One pound (pint) of formaldehyde in 40 gallons of water will treat 40 bushels of oats. The equipment needed is a clean floor, a barrel, a sprinkling can, a scoopshovel and plenty of blankets, sacks or tarpaulin. Proceed as follows:

1. Spread out 40 bushels of oats on the floor five or six inches deep.

2. Mix one pound of formaldehyde (40 per cent.) with 40 gallons of water. Stir well.

3. Sprinkle the oats with the mixture in the barrel until they are saturated. It is well at this point for one man to shovel the oats into a pile while another sprinkles. They are not exposed to the air for so long a time and less gas is lost. See that the pile is thoroughly soaked when finished.

4. Cover the pile at once with the blankets and sacks so as to keep the gas in where it will be effective. (It is this free gas that does the work).

5. Leave the pile covered for six to ten hours (over night), then remove the blankets and shovel out thin to dry. Shovel them over from time to time.

These oats may be sown as soon as they are dry enough to run through the drill. Make allowance for the swollen condition of the seed in setting the drill. It is a convenient plan to treat the oats late in the afternoon, then they can be left over night in the pile without danger of heating.

If more oats are treated than are needed for seed, they may be fed after one or two days. All the gas will have escaped.

RAMSAY'S PAINTS

For Practical Painting

RAMSAY'S PAINTS are the best—made by practical men backed by 70 years experience to with-stand the summer's heat and winter's cold — one gallon is guaranteed to cover 360 sq. ft. on wood in fair condition with two coats of paint that won't fade—crack or peel.

RAMSAY'S are the paints you want at the price you want.

Ask your dealer in your town.

A. RAMSAY & SON COMPANY, MONTREAL.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure — you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

MADAM, ARE YOU LIKELY TO BECOME A MOTHER SOON? 16

I have glad tidings for you—childbirth need be dreaded no more. Follow my advice—be happy now, and all will be well with the child and yourself. My remedy,

Mothers' Cordial or Herbal Tonic, builds up the reproductive organs and nerve centres—makes confinement easy, safe and quick, and rapidly recalls the glow and cheering health of vigorous womanhood.

Mothers' Cordial is also a rebuilder of run-down girls—girls strained or overtaxed with too much work. It purifies the blood—makes menstruation prompt and easy, and is accountable for many of the clear, beautiful complexions you admire so much.

This valuable remedy contains no stimulants or hurtful drugs. It is simply a scientific blend of Indian herbs, whose virtues are well known to medical men. Write for free circular. At your druggist's, or by mail, $1.00 per package, or 6 packages $5.00.

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Sanitary and Odorless

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list.

THE STEEL TROUGH & MACHINE CO., LIMITED,

DEPT. 103 TWEED, Ont.

An Advertisement in the Maritime Farmer will sell your surplus stock.

Spraying Notes.

(1) "Have a good strong man to work the pump and keep up as high a pressure as possible. The spraying material should come out of the nozzle with a strong singing or humming sound that can be heard for some distance around."

(2) "Lime-sulphur should not be applied when the temperature is below freezing point or while the trees are wet with rain or dew. As much wet weather is generally experienced about spraying time, one cannot always wait for a long dry spell. If, however, you can get the spray applied about ½ of an hour before or after a rain, it will be effective and will not wash off unless followed by long, continued, and heavy rains."

(3) "Unless properly taken care of, spraying apparatus will easily get out of order. Wash the tank out each night with clean water and also pump some of it through the hose, rod and nozzle and either wash in boiling water afterwards drying thoroughly or place in kerosene or some other oil over night."

(4) "If the packing of the pump gets worn, replace with new packing, otherwise the power cannot be kept up."

(5) "Lime-sulphur is strongly caustic and it is necessary to have all connections very tight to prevent leakage. Vaseline and leather gloves are used to protect the hands. The horses and harness may be protected by a blanket or light cover."

(6) "Handle with care all spraying materials as most of them are poisonous. Everything should be kept correctly labelled and under lock and key. Lead arsenate should be mixed in wooden, glass or earthen vessels."

For information regarding the planting and care of orchards, write to: The Provincial Horticulturist, Fredericton, N. B.

SPRAYS TO USE.

1st Spray—Applied during April, before buds begin to open.—Winter strength of Lime-Sulphur:—1 gallon of concentrated Lime-Sulphur, 9 gallons of water.

2nd Spray—Applied just after leaf buds open—1 gallon concentrated Lime-Sulphur, 38 gallons water, 2 lbs. lead arsenate.

3rd Spray—Applied just after blossoms fall—Same formulae as for 2nd.

4th Spray—Applied two weeks after the 3rd—Same formulae as for 2nd.

Note.—The first three sprays are of greatest importance.

Sheep and Pony Raising in Newfoundland.

The petition for the killing of dogs in St. John's East, outside the Municipality of St. John's, is being largely signed in each settlement for the encouragement of sheep-raising; in fact a majority of the people have already signed the petition, as the agents of the society who are taking around the petition reported recently; but they have decided not to be satisfied with a bare majority, but aim to secure the signatures of at least three-fourths of the voters before presenting the petition, and this will be accomplished easily during the present month. Thus sheep raising will receive the boost it needs in St. John's East. In St. John's West the raising of ponies is being encouraged instead for this year. Great credit is due the St. John's Agricultural Society for the able manner in which they are unmistakeably advancing the interests of the farmers of the districts of St. John's East and West.

"METALLIC" Ceilings and Walls

Some of the most imposing residences in our large cities are decorated throughout with METALLIC Libraries, Dining-rooms and Kitchens. It is an artistic yet fire-proof decoration, and will save you money by reducing your insurance rates.

If building a new home METALLIC should be put on without hesitation as you will save the cost of lath, plaster and paper, besides having a cheaper yet fire-proof and vermin-proof interior.

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Try METALLIC in your kitchen or bath-room, this is where its qualities are put to the severest test.

METALLIC is very artistic—hundreds of varied designs to select from—heavy beam effects, fancy scroll and panel patterns made to suit every room.

We shall be pleased to quote you if you tell us the size and shape of your ceilings or walls.

Agents Wanted in Some Localities.

THE **METALLIC** ROOFING CO. Limited

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MANUFACTURERS

1187 King Street West, TORONTO

BRANCH FACTORY: WINNIPEG AGENTS IN PRINCIPAL CITIES

HARROWS

In these days of expensive labor you can't afford to buy any Harrow but the one which will do your work best and quickest—'twon't pay you.

Our Lever Harrow is a great one; best there is going by long odds. It will harrow steadier, and just to what depth you want it. Then you can regulate the draft on the horses and get the greatest amount of work for the least pulling.

A touch of the levers and the teeth are just where you want them at each round; not too deep at first, to ease the horses, then afterwards when the top soil is loose, throw them down and your getting something done.

Saves time because less scrapes do. Made in sizes 9 and 11 Tooth, Single Section. 15 and 17 Tooth, Double Section.

BAILEY-UNDERWOOD CO., Limited. **New Glasgow, N. S.**

Use of the Land Roller.

(Continued from page 541).

particles. The water is drawn from the subsoil to the topsoil. It may be drawn from a depth of 4 feet, but the increase in moisture is mainly in the first foot of surface soil, though there is a slight increase of moisture to a depth of 18 inches. The total amount of water in the soil is not increased, but simply changes level. In fact, the quantity of water in the soil is apt to be decreased through the greater evaporation at the surface of the rolled ground. Whenever possible, the ground should be covered with a loose earth mulch to prevent this loss by evaporation.

The main precaution to be observed in using the roller is not to roll when the ground is wet. There is also an increased danger of soil erosion, due to the firming and compacting of the surface. To prevent this and also to prevent excessive evaporation from the rolled land, it should be harrowed lightly as soon as possible after rolling.—C. E. Skinner.

The Attractive Lawn.

Here are a few words about lawn making. They are not written exclusively for persons living in cities and towns. They are for farmers, and particularly for the small towns. There is no law against a farmer havinf an attractive front yard. The ground he wastes around his home would cost thousands of dollars in most American cities. Michael F. Ahearn, assistant horticulturist at the Kansas Agricultural College, a lawn maker if ever there was one, says:

"Many lawns in small towns are spoiled by carelessness or ignorance in placing the house. You find one house sitting back 40 feet and another built on the property line. If owners would meet, draw up a plan and agree on something before beginning work, every community would be benefited.

"This applies, also, to planting shrubs and hedges and trees. For all these things are the trimming of the lawn. Too many property owners spend all their money on the house and forget the lawn and the other surroundings. The lawn should be planned before the house is decided upon and before you buy the land you should know something about it. If you are buying a ready-made house, just finished, you should know what is under the recently laid sod. The yard may be filled underneath with lime and stone and plaster and other junk. This is a trick often discovered, and always resulting in disappointment for the man who would like to have a lawn.

"First, you must have rich soil. Any land that will grow corn will grow grass. One foot of soil will grow grass, but two feet is better. Barnyard manure makes the best fertilizer, but I should add, also, plant food. If you have a sandy soil, the plant food will hold it together and keep the moisture. Commercial fertilizers are all right. Nitrate of soda put on before a rain is all right. Bone meal and wood ashes are good but the land may need lime. If you find sorrel growing there, it needs acid. Wet, heavy soil must be underdrained. Plow deeply, disc, harrow and rake it. The soil must be fine. Some of the best lawns around the most costly homes have been made in just this way. Do not imagine that, because your yard is small, it cannot be plowed. This is exactly what it needs, unless you have the time or the disposition to spade it, inch by inch, carefully. Sowing the seed with a drill will give the best results. If you have a large lawn—that is, an acre—and desire to sow broadcast, three or four bushels sown both ways and rolled in will be required. By sowing in drills is meant using the drill attachment to the ordinary wheel hoe.

"Fall sowing is the best. The grass gets a good start before the weeds begin.

"Cut your grass when it is three inches high, and keep it about two inches high. The cuttings should be about two weeks apart and should be continued until September first, anyway. Let the cut grass remain on the lawn. When it becomes a burden, rake it off, but do not do it until you have to.

"Water your land thoroughly. You might as well throw the water over the roof as to sprinkle the grass. This spray brings up the roots seeking moisture and they dry out and die. Soak the ground thoroughly for 30 minutes to an hour.

"Kentucky blue grass leads all mixtures. In some parts of Kansas Bermuda grass will do, but it starts late and frost kills it and bare spots are the result.

"Weeds, the chief offenders, are crab grass, sorrel, dandelions, dock and broad and narrow leaf plantain. I fear the crab grass worse than I fear the dandelions. The only way to get it out is to get the roots. You may cut a dandelion every morning right after you shave and, like your whiskers, it will grow again before night. Sprayers, even, have succeeded only in killing the tops. Nature's weapons are the best, and every man who desires a clean lawn in this respect should spend at least as much time on his knees as he does in church. One dandelion has been known to have 10,000 seeds.

Pure Seed and Clean.

Pure, clean seed is the demand now among the best class of farmers. The time has about passed when the farmer of ordinary intelligence will buy or sow filthy seed of grass or grain. The pure seed proposition has been so thoroughly discussed by experiment stations, farmers' institutes, agricultural journals and writers on farm and crop topics, that there is no excuse for any farmer being ignorant of the injury he is doing his land and himself by sowing filthy, diseased and impure seed.

There cannot be too much agitation however on this subject. Each state should pass such laws in restraint of the sale of impure seed as would force the commercial trade, whether by producer or dealer, to dispose of nothing that would not stand the most exacting test. This is the only way to rid the country of damaging effects that impure and filthy seed is having in opposition to clean crop culture.

Every farmer should protect his own seed and crop interests by providing himself with the necessary machinery and appliances to thoroughly clean

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition!
It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

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BRUCE'S SEEDS

BRUCE'S BIG FOUR FIELD ROOT SPECIALTIES

BRUCE'S GIANT ROSE FEEDING BEET—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long keeping, large size and heavy cropping qualities of the mangel. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The best of all field carrots. 1-4 lb. 68c., 1-2 lb. $1.24, 1 lb. $2.30, postpaid.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant Feeding Beets and equally easy to harvest. 1-4 lb. 20c., 1-2 lb. 34c., 1 lb. 55c., postpaid.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking: handsome shape, uniform growth, purple top. 1-4 lb. 18c., 1-2 lb. 24c., 1 lb. 40c., 4 lbs. $1.40, postpaid.

FREE—Our handsomely illustrated 112-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1912. Send for it.

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SOVEREIGN CONSTRUCTION Co., Ltd.
859 Lumsden Bldg., Toronto.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

and renovate the seed he uses in all his grain and grass sowings. There is no excuse now for using seed that is not clean, since the market is supplied with mills, graders and cleaners that will put any kind of farm seeds in perfect condition to render the best results in crop growth.

This question of pure seed, of select seed, of the seed with the highest and strongest germinating quality, being most advantageous from a seed point of view, as well as commercial value, is being demonstrated on thousands of farms all over the country. The use of the seed cleaners and the sowing and planting of pure, clean seed, is having its convincing influences upon the observing crop producers.

The old idea that any kind of refuse seed is good enough to sow, that it will reproduce its kind, no matter about its conditions; that the weed seed and filth matters not, as the soil is full of such plant life at any rate ready to start when opportunity offers, etc., is about displaced by the more progressive ideas and practices of planting and sowing the best of everything desired in crop improvement, and having it in the best possible condition of development.

The Motherless Foal.

The time has now arrived for the foals to be putting in their appearance. If through misfortune one loses its mother, the question is what will be the best to do with it? In very many cases they are either destroyed, or they dwindle about or a few days and then die if not properly seen after. If a foal has not sucked from the mare, it is best, if possible, to procure a supply for the first two days from a freshly-calved cow, in order to open its bowels; a young cow is much to be preferred to an old one. Once having started using the milk of a particular cow, no change should be made to any other. To make the milk as near as possible like that of the mare it is necessary to add water and a small amount of sugar. At first give one part of water to two of milk and after a week or two the proportion may be one to three. Later water may be excluded. Add just enough sugar to make it taste a little sweet. The milk should be fed warm as soon as drawn from the cow; cold, stale milk is sure to provoke diarrhoea. If the foal shows signs of constipation, give a small dose of castor oil, and also inject into the rectum some glycerine and water. If the milk of a newly-calved cow can be procured, its purgative properties may be sufficient to open the bowels, in which case laxatives are unnecessary. In other respects, treat and feed the foal the same as if it were being reared on its dam until six or seven months old.

The Fox Terrier.

The fox terrier is a small black-and-white disturbance which afflicts and delights many families. The Fox Terrier has an active, expressive mouth, a lean, well-shaped head, talkative eyes, and a nose which leads him swiftly from one misdemeanour to another. Originally, he had a liberal tail, but it has been revised by man into a mere stump. The Fox Terrier is a house pet, and is clean and dainty in his habits. He lives on meat, milk, potatoes, mice, old shoes, curtains, books, opera hats and tablecloths. In return for his diet he guards the house with unremitting ferocity. No burglar can come near without dislodging an eruption of barks from the faithful brute.

He also guards the house against all cats, dogs, taxi-cabs late pedestrians, bats, owls, dead leaves and moonbeams which may chance to pass the place at night. Losing the Fox Terrier is a favorite diversion of the family which owns him-or at least pays for the dog license. He is as difficult to keep around the house as a husband. The ordinary Fox Terrier has a large acquaintance around the town. Owing to his wandering disposition, the Terrier is loved twice as much as ordinary dogs. He is frantically welcomed when he returns home, and the family is grateful when he goes away again and gives it a rest. Very few people have seen a Fox Terrier die because he always loses himself first. —Sporting Times.

Tidying Up the Farm.

At the end of the winter season, when the buildings and yards are once more emptied of the cattle and horses, it is not unusual on most farms for the bulk of the farm staff to be set to work to clean the sheds of the dust, cobwebs, and dirt which has accumulated during the lengthy occupation of the stock, and to throw the manure in the yards into shapely heaps, so as to make the premises at least approachable for those who may have business there. If it can be managed the lime-wash brush should be freely used at such times, for it sweetens the place, not only for next summer, but for next winter as well. Yards should also come under review while the tidying up fit is on. There ought not to be much litter lying about. Next, gate-ways and fences are often calling for attention at the beginning of the grass season. If there be a defective place in a hedgerow likely to be forced an inquiring beasts or horse, the better plan is to protect it with a rail at once, and thus remove the temptation. Or if a gate needs new posts, fix them while time can be spared, and do not postpone the evil day until the posts suddenly snap and leave a promising field of grain or mowing grass open to the inroads of [illegible]. Lastly, when these outdoor repairs are made good, do not forget to remove the worn-out rails or gate-posts. Unless this be done there can be no tidying-up in reality.

Preserving Fence-Posts.

After an exhaustive series of experiments, a Wyoming farmer says that "the best treatment, and one which was eminently successful in preserving the posts, was dipping the lower ends in crude petroleum and burning off the oil a sufficent distance to come above the ground when set. This seems to drive hot oil into the post, which, with the protecting char cover, keeps it from decay.

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Whatever your job of painting—whether you do it yourself, or have a painter do it—be sure of a GOOD job, soonest done, best looking, longest service, by getting

M-L MAPLE LEAF PURE PAINTS

All ready for use. Simply choose the right color from the forty-seven shades in which M-L paints are made—take off the cover, stir a bit and start to work. You'll find M-L Pure Paints spread easier, cover more surface, give a smoother, glossier finish than any other paint you could buy.

Use M-L Paint and You Won't Have to Paint so Often

Other paints soon fade, blister and flake off because other makers haven't yet found out, as we have, how to mix a special ingredient with other pure materials to make an elastic, durable paint that stands extremes of wear and weather, and keeps its lustre for the longest time.

Decorate the walls and ceiling with M-L FLAT WALL COLORS. More economical, more artistic, more sanitary than wall-paper. Easily applied and very durable. Washable, too. 16 shades. Try them.

Made in 47 colors for every painting purpose by Imperial Varnish & Color Co., Limited, Toronto

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Name .....

Address .....

Changes in the Number of Cattle, Sheep and Swine During the Last Ten Years in the Countries Adhering to the International Agricultural Institute.

The continual rise in the price of meat has long formed the object of discussion in a large number of countries. The unusual cost of this, as well as of other important commodities, has been evident for many years past, and has given rise to various investigations as to the causes.

The question is certainly a complicated one and we do not pretend to offer a solution of it here, but merely present a few points for study.

The first point to be taken into consideration is whether, during the last ten years, the total number of live stock has increased or decreased, and by how many. It should then be ascertained whether the number of live stock has increased or decreased in proportion to the population. The total number of live stock may have increased, but perhaps not to such an extent as to keep pace with the increase in the population; or, on the other hand, in some countries the rate of increrse in live stock may be greater than the rate of increase in the population, which without considering other influences, would result in the exportation of the surplus of such countries to countries in which home production did not suffice to meet demands.

Such figures are presented in the following tables. Data are given only for cattle, sheep and pigs, these animals supplying the great majority of meat used for human consumption.

As will be seen from the tables, the period between the two dates of the returns of live stock varies, in the majority of countries, between 8 and 10 years. Two important exceptions are in the cases of Spain and Italy; the period for the former being 18 and for the latter 27 years.

CATTLE.

In the group of countries considered, the total number has increased. The number per 1,000 inhabitants has also increased, the population having increased by 13·1 per cent. and the cattle by17·6 per cent.

It is interesting to note that, although the total number of cattle in Europe has increased, the number per thousand has decreased; for while the population has increased by 13·2 per cent., the number of cattle has only increased by 4-4 per cent. In America and in Australasia the proportion increase in cattle has been greater than that of the population. In Canada there has been an increase during the years 1900-10 of 138 cattle per 1,000 inhabitants.

SHEEP.

In the group of countries considered, the total number has increased, but the but the number per 1000 inhabitants has decreased, the population having increased by 13·5 per cent. and the number of sheep by 8·5 per cent. It should be noted that in Europe not only has the number of sheep per 1,000 inhabitants decreased but also the total number. There has been a decrease of 27 sheep per 1,000 inhabitants in Canada during the years 1900-10.

SWINE.

In the group of countries considered, the total number has increased. The number per 1.000 inhabitants has also increased, the population having increased by 14·0 per cent and the number of swine by 19.8 per ceut.

It is interesting to note that though the total number of swine in Europe has increased the number per 1,000 inhabitants has slightly decreasd, the population having increased by13.2 per cent while the number of swine has increased only by 12·9 per cent.

In America the proportionale increase in the number of swine is greater than that of the population, and in Australasia less.

When examining these tables it should be borne in mind that the breed of the animals is almost everywhere continually improving, so that a given number of live stock to-day represents, in all probability, a larger quantity of meat than the same number of animals ten years ago. Swine have increased in Canada during the years 1900-10 at the rate of 35 per 1000 inhabitants.

A Good Thing to Have.

Why is it that some farmers seem to find more hours in a day than others? They do not start earlier to work in the morning, nor do they finish later at night; but they get more done in their ten or twelve hours than the rest of us do in a longer day. Every minute seems to count for something with these farmers.

It is just a case of system in work. System has been defined as the "essential factor of successful business," the "keynote of modern industry," and so forth; but to bring it down to a fine thing it is just a case of using one's head to save one's feet.

There is no business that calls for a greater attention to details than farming. The number of small things that we farmers have to think of if we are to make a success of our business is tremendous. We have greater need of system in our work than have most business men. Too many of us are trying to run large farms without a semblance of systematic management.

We are acquainted with an old farmer who runs a large farm by hired labor, has several branches of live stock to look after, and everything goes like clock work. In explaining his success to us this farmer attributed it to his knowing every day and generally two or three days in advance just what work was going to be done on a certain date and on just what hour of every day the small "chores" were to be done. Systematic management of this kind can be made to save many hours of labor and enables us to do much more work in a given time. We farmers of all men need system in our business. It will cost us nothing but a little mental effort to make our management systematic.—Farm and Dairy.

Letter Heads Good Advertising.

Printed letterheads and envelopes are good advertisers. When a letter comes, it makes a big difference if it has a printed letterhead and envelope. It looks like business, and it is business of the best kind.

We farmers need such printed letterheads. There should be something for sale on every farm, and the letterhead can be made to advertise it very cheaply. It will also be found that the printed letterheads will have quite an influence on the person himself. The more he sees it the more pride will be taken in keeping up the quality of the articles for sale.

It is not accident that business men in all lines use the printed letterhead. They have found that it is a good business proposition. Those farmers who have tried it have found it both profitable and a source of pride. The cost will not be so much more than for plain paper. It may seem a little large, but then one wants to remember that he is getting a good many sheets and envelopes at one time.

Big Ben

Don't set your mind—set Big Ben

Don't bother *your* head about getting up. Leave it to Big Ben.

You ought to go to sleep at night with a *clear brain*—untroubled and free from getting up worries. You men, if you are up to date farmers, work with your brains as well as with your hands. Such a little thing as "deciding to get up at a certain time in the morning" and *keeping* it on *your mind* often spoils a needed night's rest and makes a bad "next day." Try Big Ben on your dresser for one week. He makes getting up so *easy* that the whole day is better.

Big Ben is not the usual alarm. He's a timekeeper; a good, all-purpose clock for *every day* and *all day* use and for years of service.

He stands seven inches tall. He wears a coat of triple-nickel plated steel. He rings with one long loud ring for 5 minutes *straight*, or for 10 minutes at *intervals* of 20 seconds unless you shut him off.

His big, bold figures and hands are *easy to read* in the dim morning light, his large strong keys are *easy to wind*. His price, $3.00, is *easy to pay* because his advantages are so *easy to see*. See them at your dealer.

5,000 Canadian dealers have already adopted him. If you cannot find him at your dealer's, a money order sent to *Westclox, La Salle, Illinois*, will bring him to you duty charges prepaid.

$3.00

At Canadian Dealers.

Spring cleaning is a very necessary part of poultry raising. The chicken yard should be thoroughly cleaned, all trash burned, the houses disinfected and the runs renovated. This will destroy disease germs and remove breeding places of insect pests, such as lice and mites. By thoroughly cleaning up the premises you may save the lives of many little chicks.

GARDEN SEEDER

Our Seeder has years of success behind it and the improvements recently added, makes it without doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. The flow of seed can be instantly stopped by a swinging cut-off operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. The covering wheel is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. The main wheel is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our Garden Seeders greatly increased. No better seeder can be built for accurate and fast sowing of turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn and all other kinds of garden seed.

Every machine carries our absolute guarantee.

Send us your orders today.

The Sussex Manufacturing Co. Limited, Sussex, N. B.

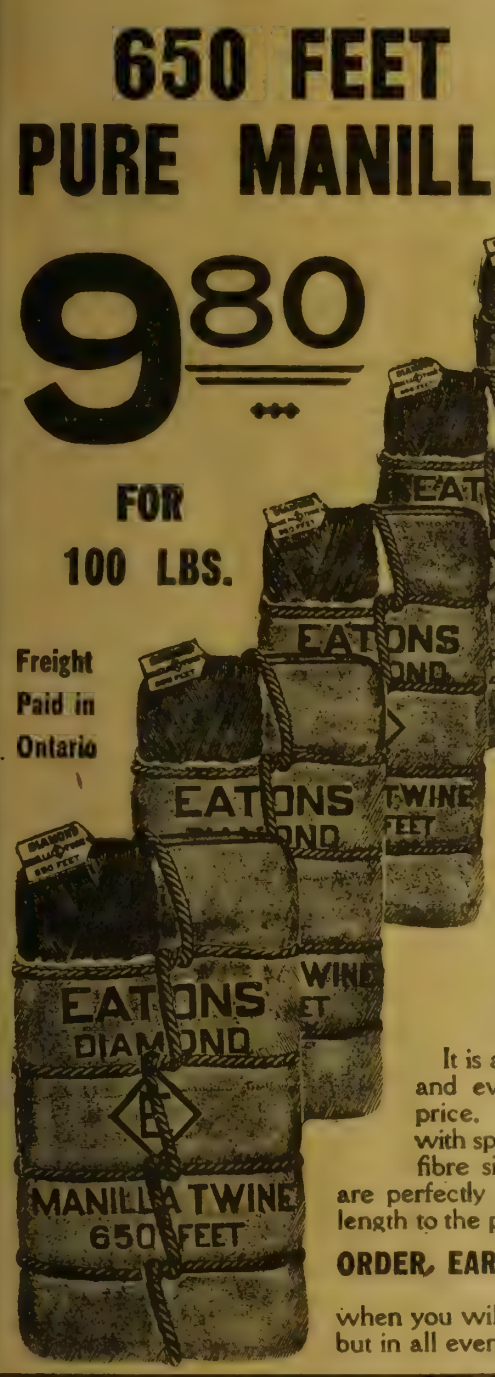
BINDER TWINE

650 FEET PURE MANILLA

9.80

FOR 100 LBS.

Freight Paid in Ontario



NOTE OUR LOW PRICES ON

GUARANTEED BINDER TWINE

TELL your neighbors about our wonderfully low prices for Binder Twine this season. We will esteem the courtesy greatly if you will tell your friends who use binder twine, and tell them we will be glad to supply them with binder twine at the prices quoted in our Spring and Summer Catalogue.

WHAT WE SAY OF THIS TWINE

It is as good binder twine as is made, strong as any made, smooth and even as any made. We say this regardless of make, brand or price. Our 550 feet Diamond ◈ Brand Binder Twine is prepared with special care from the choicest manilla hemp and first quality long fibre sisal. Our Diamond ◈ 650 feet is made from pure manilla. Both are perfectly free from lumps, snarls, thin or uneven spots, and will measure full length to the pound. It is unusually strong, therefore every inch of it can be used.

ORDER EARLY Send in your order promptly—to-day if possible. If you do not want us to ship the twine at once, say so in your order. State when you will want it, and we will ship it so it will reach you on the day specified; but in all events we would suggest that you order before July 1st.

550 FEET MANILLA AND SISAL

7.80

FOR 100 LBS.

Freight Paid in Ontario

SATISFACTION OR YOUR MONEY BACK

THE T. EATON Co LIMITED
TORONTO CANADA

50 LBS. IS THE SMALLEST SHIPMENT WE MAKE

Fighting Cutworms.

Tomatoes, cabbage, sweet potatoes and other vegetables and garden plants, and especially those which are started under glass and transplanted, are subject to serious injury by cutworms. They appear sometimes in great numbers in spring and early summer and frequently do severe injury before their ravages are noticed. The method of attack is to cut off the young plants at about the surface of the ground, and as these insects are of large size and voracious feeders they are capable of destroying many plants in a single night, frequently more than they could devour.

The usual method of control is by the use of poisoned baits. Take a bushel of dry bran, add 1 pound of arsenic or Paris green, and mix it thoroughly into a mash with 8 gallons of water, in which has been stirred half a gallon of sorghum, or other cheap molasses. After the mash has stood several hours, scatter it in lumps about the size of a marble over the fields where injury is beginning to appear and about the bases of the plants set out. Apply late in the day so as to place the poison about the plants over night, which is the time when cutworms are active. Apply a second time if necessary.

When cutworms occur in unusual abundance, which happens locally and sometimes generally in some seasons they exhaust their food supply and are driven to migrate to other fields. This they do, literally in armies, assuming what is called the army-worm habit. At such times it is necessary to treat them as we do army worms. While the methods which have been advised are valuable in such cases, these remedies may be too slow to destroy all the cutworms and we have to employ other methods. These include trenching, ditching, the plowing of deep furrows in advance or the travelling cutworms to trap them, and the dragging of logs or brush through the furrows. If the trenches can be filled with water, the addition of a small quantity of kerosene so as to form a thin scum on the surface will prove fatal. In extreme cases barriers of fence boards are erected and the tops smeared with tar or other sticky substances to stop the cutworms as they attempt to crawl over,

Clean cultural methods and rotation of crops are advisable as also fall plowing and disking.

You rarely ever hear of a horse getting cut on a well-stretched wire fence : it's that slack wire or a loose piece that so often ruins, and frequently kills, some of our finest specimens of animals on the farm. When one staple and a moment's time would have prevented this loss.

Is the Dairy Shorthorn Possible ?

(Continued from page 539)

it is surely a queer commentary on affairs in the stocker world of to-day. Everyone will agree with Mr. Campbell, who has travelled in Institute work quite extensively, that the condition of the live stock on the farms of the general farmer is most deplorable. It is this that has led to the present agitation. And our conclusions as to its cause will rarely agree with Mr. Campbell's when the situation is cleared. It is not the intention of those who would like to see the good old cows of a former day upon the same farms—to relegate Shorthorns to the dairy breeds. that is not the point at all.

GOVERNMENTS HAVE DONE LITTLE

It is a most deplorable thing that there is no bulletin nor study of the possibilities of this general purpose cow to be had in Canada. Go to the O. A. C., to Hon. James Duff, or to any other department of Agriculture in Canada, and the same confession must come as is seen in the following letter from Prof. G. E. Day, of Guelph: "I regret that I do not know of any special bulletins dealing with this subject. There have been numerous articles in the agricultural press from time to time in connection with the subject."

When we consider that the special dairy breeds have been bonused to such an extent in Canada; when we see their amazing progress; when we note the foregoing fact about this grand old breed, it seems about time that somebody had a vision and a courage big enough to do something for the average farmer. The indifferent farmer we will always have with us. The man who does not want to handle a special dairy cow, the mixed farmer—and he is legion all over the splendid country—is the man who ought to receive some attention. In this regard, these words—"the nearer we can come to a combination of the two (dairy and beef) for the ordinary farmer, the better. I know of no animal for that purpose better than the Shorthorn"—spoken by one of the Miller boys, of Brougham, whose family traditions are redolent of good cows, appears to hit the mark on the bull's eye.

Alvin Sanders, of The Breeders' Gazette, says in his book:—

"The average farmer, as distinguished from the dairyman and professional feeder, maintaining cattle as an incidental, albeit necessary, feature of a well-ordered system of mixed husbandry, requires not only milk, cream and butter in good supply for domestic consumption, but the cows that provide him with those products are also expected to raise a calf each year that can be profitably utilized in consuming the grass and 'roughness of the farm.'"

SOME DANGERS TOO.

There are dangers, however, in going after the questton without true ideals of what is required. As has been remarked, it would be a calamity to make "dairy form" a feature of our Shorthorn breeding. A record of performance would be all right if the animals came up to a certain standard.

Plenty of people would buy a bull without seeing it or his ancestors, provided his dam were a heavy milker. This would lower the individuality of the dual-purpose here. Against such a tendency we would need education.

It is this fact, I have no doubt, that will prove to be the undoing of many a Holstein and Ayrshire herd where signs are already not wanting that constitutions are weak.

The judging at the Chicago International of dairy Shorthorns gives 50 per cent. for beef and 50 per cent. for dairy points, and it is essential that that basis shall still obtain. That the board did not yield to the demands of some enthusiasts to increase the diary points is much to their credit.

A SUMMARY.

Let us sum up the question.

1. There is a big shortage of good beef cattle in the country.
2. Our supply of stockers henceforth must come from the small farm. The ranches are done.
3. A preponderating number of small farmers need a general purpose cow.
4. The present spread of dairy breeds has induced the small farmer to use these dairy sires.
5. This cross-breeding has done a big harm to our beef trade, and has not bettered, yea, has deteriorated the milk yields of the average cow on the farm.
6. The old big-bodied Shorthorn cow filled the bill exactly.
7. These cows are still possible, as our evidence here produced has proven.

THE DIFFICULTIES IN THE WAY.

The chief difficulty in the way of getting these cows on the farm is their scarcity. It is extremely difficult to find them in any part of Canada. They have them in England. Many are practically purebred, but can not come into the Dominion herd book. There is no way in the cattle world to produce a purebred by crossing-up, as in the Clydesdale association. So far as the Shorthorn herd book goes, it is a close corporation.

The beefing qualities have been paramount so long that many a cow today has all she can do to give enough milk to raise her calf. Thomas Bates' arraignment of Mason of Chilton might be equally as effective against many of our Canadian breeders of today. The demands of the ranch have been responsible for the situation, and that same demand has now proven the breeders' undoing. Our stockers, as John Campbell remarks, are a sorry bunch.

Secondly, we have no herd book appendix or official record for this valuable part of Shorthorn breeding. This, though, can readily be overcome, as it is being done in the United States.

There is a splendid opportunity for young men in every province of Canada to do their fellow-countrymen a splendid service by launching into the production and recording of this dual-purpose cow. The Breeders' Gazette, of Chicago, said in their report of the last International: "It is obvious that the milking Shorthorn must henceforth be reckoned with as an established type, with men of brains and purpose behind it, with the successful work of the British breeders as a guiding background for its advocates, and with a wide field of economic usefulness before it."

Service Table.

Date Served MAY	Mare 336 Days	Cow, 280 Days	Ewe and Goat, 147 Days	Sow, 112 Days
	APRIL	FEB	SEPT.	AUG
1	1	5	26	20
2	2	6	27	21
3	3	7	18	22
4	4	8	29	23
5	5	9	30	24
			OCT	
6	6	10	1	25
7	7	11	2	26
8	8	12	3	27
9	9	13	4	28
10	10	14	5	29
11	11	15	6	30
12	12	16	7	31
			8	SEPT
13	13	17	9	1
14	14	18	10	2
15	15	19	11	3
16	16	20	12	4
17	17	21	13	5
18	18	22	14	6
19	19	23	15	7
20	20	24	16	8
21	21	25	17	9
22	22	26	18	10
23	23	27	19	11
24	24	28	20	12
		MAR.		
25	25	1	21	13
26	26	2	22	14
27	27	3	23	15
28	28	4	24	16
29	29	5	25	17
30	30	6	26	18
	MAY			
31	1	7	27	19

Look at the label

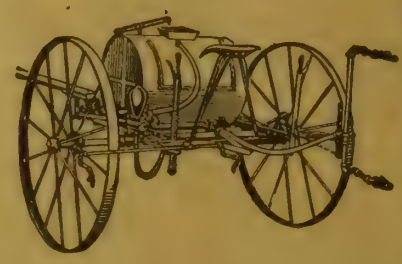
when you buy a varnish. The can with the "Cover the Earth" label contains a varnish made from the purest materials properly selected and aged to give long and satisfactory service. There is a special Sherwin-Williams Varnish for every use.

SHERWIN-WILLIAMS PAINTS & VARNISHES 74

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

O. K. CANADIAN

Four Row Sprayer



Don't waste your time and risk your crops by using a hand sprayer. An "O. K. Canadian" will spray a Potato Field or Cabbage Patch, while you are getting down a few rows with a hand sprayer.

Potato Bugs, Cabbage Worms, Blight, etc., don't have the ghost of a show of escaping when you drive over the fields spraying Arsenate of Lead or some other bug-killing compound, **"O.K. Canadian" sprays evenly** because it has the **best pump** on the market. Linings won't corrode. **Relief valve** regulates the pressure. **Agitator** is a positive mixer—and prevents ingredients from settling while the sprayer is in motion. Barrel holds 45 gallons of liquid. Get an "O.K. Canadian" Sprayer and keep your vegetables free of bugs.

"O.K. Canadian Potato Digger has taken the prize wherever exhibited as the champion potato digger of Canada and the United States.

Write For Our Book It tells how to make up your own sprays—and how to use them. Ask for Catalogue H

CANADIAN POTATO MACHINERY CO., LIMITED, - GALT, Ont. 6

FREE THIS MAGNIFICENT DOLL'S HOUSE AND HANDSOME IMPORTED DOLL

also TWO complete sets of beautiful furniture for the house and this lovely gold-finished jewelled ring

GIRLS, THIS IS A CHANCE OF A LIFETIME. DON'T MISS IT. This magnificent doll house is a perfect little palace. EXACTLY LIKE THE DRAWING IN EVERY DETAIL, with its quaint gothic roof with two chimneys, fine porch, lovely verandah and broad handsome front steps. The outside of the house is finished in red brick, the inside is beautifully papered throughout, and every window has curtains. IT IS FURNISHED COMPLETE with the loviest furniture you have ever seen—two complete sets, including sofas, chairs, tables, beds, bureaus, wash-stands, etc.

THE HANDSOME DOLL WE GIVE YOU WITH THE HOUSE is a little beauty Fully jointed so that she can sit down, turn her head, move her arms and legs, and she is dressed with fine underwear, shoes, stockings, etc., complete from hat to shoes.

Girls, if you want to secure ABSOLUTELY FREE this handsome doll house, lovely doll, the two sets of furniture and the beautiful jewelled ring, send us your name and address at once and agree to sell only 25 of our delicious perfumes at only 10c. each They come in six lovely odors, rose, carnation, lily of the valley, violet, lilac and heliotrope, and with each package we send a beautiful piece of gold plated jewellery to give free to your customers. This makes them sell like hot cakes. When sold, return us the money, only $2.50, and we will promptly send you all 5 hand some presents carefully packed, exactly as represented We arrange to stand payment of all charges right to your door with free goods covering same. DON'T DELAY, write us to day, and in a few days you can have the magnificent house and all the beautiful presents. Address— NATIONAL SALES CO., Ltd. Dept. H 284 TORONTO, ONT.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

BUY A WAGON

YOU CAN DEPEND ON

For convenience, strength and durability, get a T-A Handy Farm Wagon. Designed especially for farm work, will give everlasting service under the roughest usage to which a wagon can be put. And besides—it is easy on horses.

T-A Handy Farm Wagons and Wide-Tire Steel Wheels

Carefully and strongly built of the highest grade material, these T-A Wide-Tire Steel Wheels will carry 25 to 50 per cent. heavier loads without the least danger of breaking down or getting stuck.

We will be pleased to send you descriptive catalogue. Write for it.

TUDHOPE-ANDERSON Co. Ltd., Orillia, Ont.

Tent Caterpillars.

The very large number of eggs of Tent caterpillars which have been present on apple, wild cherry and other trees during the past winter are now hatching and the young caterpillars will soon make their conspicuous webs on the branches and twigs of trees.

During the spring and early summer of 1910 these caterpillars were extremely abundant in eastern Canada and were responsible for widespread and serious defoliation of fruit and shade trees. In all probability they will be even more numerous and destructive during this year. These caterpillars are very easily controlled in orchards, ornamental grounds, along roadsides and on shade trees of town and city, if the webs in which the caterpillars sheltered at certain periods of the day are removed. This can readily be accomplished by either burning the webs by means of a torch, or by cutting off and destroying the small branch bearing the web or nest. The best time for destroying the webs is during the early or latest hours of the day; in the middle of the day; the caterpillars are generally out of the webs feeding.

If these webs are not removed while the caterpillars are small many trees will of course be entirely defoliated and in consequence seriously injured. When the caterpillars are seen to have spread over the trees, they must be killed by spraying the foliage with a Paris green mixture (using one pound of Paris green, one pound of unslaked lime and 160 gallons of water) or arsenic of lead, three pounds in 40 gallons of water.

Orchardists and all citizens interested in the protection of our fruit and shade trees, should destroy as many of these webs as possible during the month of May.

Wild Oats and False Wild Oats.

According to a bulletin recently issued by the Seed Branch of the Department of Agriculture at Ottawa, there is a type of more or less harmless Wild Oat that is frequently confused with the true Wild Oat which is recognized as being one of the worst of weeds. This publication, prepared by Mr. Norman Criddle, describes field experiments with these two plants and explains by means of charts and descriptive matter their distinguishing characteristics. According to this authority, it is a comparatively simple matter to distinguish the two sorts in the growing stage as the false variety shows the same manner of growth as the cultivated oat while the true Wild Oat exhibits a different habit. In the seed form, the difficulty of telling them apart is greater, more especially in so far as some of the smaller varieties of the False Wild Oat are concerned. With the larger sorts, the difficulty of distinguishing them is more easy as an experienced eye will at once detect the False Wild Oat by its larger size and its usual close resemblance to the cultivated variety in which it is found. Generally speaking too, the outer seed coat is more open in front with cultivated forms and False Wild Oats so that the inner coat is broadly visible, whereas in Wild Oats, the edges of the outer coat almost meet. Readers interested in distinguishing Wild Oats from False Wild Oats would do well to write to the Publications Branch, Dept. of Agriculture, Ottawa, for a copy of Bulletin No. S. 7.

A Poultry Instructor for British Columbia.

Mr. J. R. Terry, formerly assistant poultryman at the O. A. C. Guelph, Ontario, and since January 1st, 1911, Provincial Poultry Instructor for British Columbia, has been appointed Chief Poultry Instructor for that Province. The vacancy caused by Mr. Terry's promotion has been filled by Mr. H. E. Upton, who for the past two and a half years has been Poultry Instructor under Professor W. A. Brown, at the University of Maine, Orono, Me. Mr. Upton is an ex-student of the O. A. C. Guelph, Ontario, Canada.

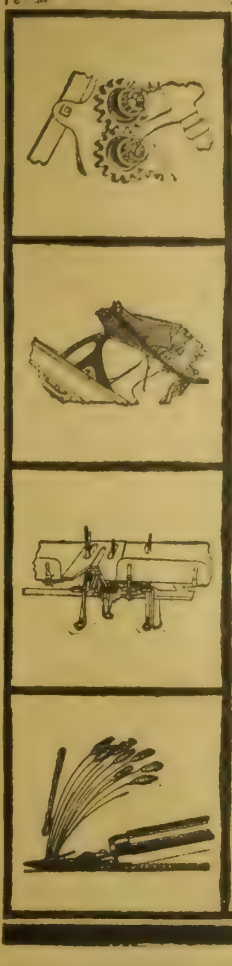
Prevention of Rooting.

The pig that goes rooting is a nuisance on every farm. Some breeds are worse in this way than others, and require to be restrained by the very practical method of ringing. As a rule, the long-snouted breeds are the worst sinners in this respect, and many an orchard can tell a tale of wasted hours in the rooting up of old pasture by grazing pigs.

The means by which the prevention of rooting may be accomplished is a very simple one. Single rings are sometimes effective, but invariably they fall out either through wearing away or tearing part of the cartilage of the nose. Two or three rings are therefore used in the case of bad rooters.—'Farmer and Stockbreeder.'

Motherless Lambs.

Now is the time that the motherless or "one too many" lambs are being brought to the house to be fed with milk. There is usually a hunt for a teat of some sort, and old glove fingers, etc., are often pressed into service. We have found the easiest way to give the food is to pour it into a basin and let the lamb suck it up with the help of a finger as a calf does. It does away with all danger of sour and dirty teats, and a lamb of three hours old seems quite able to manage. If the milk causes scour—it usually does—the best thing seems to be to dilute it with water and give a mixture of milk and buttermilk as soon as possible, gradually increasing the proportion of the latter; a little dry slops of good quality is a great help, too. Theoretically, weakening the milk is wrong, but practically, it seems effective, and a teaspoonful of gin or other spirit has a soothing influence if griping pains are troubling the little orphan.



Tall Grain and Short--Both Look Alike to a Deering New Ideal Binder

TO harvest successfully short or tall grain that is filled with undergrowth, to cut and bind it all without waste—these are the problems that confront the farmers of Eastern Canada.

Deering binder features solve these problems. The T-shaped cutter bar, which is almost level with the bottom of the platform allows the machine to be tilted to cut close to the ground without pushing trash ahead of the knife. This, together with the reel adjustments for very tall or very short grain, makes the Deering binder very successful in Eastern Canadian harvest fields.

The elevator projects ahead of the knife and is open at the rear to enable it to deliver the grain properly to the binding attachment. A third packer reaches up close to the top of the elevator and delivers the grain to the other two packers. A third discharge arm keeps the bound sheaves free from unbound grain. The Deering knotter never fails.

See the Deering local agent and have him explain fully all the strong features of Deering harvesting and haying machines and tools and binder twine. Get catalogues from him or write the nearest branch house.

Eastern Canadian Branches

International Harvester Company of America
(Incorporated)

At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Bldg., Chicago, U S A

Covers Canada From Coast To Coast

Brandram-Henderson, Limited, "English" Paint is 70% Pure White Lead—30% Pure White Zinc—mixed ready for use, with Pure Linseed Oil, Pure Turpentine and Dryer, and nothing else.

There is a B.-H. "English" Paint for every color you wish to paint. Ask for a sample card. 86

BRANDRAM-HENDERSON LIMITED

Montreal Halifax St. John Toronto Winnipeg

The Advertisers in The Maritime Farmer are worthy your confidence.

Sheep Dipping.

The method followed in dipping sheep at the Connecticut agricultural College is to use an inexpensive, galvanized steel dipping tank set into the ground so the sides are about the right hight to reach over conveniently. This is located at a convenient point and a dripping board is arranged for the draining of the sheep after the dippings, so no more solution be wasted than necessary. One man catches the sheep and passes it along when another takes it and places it in the tank where it is immersed and passed on to the draining board.

After standing a few moments to drain, sheep are turned loose, but not allowed to go where grass is growing as the drip might cause trouble, if they were allowed to graze where it has covered the grass. The commercial dip of two gallons to 112 gallons water makes a quantity sufficent for a small flock. A permanent pant is a good thing where many sheep are kept, and where this is arranged the sheep should stay for a few moments in a pen with a cement floor, so arranged that the drip will drain back into the tank. The college practices dipping right after shearing and repeats in about two months.

Drain Tile of Cement.

Near South Bend, Ind., are miles of cement tiles laid as far back as 1875 Both sewer pipes and drain tiles were made. Recent investigations made by a large manufacturer of cement indicate that in every instance where these cement tiles and pipes were properly made and properly laid they have performed their functions perfectly and are today in nearly perfect condition. The water seems not to have perceptibly worn away the concrete.

The secret of making good durable concrete tiles seems to be, first to use good materials, both of cement and coarser stuff ; next, to use enough cement to thoroughly fill the voids, and then to use the material in a fairly moist condition, to compress well and to keep the tiles moist untill they are well cured.

Where there is no excess of alkalies in the soil there seems reason to expect cement tiles to endure for many years without deterioration.

Dry Potatoes as Stock Food.

Within the last ten years the drying of potatoes for stock food has, says Prof. Price writing in the American Agriculturist, come to be an important industry in Germany. Dried potatoes as food stock are regularly found open the markets. The drying is done in special factories equipped with drying machinery. In 1907 there were only 118 factories, and last year 404. There are two forms in which potatoes are dried: "Schnitzel," similar to dried beet pulp, and "fiocken" or flakes. In preparing schnitzel raw potatoes are first shredded into pieces about the size of a small lead pencil and then dried. Potatoes are first cooked by steaming and then passed between hot rollers in making flocken. While the dried potatoes are used for all kinds of live stock they are fed mostly to hogs. Potato flocken is excellent for fattening purposes. Corn in the ration can be replaced by flocken.

A pitchfork, carelessly thrown around, is a wicked-looking instrumeut, through which many a farmer has had cause for regret— after it had crippled, killed or ruined some valuable animal or severely wounded some member of the family, endangering their very lives.

The Value of Dynamite.

One mistake that the farmers in the older sections of the country are making is failure to use the plant food in the lower soil. Where the land is plowed year after year to about the same depth there is a tendency to form a sort of floor or crust about the level of the bottom of the furrow. Through this crust the plant roots pass with great difficulty. Some of the finer roots never get through and as a result a very flat root system follows instead of one reaching down to lower levels of moisture and nutrition. This is the secret of the success with such plants as sweet clover, alfalfa and other clovers. The long system of roots passes down to levels that are not reached by the smaller grains and corn. Naturally the plants enjoy a longer life and make a more vigorous and hearty growth. It is not possible to change the root system of a plant but it is possible to make available the food that nourishes these roots by deeper plowing or by breaking up the sub-soil with explosives. Herein is where dynamite is most valuable to the general farmer.

Turkeys.

The weather has such an important bearing upon the successful rearing of young turkeys that an endeavor should be made to have them hatch at the proper time. For the southern half of old Ontario I should say the last week in May is as early as they should be hatched, and in the northern part, the first week in June. Last year early May poults struck ideal weather for the first time in my experience, but the previous year was just the reverse, many losing a great proportion of those hatched in May on account of the wet, cold weather. I feel sure the dates I have mentioned are close to the best time in the average of years.

I prefer the turkey hen for hatching purposes, but chicken hens and incubator will give fairly satisfactory results. Large chicken hens of the Asiatic type will cover nine turkey eggs. Medium hens of American type, seven eggs, and a turkey hen, in May, seventeen eggs. New laid turkey eggs frequently hatch upon the 27th day, but on the average it takes twenty-eight days. I am informed that the incubator should be run about one degree lower for turkey eggs than when hen eggs are used, that is, 102, and not over 103 deg. In preparing the nest for hatching have sufficient room for the broody hen to turn easily upon the eggs, and do not allow them to jump down upon the eggs when going on the nest. Use soft hay, fine oat straw or wheat straw and chaff mixed for nesting material but be sure there are no "thistles" or "awns" in this material to irritate the hen while sitting. Having got thus far it is important to remember that in every case the nest should receive a liberal dusting of insect powder. Make sure the broody hen has settled down for business before trusting her with the eggs—let her stay on for a couple of days. I allow the hen to come off the nest when she pleases during the day, and provide for her only a drink of clean, cold water, and dust bath. Grass is plentiful at this time, and this is all they seem to require in the way of food. When the hen is noticed off the nest the latter should be examined and if any eggs are broken or 'smeared" all should be "cleaned up" before the hen returns. It is also advisable to close up the nest at night if at all possible, in order to keep out dogs, skunks, etc. as early in spring as the ground will permit a bed of onions (shallots or potato variety) should be planted, and another again in two or three weeks. These are needed to furnish the green tops for the young poults in June. I make each of those beds about four by eight feet.

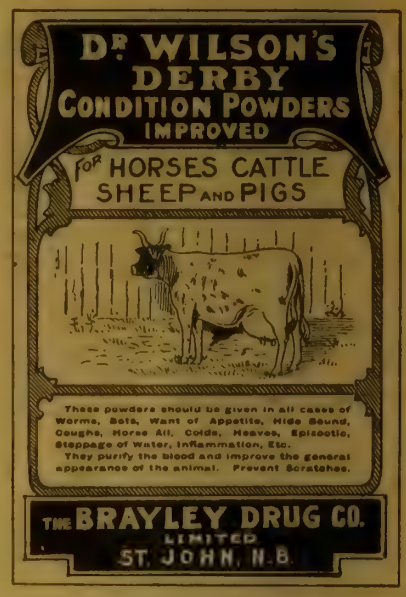
Canada's Leading Stock Men Strongly Recommend the use of

Dr. WILSON'S DERBY CONDITION POWDERS

for Horses, Cattle, Sheep and Pigs

The names of the successful Stock Breeders whose testimonials appear in this advertisement, are household words in the Maritime Provinces. They are some of the leaders who are setting the ideal to which progressive fellow farmers aspire. They are authorities on the care and management of Live stock.

Read what they say about Dr. Wilson's Derby Condition Powders, the best Live stock conditioner on the market as it purifies the blood and improues the general appearance of every animal to which it is administered.


DR WILSON'S
DERBY
CONDITION POWDERS
IMPROVED
FOR HORSES CATTLE
SHEEP AND PIGS
These powders should be given in all cases of Worms, Bots, Want of Appetite, Hide Bound, Coughs, Horse Ail, Colds, Heaves, Epizootic, Stoppage of Water, Inflammation, Etc.
They purify the blood and improve the general appearance of the animal. Prevent Scratches.
THE BRAYLEY DRUG CO.
LIMITED
ST. JOHN, N.B.

Amherst, N. S., July 10, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.
Gentlemen: It affords us great pleasure to let you know of the great success we have attained by the use of your Condition Powders. We have been feeding them for some time back and are satisfied that they are as good as you claim them to be and in our estimation there is no better in these parts.
Wishing you continued success, we are,
Yours truly, LOGAN BROS.
Breeders Holstein Cattle and Clydesdale Horses.

Truro, N. S., Jan. 12, 1910.
The Brayley Drug Co., Ltd.
St. John. N. B.
Gentlemen: It affords us great pleasure to recommend Dr. Wilson's Derby Condition Powders to anyone looking for genuine Powders. We think they are a very good medium for fattening cattle and improving their appearance. We would not be without them as their cost is not to be considered with the vast amount of good they do. Yours truly,
RETSON BROS.

Buctouch, N. B., June, 10. 1909.
The Brayley Drug Co., Ltd.
St. John, N. B.
Gentlemen: I believe I have been using Dr. Wilson's Derby Condition Powders since they were first introduced in New Brunswick. I am well satisfied that they have done my cattle a power of good. I have used no other in four years despite many inducements offered. Yours truly,
J. D. IRVING, Seaview Farm.
Breeder Holstein Cattle and Clydesdale Horses.

Truro, N. S., April 19, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.
Dear Sirr: I will be needing some more of your Condition Powders very soon. When will your agent be in Trupo?
I might take this means of congratulating you on your manufacturing such an excellent powder. I have recommended Dr. Wilson's to many of my friends who breed cattle as I feel sure they will be as well satisfied as I am. Yours very truly,
C. A. ARCHIBALD.

Silver Falls, St. John Co., N. B., Sept. 10, 1909.
The Brayley Drug Co., Ltd.
St. John, N B.
Dear Sirs: Dr. Wilson's Derby Condition Powders were recommended to us and we decided to give them a trial. We feel sure they have proved their worth to us in many ways. We feed them regularly and we feel safe in proclaiming them the best Condition Powders we have ever used. Yours truly,
JOSELYN & YOUNG.

Burnside Farm, Howick, P. Q., March 21, 1910.
The Brayley Drug Co., Ltd.
P. O. Box, 301, St. John, N. B.
Gentlemen:—You will no doubt be pleased to hear what I have to say. I want to say a word in favor of your Dr. Wilson's Condition Powders. They were recommended to me at a Dominion Exhibition in Halifax, N. S., and I decided to try them. I have used many Condition Powders before but never with such remarked success as with yours.
I think I have as nice a stock of Ayrshire cattle as can be found anywhere and can give your Dr. Wilson's Condition Powders a share of the credit.
Ever wishing you success, believe me,
Dear Sirs, Yours very truly,
R. R. NESS.

Dr. Wilson's Derby Condition Powders may be purchased in every town in the Maritime Provinces and is manufactured by

BRAYLEY DRUG COMPANY, LIMITED, St. John, N. B.

The Dairy Cow at Time of Parturition.

The care begins long before the time for partuition to be due. Not anly is the cow that is nourishing a quickly-growing foetus to be well fed but extreme watchfulness against injury from attacks of the "boss" cow of the herd, or from any of the many ways in which injury may be received, is absolutely necessary, that the labor of parturition may not be increased or the life of the cow endangered.

"Drying-up" the cow is important. many of the troubles with the udder come from improper drying. Care must be exercised that no old milk is left in the udder. Some have ascribed to this the cause of milk fever, but whether this be true or not, certain it is that garget and other udder ills may easily result from improperly cleaning out the udder in drying.

During the "dry" period, the cow, if in the stable, must be kept in healthy condition. Our experience is that judicious feeding of such foods as ensilage and chaff, clover hay, chop, and "salt at will," keeping the bowels in good condition, and lessening the quantity of feed for a week before calving, will give better and safer results than dosing with mixtures which the cow does not get in ngtural feeding. No dairyman can profitably do without bran and some succulent food for nourishment and healthy maintenance of the cow at approaching parturition. Every natural means which adapts the system of the cow to the work she must perform at this stage should be imitated under artificial conditions of feeding, and the care with which this imitation is exercised increases in direct relation to the increased return expected from high breeding and other artificial conditions with which we surround our cows. We must know our individual cows preparatory to and at parturition, as well as during lactation.

Difficulties in parturition occasionally present themselves. A little experience will lead us to know whether presentation is right for safe delivery or not. If all is right, in some few cases some assistance may be necessary, and be rendered with no harm to the cow, and will shorten the period of labor. If, on the other hand, examination shows wrong presentation or malformation, unless sure of our ability to accomplish a successful delivery, we leave the task to the veterinary surgeon.

Safe delivery accomplished, what next? The cow has thrown back on her system a large quantity of blood and nerve force which have been going to the foetus. The whole system is in a state of tension, and often complications result. Our experience has cost us something, for we have tried apoplexy and other inflammatory ills have resulted, and often disastrously. Time gone by we have removed the calf before it was dry, then milked and fed the cow, and watched for the development of parturient apoplexy. Now we leave cow and calf together in a box stall, clean and well bedded. The mother has her offspring with her and the satisfaction of this condition is a partial relief for the tension. We do not milk immediately, except to test the udder; leave that for the calf. We give a drink of tepid water, less fever, we add a dessertspoonful of saltpetre (pulverized) dissolved in hot water, to allay fever.

For a day or two, perhaps for four or five days we are careful as to feed In summer, we can allow access to grass. In winter, clover hay, roots and some bran are, in our opinion, best till the condition of the system becomes normal. For the same time, we are careful as to watering. Twice a day, water from the chill has been removed is given, and, if the udder is swollen and hard, as it often is, continue to give tepid water to drink till the udder is cured, as much of the inflammation in the udder is intensified and often caused from drinking cold water.

The second day, as a general rule, we milk out the cow if the calf has not sufficiently reduced her udder, and her condition appears healthy. The next day she may be put back in her place in the stable. Ifthe udder is swollen, as before mentioned, we avoid cold drink, occasionally bathe with warm water, rub dry, and apply a liniment of wood alcohol and camphor gum (one pint to one cake), followed by an application of lard or other mild grease to close the pores; or apply camphor oil. We have also used soft soap and bella-donna (extract), one quart to two ounces, but prefer either to the former. If the udder does not reduce to normal conditions quickly with this treatment, a dose or two of Epsom salts may be necessary, but only when the system has passed the danger of milk fever.

By the time the cow's milk is fit to use, the calf has learned to drink, and the cow is satisfied to be separated from it.

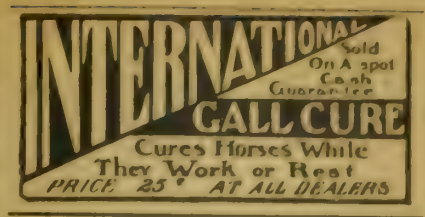
If the weather in summer or early autumn be wet, do not allow the newly-calved cow to remain out in the rain or lie upon the wet ground, until the system becomes thoroughly normal.

Our results are now satisfactory from this treatment. We have had no milk fever for five years, have good strong calves, and few ailments in cow or calf. C. M. Macfie in Farmers Advocate.

Barreness in Cows.

"A cow may appear at oestrum in a perfectly natural and regular fashion, and yet there may be some obstacle, which may or may not be removable, rendering conception impossible. There are a number of diseased and altered conditions of the generative organs that are capable of proving a complete barrier to fecundation." You want to know something about the obstructions and malformations which interfere with breeding. They include diseases causing alteration in the ovaries, fallopian tubes; uterus, and vagina, while growths or tumors of various kinds in these organs are frequent causes of sterility. One of the most common obstacles to breeding where the animal appears regularly in season—the most common, that is, with the exception of that altered condition of the secretion of the vaginal mucous membrane which destroyes the vitality of the 2,000 germs before they have time to gravitate into the uterus, is some abnormality of the neck of the womb. Contracted os, malf formed os, and a non-retaining vagina are recognized causes. The contraction may be a temporary or permanent drawing up of the neck of the womb, so that the seminal secretion of the male cannot enter it, while malformation generally means that the crevix is not of proper shape. It may be elongated, conical crooked, or have a membrane obstructing the entrance. Attention has already been called to the advantages of a physical examination by an expert to determine whether any such obstacle exists, and to the possibility of its being overcome by resort to artificial insemination.

Most of us manage to sell a few dollars' worth of feed along in the late fall or early winter, when it is a moderate price ; then run short of feed ourselves, in the spring, at a time when corn and all roughage are at their highest price. This ought not to be regarded as simply carelessness, but rather as extreme foolhardiness, since it is done by some, year after year, and they never seem to take warning at their continued shortsightedness,



MOLASSINE MEAL

Keeps ALL Horses in the PINK of condition.

The MOLASSINE Co., Ltd., Greenwich, S.E.

WARNING
Avoid foreign Imitations or you will be landed with heated, fermented, useless foods, only fit for the manure heap.

What Do You Feed Your Animals?

Have you seriously considered the question of returns for your good money spent buying Middlings, Bran, Cornmeal, etc. at the present high prices?

But, you say, what shall I feed to get good results? The answer is MOLASSINE MEAL. If you have not used MOLASSINE MEAL, you do not know of its good qualities. You have undoubtedly heard of it. Actual experience brings conviction. Buy some TODAY and see the result on your HORSES, CATTLE, PIGS, SHEEP and POULTRY.

MOLASSINE MEAL is made in England, of Pure Cane Molasses and the best that Mother Nature can produce in the way of a Vegetable Product which neutralizes the effect that Molasses, in its ordinary state has on the stomach of all Animals.

If your Dealer cannot supply you, please write us and we will tell you how to obtain better results by feeding MOLASSINE MEAL.

L. C. PRIME COMPANY, LIMITED

DISTRIBUTORS. St. John, New Brunswick.

Hogs Proved Profitable.

Here is a little pig story I would like to tell. I don't claim to have done anything wonderful, but these are actual figures. August 7 I bought four five-weeks-old pigs, paying $10 for them. I fed them what skim milk I had, which was not much, as I was only milking one cow. I had plenty of little potatoes, which I boiled, and later varied these with windfall apples, also boiled. I bought a bag of middlings for $1.65 and gave them a handful or two at each feeding. September 25 I sold two of the pigs to a neighbor for $10, thus getting back what the four had cost me, minus $1.65 paid for middlings. At this time the pigs, or rather shotes, weighed between 60 and 70 pounds apiece.

The other two I kept, and as I soon had more milk I dropped middlings from their bill of fare. Soon after the middle of January I began to feed them meal. In all I bought four bags meal at $1.55, making a total of $6.20. March 4 I sold one which dressed 208 pounds for $16.50. March 19, I sold the other. He dressed 237 pounds and brought me $18.96. Reckoning out the price paid for the four pigs, $10, and what I paid out for grain for them, $7.85, left me $27.61 for my labor, skim milk, apples and potatoes.

GRAIN BILL WAS PAID.

Another bit of experience may be interesting. It always seems as though the greater part of my money is spent for grain, for although we keep books in a rough way, we seldom balance them up. The other day, I did a little figuring, just out of curiosity. What I found out surprised me some. During the year 1911 I had two cows, excepting the time from September 16 to November 4. I vealed one calf which I sold for $8.50, and had another one, which I was vealing, which was two weeks old at the end of the year.

The family, which most of the time consisted of four, had all the butter, milk and cream they wanted. We used quite a lot of cream for cooking and whipping, and from 1½ to 2 quarts fresh milk daily. I found that I sold butter enough during the year to pay the grain bill, lacking 74 cents. The grain not only fed the cows but also the horse, pigs and hens. I have had two hogs most of the time, and from 30 to 40 hens.

The Stallion.

There is no reason to worry about the sureness of a stallion because a large proportion of the mares first bred may return again later in the season. Mares do not naturally breed well early in the spring. They are much more likely to conceive after the weather gets warmer and their systems are cooled out by a little grazing. The small percentage of foals secured by the earlier spring services prompt many experienced stallioners to discourage farmers from bringing their mares in at all before the middle of April. They depend upon those who are determined to be early to bring in enough mares at the start of the season to get the stallion squared up in good shape for a hard season later on when his system has become accustomed to the renewed sexual activities. A horse that has been maintained in idleness all winter is also less likely to be sure at first than one having continuous exercise sufficient to keep the muscles firm and the circulation strong. Some impotent stallions have regained their vitality when the bondage of a close box stall has been exchanged for the freedom of the harness. That which can effect a cure in such bad cases will also prevent the trouble in the first place. Horses naturally take far more exercise than any other kind of stock. They require it for continued health. The stallion that has been rationally handled up to the present period of the season should get a large proportion of his mares in foal from this time on.

We seldom clean out the poultry buildings or the chickencoops, but allow them to become filthy and foul-smelling, then foolishly wonder why our fowls arr unhealthy, and why we do not make a success in poultry-raising, when cleanliness is the very foundation upon which we must build up a profitable poultry flock.

1870 1912

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

Argyle Street, Halifax, N. S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

Dates to be Remembered

St. John Exhibition, September 2—7, 1912.

Halifax Exhibition, September 11—19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th, 1912.

"Conkey's Remedies are guaranteed to save little chicks, or money back. White Diarrhoea Remedy 50c., Cholera Cure 50c., Lice Powder 25c and 50c., Head Lice Ointment 10c and 25c., Gape Remedy 50c. SEND FOR CATALOGUE."

Maritime Poultry Supply Co. *Moncton, N. B.*

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issue. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

FOR SALE—One Yearling Guernsey Bull, Apply to T. D. BLAIKIE, Great Village, N. S.

FOR SALE—Two Pure Bred Holstein Bull Calves. W. GARFIELD CAMPBELL, Salisbury, N. B.

FOR SALE—One span drivers, three and six years old, (marcs.) Apply to M. E. A. BURPEE, Burton, N. B.

FOR SALE—Pure bred Collie Pups, six weeks old. Also Collie dog, 12 mos. trained. W. J. WALSH, Fairmont. Antigonish Co., N. S.

FOR SALE OR EXCHANGE — Registered Yorkshire Boar 1 year old, also litter five weeks, Five dollars. A. E. L. FRITZE, Lunenburg, N.S.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

EGGS for hatching from Utililly Barred Plymouth Rocks—$1.00 per 15. JOSEPH HORSFALL, Annapolis Royal, N. S.

PIGS FOR SALE:—Berkshires, Yorkshires, Chester, Pure bred and Crosses. PETER BRODIE, York, Prince Edward Island.

FOR SALE or exchange for boar, one registered Chester White boar sixteen months old. Apply NORMAN ZWICKER, P. O. box 114, Mahone, N. S.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

WANTED—Good Cook, by 15th May, to go to Rothesay for 4 months. No washing, good wages. MRS. T. E. G. Armstrong, 27 Queen Square, St. John, N. B.

PURE BRED YORKSHIRE PIGS FOR SALE—Ready for immediate shipment. Send your orders at once to JAS. BARRETT & SONS, Crouchville, St. John Co., N. B.

FOR SALE—Very choice Gold Coin Seed Potatoes, also other varieties, very choice $1.75 per bushel. Write for particulars. Stock limited. BOX 44. Paradise, N. S.

FOR SALE:—Pure bred (registered) Shorthorn milking strain Bull, 2 years old, quiet and active. Also common bronze turkey eggs, and pure bred barred Plymouth Rock eggs. LAURIE M. ANDERSON, Sackville, N. B.

FOR SALE 1 Jersey bull 15 months old also several bull calves from four to six months. For particulars apply to ROBT. ROBINSON, Meadow View Farm, Sussex, N. B.

GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

FARM FOR SALE—At Waterford, 190 acres well cultivated with good house and barn. Lighted with acetylene gas, water and sewerage in house. Apply to MRS. J. A. MOORE, Waterford, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

WANTED—NURSES—We are starting a new class. Expert training given in all branches of this profession, under the best teachers of modern science Those wishing to receive exceptional opportunities should apply at once. CHILDREN'S HOSPITAL, Portland, Maine.

FOR SALE—Ayrshire bull 'Pearlstone of Meadowbrook" 15 months old and fit for service, sired by "Pearlstone of St. Louis," gr. sire Pearlstone of Glenora, dam "Lily of Meadowbrook" a splendid dairy cow, will be sold right to quick buyer. ANDREW McPHERSON, Meadowbrook Farm. Pictou County, N. S.

Will the person who forwarded a two dollar note in payment of subscription, without signature, in an envelope postmarked Fredericton, during the week ending April 20th, kindly notify The MARITIME FARMER office, St. John, N. B. Also the person who sent one dollar in the same way in an envelope postmarked Shediac, N. B. during the same week?

WORKING FOREMAN FARMER WANTED.—Good situation for right man. Write stating experience and salary expected. References must accompany application. Must thoroughly understand Dairy Stock and handling of men and teams and a practical all round farmer. Write to THE MARITIME FARMER, St. John, N. B.

STRAWBERRY PLANTS

That Are Great Yielders

We grow Glen Mary, Sample, Wm. Belt, Senator Dunlap, and other leading varieties of Strawberry Plants. Red, Yellow and Black Raspberry, Blackberry and all Small Fruit at LOWEST PRICES. For LARGE CROPS and QUICK RETURNS plant our NORTHERN GROWN STOCK.

150 Strawberry plants (assorted) or 24 Raspberry plants (assorted) postpaid for $1.00.

Bees and Bee-keepers' Supplies

PRICE LIST FREE

E. L. COLPITTS, Petitcodiac, N. B.

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON, Canard, N. S.

SEA VIEW STOCK FARM

Buctouche, N. S

Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 16 months old.
2 Holstein bulls 7 months old.
1 Holstein Heifer 7 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

Farm for Sale.

One of the best farms on Northumberland Strait, 140 acres, nearly 100 acres cleared, well watered; cuts about 25 to 40 tons of hay; lots of good pasture, good buildings, near two churches and schools. Rural mail delivery. For particulars and price write to J. H. FRASER, R. R. No. 2, Amherst. P. O., N. S.

Eggs For Hatching.

More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in comptition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

Craig Bros., Amherst, N S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Orpingtons,

In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

C. H. Wisener, Pictou, N. S.

Eggs For Hatching.

Barred Rocks. White Rocks, White Wyandottes, Rhode Island Reds, White Leghorns and Brown Leghorns. Choicest matings in Eastern Canada, 20 year experience in mating poultry for best results. A few good Cockerels left for sale. Address

SUSSEX VALE POULTRY YARDS,
Box 39. Sussex, N. B.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Jersey Cattle.

Walter McMonagle, Sussex, N. B.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.
Walter McMonagle, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

yrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

horthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.
Walter E. Eaton, Upper Canard, Kings Co., N. S.

Oxford Down.

Frank S. Black, Amherst, N. S.

Cotswolds.

Donald Innis, Tobique River N. B.

WINE—Berkshires.

J. R. Semple, Brule Co., N. S.

Yorkshires.

J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

Jacob Allen. Bayfield, N. B.
W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Springbrook Ayrshires

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Cattle and Sheep Labels.

Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

EGGS FOR HATCHING.

at reduced prices after May 1st. Brown Leghorns, $1.00 per 15 eggs. Single and Rose Comb R. I. Reds, $1.25 per 15 eggs. Guaranteed 80 p.c. fertile.

W. H. HENRY,
Shubenacadie, N. S.

Farm For Sale or to Let

at Point deBute Corner, new marsh, new buildings. Terms reasonable. Apply to

W. A. TRUEMAN,
Point de Bute.

Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

Eggs For Hatching.

Three pens mated up for spring trade. Columbian Wyandottes; S. C. Rhode Island Reds; Barred P. Rocks. Mammoth Pekin Ducks. Write for prices.
Stock for sale after June 1st.

BROOKSIDE POULTRY YARDS,
Westfield Centre, Kings Co., N. B.

FOR SALE

A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, including the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

$10 takes them. Money refunded if not as represented. Address

P. WELLER,
11 Oakland Road,
Halifax, N. S.

KINNEAR POULTRY CO. LTD.,

Sussex N. B.

We are now prepared to supply eggs for hatching from our Utility Pens of B. P. Rocks & R. I. Reds (bred for egg production and market qualities) at $4.00 per 100 in lots of 50 eggs or more. Order ahead of time to ensure delivery when wanted.

"HOMESTEAD FARM"

Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S.

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FOR SALE—Our entire flock of Shropshire sheep consisting of 32 pure bred Registered ewes, none older than six years. One imported ram and one yearling ram, and 23 March lambs, some over 1 month old, all in fine fit. The entire flock will be sold at a bargain. For particulars write

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on Strawberry and Raspberry plants, also half price on Utility Barred Plymouth Rock and Fancy Columbian Wyandotte Eggs for hatching.

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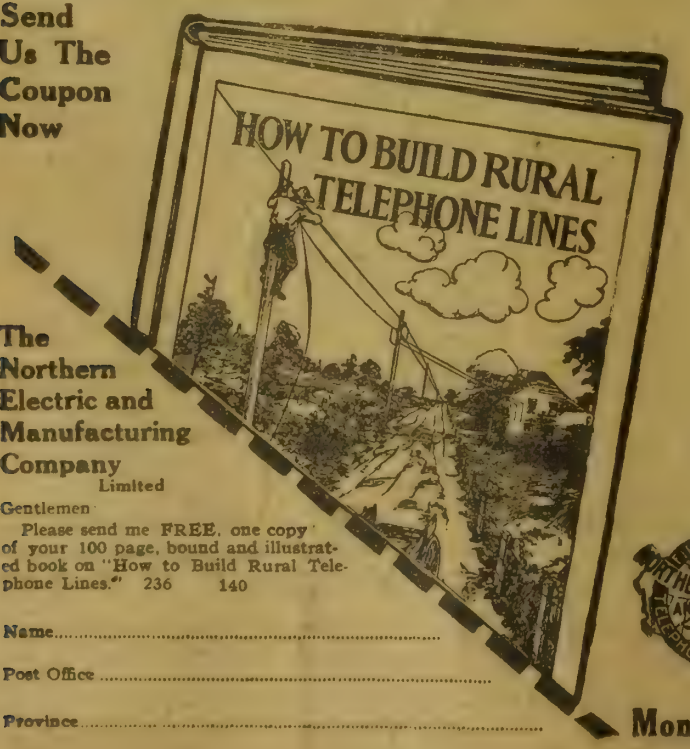

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., MAY 28, 1912 No. 16

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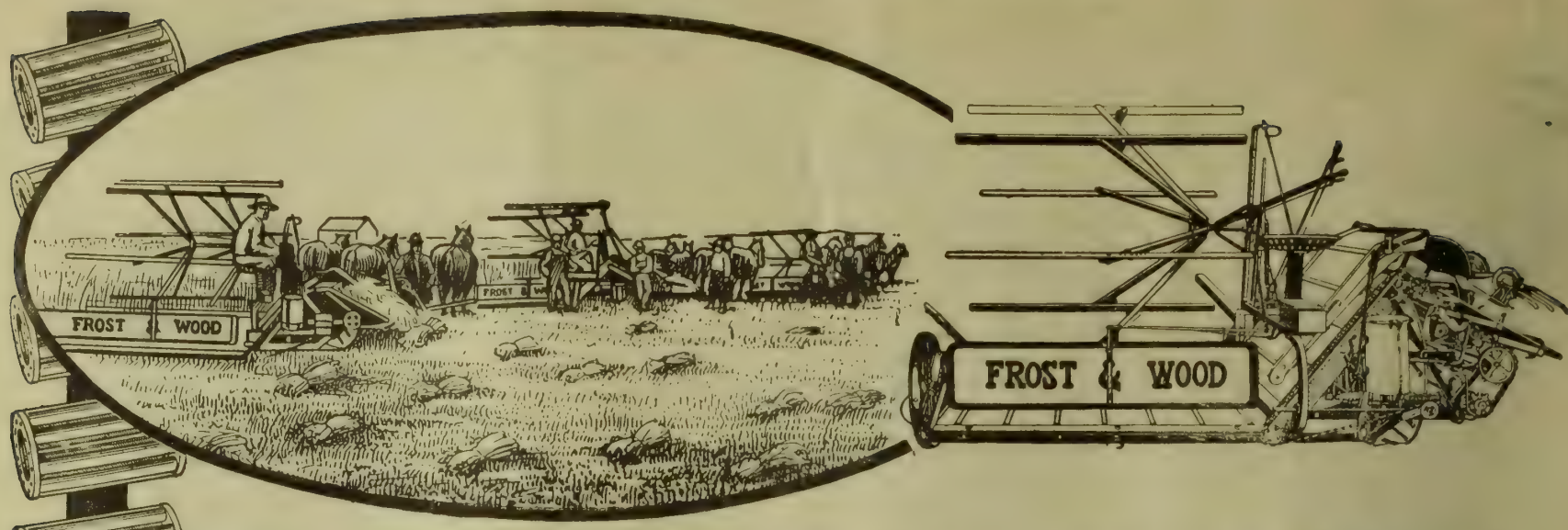

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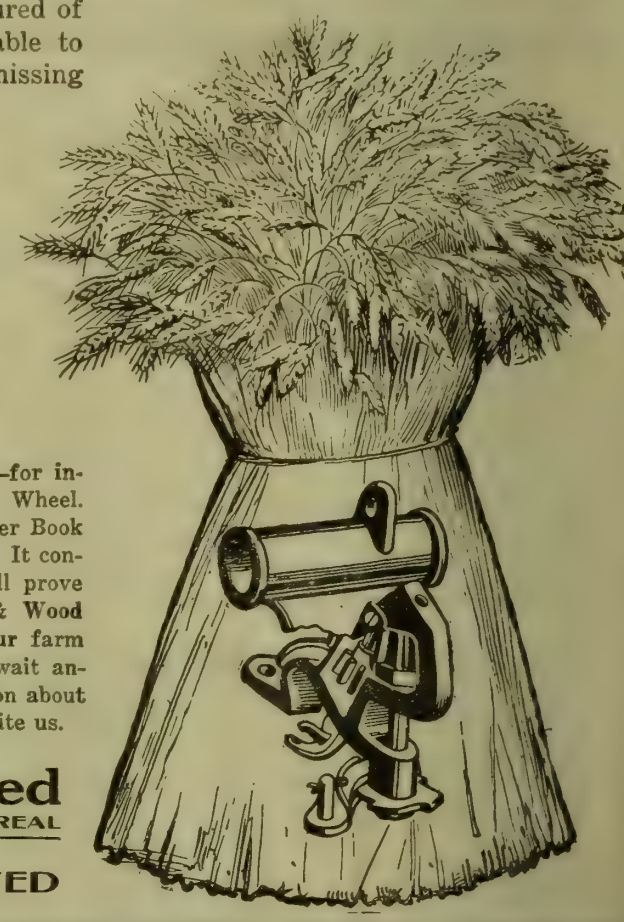

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The Cutter bar is so arranged that the guards get down under the most tangled grain and save it all. The Reel is easy to operate—back, forward, up, down—so you can instantly shift it to suit varying conditions. That means clean work. Elevators have ample capacity for handling the heaviest and lightest crop, and **Frost & Wood Knotters** have yet to be equalled for sure and positive work. Run the Binder as fast and as long as you like—you'll find it always ready to tie the next sheaf.

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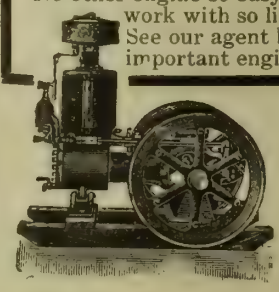

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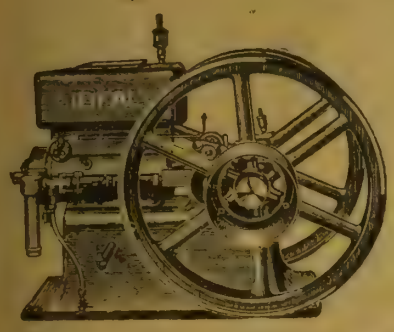

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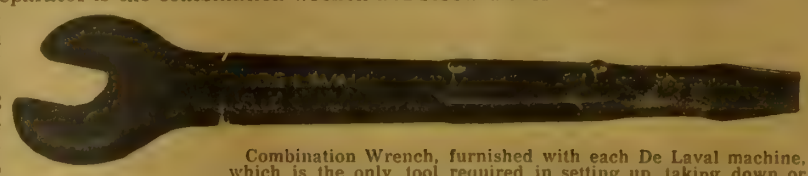
THERE IS NOTHING ABOUT THE MACHINE THAT cannot be taken apart, removed or replaced by any one who can use a wrench or screw driver, In fact, the only tool which is needed in the use and operation of a De Laval Cream Separator is the combination wrench and screw driver illustrated below.

THE ONLY WAY TO PROPERLY UNDERSTAND and appreciate De Laval superiority to other separators, is to look over, and better still to try, a 1912 De Laval machine. Every De Laval agent is glad to afford prospective buyers the opportunity to see and try a De Laval Separator.



Combination Wrench, furnished with each De Laval machine, which is the only tool required in setting up, taking down or using the De Laval, the most simple cream separator ever built.

Complete gearing of the De Laval Separator as it would appear if removed intact from the frame of the machine. Note the remarkable simplicity of construction.

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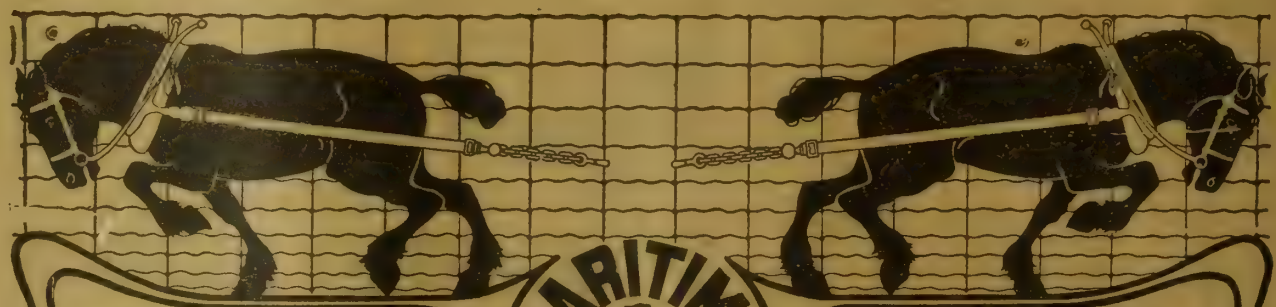

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Volume 17. ST. JOHN, NEW BRUNSWICK, MAY 28, 1912. Number 16.

Early Importations of Noted Horses to P. E. Island

By John Richards.

THE history of our great breeding horses is not written as it should be, and unfortunately what little has been written has not been properly preserved.

In the Old Land they preserve the history of their famous race horses and racing progenitors better—indeed with great care; but this is not strange, for they honor their dead "Prophets" better than we do, and why not their great horses? He who wishes to learn the story of our "Roncesvalless," our "Revanges," our "Saladins," our "Columbuses," and other great sires, whose blood laid the foundation upon which the fame of our Island horses was built, will nowhere find it written with any method or degree of completeness—in fact it has never been published except in stray paragraphs in our earliest newspapers. Therefore my readers must be content with a very imperfect and inadequate account of the great horses imported here in the early days—indeed in many instances it was with difficulty that even the approximate dates of their importation could be ascertained.

"Barrister"

The first importation of which the writer can find any record is that of "True Briton," a Suffolk Punch, brought here from England in 1824, and taken to King's County. It may here be mentioned that the "Suffolk Punch" was named from its native country of Suffolk, and from the thick set body on short legs. Its chief points of difference from the Shire and Clydesdale are its chestnut color and its freedom from the abundance of long hair on the legs. The Suffolk is very docile, easily kept and capable of any amount of hard work. As a breed they are very prolific and long lived—one mare on record having lived till she was 37 years old.

"Roncesyvalles," a noted thorough-bred and excellent breeding horse, was brought out from England by Governor Ready in 1826. "Wanto," (thorough-bred), was imported in 1827. "Stag" (thorough-bred,) was imported in 1833. "Revenge," (thorough-bred), came from the United States in 1833. He was a son of the great first "Bush Messenger," the founder of the "Hambletonian" trotting family. "Rainbow," (thorough-bred), came the same or following year from the States and was also a son of 1st "Bush Messenger." He was very handsome and much admired.

In 1836 two more thorough-breds were imported from England. "Tideworth" and "Aurelian." The former was owned by a Mr. Woodman and the latter by Governor Fitzroy.

The old Royal Agricultural Society imported "Columbus" (Clydesdale) in 1839. It is worthy of note that "Columbus" was the first Clydesdale horse to be brought across the Atlantic—in fact only one other draft horse of any breed was brought over before that date,—that was a Percheron, brought over from France to Philadelphia. Thus the honor of bringing the first representative of the now world famous breed of draft horses across the Atlantic, belongs to our Island. Dr. Dick, then head of the Glasgow Veterinary College, selected "Columbus" for the Agricultural Society. He did not receive his name from the famous and intrepid navigator who discovered America, but from the sailing ship of that name, in which he was brought from Great Britain to Miramichi, N. B. A man named W. Shaw had charge of him on the long voyage. "Columbus" was not a large horse, as compared with many of the Clydesdales of the present day. The writer is informed that he weighed, with a boy of fourteen years old on his back, 1640 pounds. He was, however, an extremely active horse and could trot a three minute gait. He proved himself to be a wonderful breeding horse and it is a noteworthy fact that the dams of many of our old time fast trotters—notably "Fairy Queen," the dam of "Dean Swift" were by "Farmer Glory"—a son of "Columbus," from a thoroughbred mare.

In those days our Island could boast of a splendid class of brood mares—chiefly the progeny of the earlier importations of high class thorough-breds, and these intermingling with the blood of "Columbus" through his sons from thorough-bred mares produced a type of carriage roadsters and saddle horses, the like of which we perhaps never had before nor since.

"Fairy Queen" deserves more than a passing notice, as she was one of the best bits of horse-flesh that our Island has ever produced, and has the distinction of being the dam of that good breeding horse "Dean Swift" who founded a family in this Province noted for their splendid road and other useful qualities. The ancestry of "Fairy Queen," on the dam's side, for several generations were thorough-breds of the highest class, as the following will show:

"Her dam was a daughter of "Royal Sporter," (thorough-bred), grand dam by imported "Stag" (thorough-bred.) "Royal Shorter's" sire was old "Revenge," (thorough-bred) by 1st "Bush Messenger," above mentioned. "Fairy" was queen of the Maritime turf for several years and won many memorable races on the ice. She was a noted roadster and for gameness and endurance had few, if any equals. She was owned by the writer for several

years at the close of her career and produced some valuable stock. Both "Fairy" and "Dean Swift" were bred and raised by Robert Fitzsimmons, Esq., of Long River, New London, from whose stud many of the Island's best and noted sires have come. Mr. Fitzsimmon's fame as a successful breeder of light harness horses, is not by any means confined to his native Island, but is known throughout the Maritime Provinces and in many of the Eastern States, where his horses have competed in numerous, hard fought races.

"Saladin" (thorough-bred) was imported from England in 1845. He came out in a sailing vessel in charge of the late Mr. John Osborne, who informed the writer that during the long voyage of over forty days "Saladin" never once laid down, but seemed none the worse for his experience. "Saladin" was a bay in colour standing a little under sixteen hands and would weigh in fair condition about 1200 lbs. Few sires, if indeed any, that have ever been brought to our shores did more to improve our class of carriage horses and roadsters than "Saladin"; and this would be expected of him from such an inheritance as he possessed. His sire "Bay Middleton" winner of the Derby and many other classic events of the turf, the property of the Earl of Jersey, was the greatest sire and racer of his day. He was an ill-shaped horse, but possessed wonderful speed.

In 1855 the Royal Agricultural Society purchased in the United States three horses for breeding purposes, namely, "Sam Slick," "Telegraph Morgan" and "Eclipse." The same year the Society imported two English Coach horses, "King of the Valley" and "Waxworth." A thoroughbred "Mountaineer" came about the same time and left some good stock. His sire was "Mulby Mullock," a celebrated horse.

"McInnis Pony."—Unfortunately but little information can now be got regarding the early history of this wonderful little horse, whose blood exercised such an influence on the Horse breeding interests of the Island, more particularly in King's County and the Eastern parts of Queens, where he was owned for a number of years. He was then sold to one Hugh Province of Quebec in the year 1854, by Dr. H. B. Hillcote, who in the spring of 1855 purchased Keppoch Farm near Charlottetown, where the little horse was kept for some two years. He was then sold to one Hubh McInnis, from whom he received his name. Mr. McInnis drove the mail between Georgetown and Charlottetown for several years, and made use of the game little stallion for this purpose. The "McInnis Pony" as he was called, is well known by reputation to all horsemen in our Province, and no doubt there are many who remember him. Like the "Flying Frenchman" he was probably of French Canadian extraction, and there is but little doubt that his ancestors, not very remote, carried a good drop of thoroughbred blood in their veins. He is described as a handsome pony, brown in color, possessed of wonderful pluck and endurance, with great style, high action, and considerable speed,—all of which qualities he transmitted to his progeny in a marked degree.

"Flying Frenchman" was brought here in the early sixties from the Province of Quebec by—so it is alleged—two peddlers, who becoming financially stranded, were obliged to sell their horse and outfit. He was a small horse of the pony class, a chestnut in color, handsome and high spirited, with almost phenomenal speed at the pace, hence his name. There are many stories as to his origin, but there seems but little doubt that he had a strong dash of thoroughbred in his veins. His gameness and prepotency as a sire would clearly indicate this. He had no superior as a sire of fast, durable roadsters, many of them with extreme speed, and to this day wherever there is a drop of his blood it will assert itself.

The next importations were old "Clyde" and "Stockman," both Clydesdales, and which did much to improve our class of draft horses of that day.

"Gull," as far as the writer can ascertain, was purchased in Quebec by the late Joseph Belony Perry, of Miscouche, about the year 1868. "Gull" was a dapple grey of the large carriage type, a powerful horse, with plenty of bone of the right quality. He had good action, and in those days was looked upon as quite a fast trotter. As a producer of sizeable carriage and driving horses, useful for almost any work upon the farm, kind disposition, but with plenty of ambition, "Gull" stands in the very front rank amongst our best sires.

"Gladstone," (Clydesdale) was imported by the Government in 1871, selected by the late Wm. Bagnall. He was bred and raised by Robert Beith (now Senator Beith) of Bowmanville, Ontario. His sire "Neatherby," was considered one of the best Clydesdales that ever crossed the Atlantic. His dam was a very noted mare, winning no less than thirty-two gold medals at different shows in eleven years. She was sired by "Gray Clyde," a good breeding horse and noted as the first Clyde ever brought into Upper Canada. "Gladstone" was purchased by Mr. P. McBride, of Central Bedeque, in 1875, who had the misfortune to lose him in 1882. He was gray in color, of medium size and extremely active. He was highly regarded as a breeding horse and left some excellent stock, mostly of the agricultural type.

"Bush Messenger," a trotting bred horse, a descendant, no doubt, of the first "Bush Messenger" before referred to, was brought here from the States about the year 1873. He was a dark chestnut, rather undersized, but very handsome and stylish. He was the sire of "Dean Swift" already mentioned, and many of the best road horses of their day.

About this time several valuable thoroughbred Stallions were brought here from Kentucky, by Dr. J. T. Jenkins, who at different times bred and owned some of the best in the land, trotters, carriage-horses and saddlers. Among the latter was the well known "Royal Harry," a horse standing over sixteen hands, and of wonderful style and beauty. In 1875 he was sent to the Great International Exhibition in Philadelphia, where he carried off first prize in a very strong class of carriage stallions.

Dr. Jenkins, who is recognized as one of the keenest sportsmen in all Canada, has always been an ardent lover of good horses, and there are few who have done as much, both by precept and example, to encourage the important industry of horse breeding in our Province. Despite his advanced years he still retains his interest in horses, indeed in all agricultural matters. At the present time he owns several fast trotters, well known on the Maritime Turf.

"All Right," a celebrated trotting horse, whose name came to be a household word in this Island, was brought here from the State of Connecticut, in the year 1877, by Mr. Newton Lee, now residing in Truro. Mr. Lee, though not a wealthy man, had the pluck to pay $3000 for this good horse, which is, we think, the highest price ever paid for a horse to be brought to our Province, and at that time would be regarded as a stiff price anywhere in America. "All Right" proved to be an excellent breeding horse, and with but comparatively poor opportunities, produced a large number of fast trotters, which worthily upheld the fame of our Island on many a race course throughout the Maritime Provinces, and in the Eastern States. He was a dark bay in colour, of handsome outline, standing about 15.3 hands. He was sired by "Targatts" Abdallah," dam by "Rysdyks Hambletonion."

"Hernando" was purchased in Kentucky, in the year 1888, by W. McLeod, now of Winnipeg, and Judge McLeod, of Summerside. He was sired by "Almont," one of the most successful sires of the day. "Hernando" was a dark bay of good size, and handsome conformation, and left a very useful class of carriage horses and brood mares, as well as some fast trotters.

"Barrister," whose picture graces our first page, came here in the spring of 1881, when he was three years old. He was selected and purchased in the City of York, England, by C. C. Gardiner, Esq., who is recognized as one of our best judges of horses, and no further proof of this is wanting than the selection of such a good horse as "Barrister" affords. It seems superfluous to say much in these pages about the achievements of "Barrister," in the stud as these are well known to the majority of my readers in the Province who are at all interested in horse breeding. That he was a great sire all will admit, indeed it may not be too much to say, that his superior never crossed the Atlantic. His progeny for several generations won distinction in the prize rings of this and the neighboring Provinces, also in the State of Maine, to which many of them were taken at long prices; and in the breeding ranks they were no less successful. "Barrister" himself was a frequent prize winner at the leading Shows in the Old Country, as a yearling and two years old. At the great Royal Show as a two years old, in competition with many of the best in the land, he was highly commended. In this country he never met defeat when in his prime. He was a bay in colour, powerfully built at all points, large, well shaped feet, and with a set of legs that denote both strength and quality of bone. His weight at three years old was about 1700, and at five years, close upon a ton. He was sired by "Emperor," 1155 Clydesdale Stud Book—a noted horse for which the high price of 600 guineas was paid. His dam "Bounce" was by "Honest Tom," the greatest shire horse England had produced, he having taken no less than six first prizes in succession at the Royal Society Show. "Bounce" was regarded as one of the best mares in the three Kingdoms, in her day, and rarely met defeat in the show ring.

It will be noticed in "Barrister's" breeding that his sire was a Clydesdale and his dam was got by a shire horse. It is well to state that before the inception of the draft horse stud books in England and Scotland, horses were frequently bred in these lines, and many of the best horses in Scotland, notably "Prince of Wales," "Darnley" and the superb show horse "Prince of Avondale," were evolved in this way, and are now regarded as among the greatest progenitors of the Clydesdale breed.

In 1884 the shire horse "Oak Heart" was imported from England, by George Tweedy, Esq., of Alberton, who also imported, in 1885 the thoroughbreds, "Early Clifden" and "Aquilaus." These latter were sold shortly afterwards and taken out of the Province. Mr. Tweedy imported in 1887, the shire horse "Honest Lincoln," sire "Lincoln" dam by the noted "Honest Tom." "Honest Lincoln" was an excellent type of the shire horse and did good service in the stud. In 1888 the Yorkshire Coaching Stallion "Premier" was imported by Mr. Tweedy, and in 1889 the shire "Lucky Harry."

Mr. Tweedy, though a lawyer by profession, has always taken a deep intelligent interest in agricultural matters, is a keen sportsman and one of our best judges of horses.

"Bunk Island Hero," a large and typical draft horse, and which left some valuable stock throughout the Province, was imported in the eighties by Thos. Robins, Esq., of Bedeque, who in his time has owned a number of very good stallions, both heavy and light. Mr. Robins has always taken a keen interest in our horse breeding industry, which needless to say, he has done much to promote.

"Lucky Lad," a pure bred Clydesdale of handsome conformation, and that stood well up in the list of winners at the Glasgow Stallion Show, was brought out by Mr. C. C. Gardiner, in the spring of 1887, being then three years old. He proved a valuable breeding horse.

At the same time, the well known horse, "Knight of Ardgowan" then three years old, was imported by the writer. It is perhaps not too much of an exaggeration to say, that few horses that ever stood for service in this Island produced more desirable stock than did the "Knight." His get were noted for soundness, robust constitution, docile disposition, and a capacity and willingness for hard work. They were generally regarded as ideal farm horses. The "Knight of Ardgowan" was a superbly bred horse, his sire being the noted breeding horse "Top Gallant," whose get were remarkable for their high quality, especially in underpinning—the all important point. "Top Gallant" sired "Sir Everard," who in turn produced the now world famous "Baron's Pride." It will thus be seen that the "Knight" and "Baron's Pride" were closely related.

"Administrator" (trotter), was purchased in the United States by the late Alfred Gourlie in the spring of 1887. He was by "Rysdyks Hambletonion"—one of the few sons of the old horse then living. It is worthy of mention, as a tribute to our Island bred mares, that though "Administrator" was twenty years old when brought here, and though he had unusual opportunities in the stud in Kentucky and at other breeding centres in the States for many years, yet he produced his fastest trotter in this Island, namely, "Dot" 2.18 and from a "Dean Swift" mare.

"Preceptor" (trotting bred), was bought in Kentucky in the spring of 1888, by Messrs. Gardiner and Heartz. He was sired by "Nutwood" among the leading sires of his time or indeed of all time. Dam by "Pan Coast," a well known sire. "Preceptor" left a good number of high class driving horses and quite a few that won distinction on the turf. With better opportunities, he would no doubt have earned a high reputation as a sire of fast trotters.

The well known and successful breeding horse "Parkside" was purchased by W. A. Brennan, Esq., of Summerside, at a sale of horses held in New York in 1889. "Parkside" was sired by "Clay," son of "Electioneer," dam by "General Benton." He produced many noted turf performers, both trotters and pacers. His best son was probably "Parkwood," bred by that veteran horseman, Mr. John McPhee, of Freetown, who bred many good ones, and who has done much to encourage and promote the breeding of high class trotters and drivers in our midst. "Parkwood" was not only a fast trotter himself and a sire of many fast ones, but also won great distinction in the show ring. He was sold to a gentleman in New York at a high figure, and afterwards carried off first honors in his class at the big horse show held annually in Madison Square Gardens, New York, and open for competition to the whole world.

There are several other high class stallions of different breeds imported in recent years and Island bred that should be noticed in detail, if it had been the writer's purpose to include in this article a reference to all the

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How I Grow Potatoes on a Business Basis.

By John Howlett, Annandale, P. E. I.

Awarded Third Prize in The Maritime Farmer's Potato Growing Contest.

I can grow potatoes successfully as I am located near a shipping port, where I can dispose of all I can grow.

Now, how do I grow them, and how do I handle my land to grow them successfully?

We will take one acre. This land had two crops of hay taken off it, mostly clover hay, then one crop of oats. As soon as the oats are harvested, I plow the stubble under and harrow it well. I leave it in this state all winter. I provide sixty loads of well rotted stable manure.

About the twentieth of May, I plow this land again across the former plowing, and disc-harrow till quite mellow, then putting on my sixty loads of manure which I find plenty to cover the acre, leaving the manure spread on the ground twenty-four hours before planting potatoes. I find from experience that results are much better than planting immediately after spreading. However, before planting I sow two-hundred pounds of Sulphate of Potash over the manure. I plow in the potatoes every third furrow or thirty inches between rows, the sets seven inches apart, and four inches deep.

When through planting two hundred pounds more of Sulphate of Potash are sown over the acre and harrowed in with the spike harrow. This is necessary not only to well mix the fertilizer with the soil but also to keep the air from the sets.

I prefer two eyes to a set and I must have the best potatoes I can select. The best time to choose potatoes for seed is when digging; handle them carefully and keep them in a cool cellar till planting time. I prefer keeping them in barrels. By following the foregoing directions, I have raised from four to six hundred bushels per acre.

The expenses of raising this acre of potatoes are as follows.

Rent of land	$10.00
Fall ploughing and harrowing	5.00
Preparing land in the spring	3.00
60 loads of stable manure @ 25c. per load	15.00
Hauling manure and spreading	2.50
400 lbs. of Sulphate of Potash	8.00
12 bus. of potatoes @ 50c. per bus.	6.00
Cutting sets and planting same	2.00
Ploughing in potatoes	1.75
Harrowing, moulding and scuffling	3.00
Digging and culling	6.00
Shipping 400 bus. potatoes	5.00
Expenses	$67.25
I sold 400 bus. potatoes @ 40c.	$160.00
50 bus. cullings @ 25c.	12.50
Net proceeds	$172.50
Expenses	67.25
Net profit	$105.25

By H. L. Flemming, Debec, N. B.

Awarded Fifth Prize in The Maritime Farmer's Potato Raising Contest.

Four acres of land (off which the second crop of clover had been cut) were secured at a rental of $10.00 per acre and immediately plowed at a depth of about six inches. Occasionally, during the summer, it was scuff harrowed, thus drawing the heat and holding the moisture and hastening the rotting of the sod.

In the spring the land was again well harrowed until a fine seed bed was formed, then rolled to give a smooth surface.

Aside from the natural fertilizing elements contained in the soil thus prepared a high grade (Great Eastern) fertilizer was applied; 1000 lbs. being the amount used per acre. It might be stated here that a number of potato growers co-operated in securing this fertilizer and by buying by the carload the price was considerably reduced, costing $37.50 per ton. The applied fertilizer was put in the ground with the seed, at the time of planting.

Selected potatoes of the Green Mountain variety of a medium size were secured and prepared for seed, each seed containing two eyes.

This seed was immediately planted with a modern potato planter, about four bbls. of seed being used per acre; the hills being 11 inches apart and the drills 34 inches apart, covering the seed very light.

About eight or ten days after planting, the rows were covered with earth. This operation having two objects, viz. 1st, to help mulch the ground and 2nd, to destroy the weeds.

As soon as the tops broke through the ground they were again covered. This second covering promotes a more thrifty stalk.

As soon as the stalks re-appeared, the cultivator was run through them to take the earth away on both sides the young plants, this operation being continued at short intervals until the plants were in blossom. During this time a weeder was occasionally run through the rows to destroy the weeds and to break up the soil.

Last, the horse hoe was run through them, hilling them up, being careful at the same time that a generous amount of earth was left around the plants.

When the plants were six inches high, they were generously sprayed with the Bordeaux mixture. This operation being continued at intervals of two weeks during the growing season.

This solution performs a two-fold service, viz. it greatly promotes the growth of the potato plant and it tends to destroy the parasite which is the cause of rot under favorable conditions and which is so disastrous to profitable potato culture.

During all this time a close watch was kept for the appearance of the potato bug and a preparation consisting of 1 pound of Paris-green to 50 gallons of water was applied with a sprayer at the time the young were nicely hatched, it being necessary to repeat this operation before the field was rid of these pests.

When the frost had killed the stalks making further growth impossible, the tubers were harvested, a Hoover digger being used for this operation.

The four acres yielding 600 bbls. of marketable potatoes, one half the crop was put on the market at once at $1.00 per bbl., the remaining half were stored in the cellar and at a later date disposed of at $2.00 per bbl.

It had cost $58.00 per acre to secure and prepare the ground and to plant, fertilize and harvest the field of potatoes. The expense entailed totalling $232.00 while the crop sold for $900.00 making a net profit of $668.00 or $167.00 per acre.

The potato crop occupied the first place in the crop rotation, the second being the grain and the third and fourth being occupied by the clover crop, two years crops of clover gives a growth to the roots which when plowed up and properly rotted supply elements which are most needed and which are most expensive in manufactured fertilizers, viz. ammonia and nitrogen.

Air and Fertility, By S. Edward Paschell.

Air consists essentially of oxygen 20 per cent. and nitrogen 79 per cent., with about ½ per cent. of carbonic acid and always a trace of water.

Soil chemists assert that it is impossible for plants to breathe air, and thus directly to secrete nitrogen (ammonia); but it is known that the clovers and their allies obtain nitrogen from the atmosphere through their root tubercles. A root tubercle is apparently not a true part of the plant, but is rather a colony or group of friendly microscopic parasites attached to a feeding root. A sort of mutualism exists; the plant giving food to the inhabitants of the tubercle, and they, in turn, supplying the plant with nitrogenous food.

It is a curious and very significant thing that root tubercles have also been discovered on certain plants not leguminous; and it may be learned, by and by, that tubercles or something corresponding to them are more universal than has heretofore been supposed. For the present, however, the farmer and gardener must rely on legumes for obtaining nitrogen from the air.

The significance of all this is, first, that the air contains a large percentage of that most expensive element of fertility—nitrogen; and, second, that there are feasible ways of trapping and holding it.

Air also contains oxygen, and the importance of this element must be emphasized. The oxygen of the air is active; the nitrogen passive. Give the oxygen a chance, and it will produce an endless series of changes. Admit it to the soil, and it will at once proceed to break down the old combinations and to form new ones. It will even attack the rock particles of which the soil consists, and will aid in tearing them apart and in making them soluble. Give a piece of soil a sufficient number of turnings and airings (without other treatment), and it will soon be ready to produce a new crop; not a maximum crop, but a fair one.

Sir John Lawes, of England, showed that a field could be made to yield a crop of wheat by culture alone, year after year, almost indefinitely. His experiment was conducted for more than half a century. The crop was always above twelve bushels of wheat per acre. The purpose was to learn the rate at which air, rain and sunshine can be made to produce plant food from the raw elements in the soil. The object was not to discourage the use of manures and fertilizers, but to emphasize the value of cultivation, and to show how man may unlock nature's inexhaustible storehouses. The steel-tooth cultivator, in this sense, is as important as the dung wagon.

Nobody questions or doubts the efficacy of tillage in field or garden, but it is seldom that the soil is pulverized and aerated to the maximum limit. The process usually ceases when a sufficient degree of fineness has been secured, whereas the liberation of plant food goes on as long as fresh supplies of air are introddced to the soil by means of the harrow teeth. Of course, the time comes when the amount of new plant food will not pay for further labor, and yet Clark, of Connecticut, is on record as having worked his hay field twenty-five times before sowing the seed. His hay crop was four to six tons per acre.

MANURES AND FERTILIZERS.

The pulverization of plant food (manures and fertilizers) is as important as the pulverization of the soil itself. Artificial fertilizers owe part of their quick action to their fine mechanical condition. They are within immediate reach of the air and water, and are at once available.

Stable manures are wonderfully improved and quickened in effect by what is called composting; that is, by breaking all the lumps and masses, and filling with air by repeated turnings. The oxygen acts promptly, resulting in a quick rotting or destruction of the vegetable fibre, thus making all the plant food available.

EXPERIMENTING WITH NIGHT SOIL.

An experiment or series of experiments with night soil (human excreta) made in southern New Jersey by the writer, some time ago, gave significant results. Night soil is one of the most difficult or one of the most easy substances to manage in the world, depending on the way the work is done. Kept away from the air, it will remain unchanged for months or years, but exposed to the air in a proper manner it can be converted into mellow valuable plant food in a week; yes, in a day, for I once performed the whole process between the rising and the setting of the sun, in midsummer.

The composting of human excreta (solid and liquid) is an exceedingly simple matter. The whole problem is to find a way to expose it to the air; or preferably, to both air and sun, for the most active and friendly of the bacteria work in fresh air, sunlight and moderate moisture.

I took the solid and liquid contents of the box under the outhouse, and mixed with double the bulk of finely-screened, mellow top-soil from the garden. That was just after sunrise. At 9 a.m. the heap was carefully turned with a shovel, and everything chopped fine. Another turning was

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THE MARITIME FARMER.

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July ..... 9—23

THE FARM HOME BEAUTIFUL.

There has been much said and much done by the residents of towns and cities all over the country in an effort to instill a sentiment of pride and ambition among home owners to fix up, clean up, decorate and otherwise make more attractive the grounds, buildings and improvements they occupy and call home. "The City Beautiful" is the inspiring call that is sent out broadcast by the cities of the land, as the watchword to be taken up, acted upon and passed along in the interest of home decoration and property adornment.

Why not some of this kind of sentiment aroused among the farmers? Why not more interest taken in making the farm home more attractive and pleasant as a place to live? It is just as important, from the standpoint of increasing property values, that the farm home be made attractive and desirable to the eye of the visitor and all who chance to see it as that the city home be neat and well kept.

Give the home on the farm room, give it a chance to spread out and have a place for shrubs, flowers, evergreens, ornamental shade trees, a lawn with plenty of room for green sward; nothing is so inspiring, nothing so pleasing, nothing so satisfying to a family as a comfortable, well-kept home. If there are long yards, calf lots, corncribs or other infringment on the grounds that should be taken into the dwelling inclosure, move them back, get them out of the way, relocate them where they naturally belong and give the dwelling and its attractive features at least an acre of ground; then enclose it with a substantial, good-looking woven wire fence that will exclude poultry and all other intruders that detract from the care and neatness of the front door yard.

A good dwelling, nicely painted and well equipped for the convenience of the housekeeper is the best investment that can be put into the farm. It will add years onto the life of the queen of the homestead; it will bring joy and pride into the very begin of each member of the family; it will be one of the strongest influences in bringing contentment and a feeling of satisfaction into the minds of the boys and girls. Did you ever stop to think, did you ever realize, that the stinted crowed condition of many farm homes, this lack of room, has been the means of discontent, the primary cause of driving the young man and woman out into the world? The desire of freedom, the desire to have a room all their own, a little privacy, a little sacredness and independence of this sort is only the natural development of human nature.

EXPRESS RATES AND REVENUES.

Another government bulletin, that of "express statistics," has just been published at Ottawa. Among the dry bones of these blue books, an occasional flutter may be seen. This one is full of facts for farmers and consumers generally. Although it covers all express companies doing business in Canada the principal ones are the Canadian (G. T. R.), the Dominion (C. P. R.), and the Canadian Northern.

The gross receipts for the Canadian Express Co. were $2,689,697.92; for the Dominion, $5,556,338.06; for the Canadian Northern, $564,279.54. After deducting the total expenditures, including $481,624.32 for dividends, there was a balance of $683,664.33. This profit represents 27.14 per cent. of the capital liability.

This is a pretty snug balance to add to the profit account. Many farmers will find it hard to sympathize with the railways, for these companies are held in trust, as the report states, for the railways, in their endeavor to add extra charge to their live stock, fruit and other shipments.

Such handsome profits ought to pay big taxes to the provinces in which they operate! Do they? The same report gives the total taxes paid at $19,695.78. This amount represents, on the gross receipts in round numbers, about one-fifth of one per cent. The average 100-acre farmer pays in direct taxes about $40 on a gross income of, say, $2,000, or a rate of 2 per cent. In other words, the farmer is taxed ten times as much as the express companies. The total cost of the real property and equipment of the three Canadian companies is given at $2,109,556.33. Their net earnings total $1,118,409.19, a sum over 50 per cent. of their investments. Could our average 100-acre farm, representing an investment of $7,000, pay similar returns—i.e., over $3,500 clean profit yearly, how long would a "back to the land" movement have to be advertised?

The farmers should insist upon a more just system of taxation, and that the express rates be lowered on all their commodities. Had the excessive profits from these public service corporations gone into the public chest, there would be no need for many of the present burdens on agriculture.

GOOD ROADS.

The good roads movement is kept to the front in urban oratory and after-dinner harangues. Glibly indeed roll out the well-rounded phrases from platform and press. Good roads are great things for the country. So are many other things in the reclamation process from nature.

Nevertheless, these things do not come in an insistent call from the farmer. It is not his voice that the promoters of good roads hear when their ears are to the ground. Automobile interests, machinery interests, etc., are having something to do with the sound waves.

Farmers need the good roads to their market towns. Agriculture is paying the brunt of our country's taxes. And it is the duty of the governments of the day to see that the farmer's burdens are lessened. His efficiency must be promoted. Every assistance to the production of improved crops should be given the farmer.

This whole Good Roads question must be taken up correctly. All money must be spent wisely, and all control of the lands left in the hands of the people most interested.

YOUNG AGRICULTURIST.

Dear Editor:

I am a reader of the Maine Farmer, and I see many anecdotes in the boys' and girls' column, so I thought I would write a few lines about what crops I raised last year.

On one-quarter of an acre of ground, I raised 29 bushels of salable potatoes, which I sold at an average of about ninety cents per bushel. On another quarter of an acre I raised about 275 heads of cabbage, 24 bushels of mangel wurzel beets, nearly two dump-cartfuls of pumpkins and squash, and about 50 sunflower heads, which I fed my hens. The pumpkins and squash were gone nearly four months ago, as they do not keep as well as cabbage or beets.

I own one house, 10 by 14 1-4 ft., and one-fourth of a house, 12 by 40 ft., in which I keep my poultry, 55 in number. My grandfather gives me all the land that I wish to plant crops on. I have one-half an acre plowed to plant potatoes on this year. I shall plant nearly an acre of potatoes, beets, corn, beans, and other crops this year.

I have lived with my grandfather since I was three years old, and now I am thirteen years old.

I would like to hear from some other boys and girls who read the Maine Farmer and have raised crops of their own, and that also keep some hens. My hens in the months of January and February yielded me a clear profit of $12.33.

If I see this in print, I will write about my experience raising potatoes at five years of age.

A DOLLAR A WEEK.

"It is mighty hard," said an unfortunate working man some time ago to a writer, to save up a thousand dollars by laying aside a dollar or two a week and then to take it out of the savings bank and lose it to a get-rich-quick swindler, as I have just done."

This poor fellow could work and save, but he had not had even a kindergarten education in finance else his story would have been different. He had never given a thought to interest, and so was absolutely ignorant of growth through compound interest, and of course, had never heard of that wonderful process of accumulation known as "progressive compound interest."

One dollar deposited in a savings bank that pays 4 per cent. will amount to $2.19 in twenty years. This is a simple compound interest. Now, if you deposit one dollar every year for twenty years, or $20 in all, the sum to your credit will have grown to$30.97. Any wage-earner can put by $1 a week. That money deposited in a savings bank for twenty years will have increased to $1,612. A deposit of $5 a week will have grown to $8,000, and this at 4 per cent. will be $320 a year. There is no secret nor mystery about this. It is clear as the cloudless sun and the method is just as clean and honest.

Community Co-Operation.

Community spirit and progress in any locality is due largely to a sympathetic co-operation of its members and a common ideal for better things. The co-operative spirit seems to find its most fertile soil where the dairy industry dominates. It is frequently said that the cow has a favorable influence on the establishment of the home. She plays a big part in furnishing food, wearing apparel and minor necessities of life. She has assumed a place in the activities of the farm which no other animal can fill.

Co-operation in a dairy community is potent in establishing a more highly organized social life. It fosters the demand and increases the prices for products ofthe dairy and stimulates moral and intellectual activity among the members of the organization.

However, as viewed by the unorganized community, such things have little value unless they show that co-operation can be made practical and profitable. The disposal of the stock in a community at a more uniformly higher price; the elimination of the poor cow and the improvement of the herd together with more profitable disposition of the dairy products, are the points in which the co-operative spirit first reveals itself. Wisconsin boasts of her highly organized communities, her co-operative creameries and skimming stations, her active trade in good dairy stock and her production of a better grade of dairy products. She also boasts of a social awakening, a demand for better methods of farming and an interest in better schools.

The desire for a higher standard on dairy stock resulted in the purchase of high class bulls. Sires of merit and performance created a growing demand for community stock. The man having but 10 cows and whose means would not permit the purchase of a high class sire by himself was given the use of such a bull and a larger field in which to sell his stock through the use of the community sire. Bulls could be used longer in the same neighborhood and the uniform standard of stock became an advertisement to the local community. This fact also enabled the purchaser to obtain a foundation herd in one place. Furthermore all of his stock was more uniform in type and performance. After the standard was once established a higher price and a more healthful demand followed.

The president of the co-operative system having a call for a specified number of cows or bulls makes haste to take a census of the available material in the community. After obtaining this information he informs the inquirer of the number, kind and prices. The transaction is closed and the members receive the amount which an able committee places upon the individual cows or bulls.

This is not the only line of improvement in the community stock which is of much value. The boarders in the herd and the low butter-fat producers, together with the poor type cows, are eliminated particularly through the use of the scales and the Babcock tester. A test association is organized. One man, the cow tester, gives his entire time to the association. He visits one herd each day, hence he is able to visit each herd once a month. He arrives in the afternoon, weighs the ground and rough feed that each cow eats, estimates the value of the pasture feed, weighs the milk of each cow night and morning, and tests it for butter-fat. For one day each month the tester knows how much butter-fat each cow has produced and how much it costs to produce it. He multiplies this one day's record by the number of days in the month and enters the same in the record book. A copy of this report is left with the farmer. The tester makes 12 visits to each farm during the year and at the end of that time every farmer in the association knows approximately how much butter-fat each cow has produced and how much it cost to produce it.

The tester becomes a dairy specialist. He sees the business not from his viewpoint only, but from the viewpoint of 26 practical farmers. He knows exactly what each man in the association is feeding. He has the different rations fed on the different farms all copied in the record book. These records are accessible to every man in the association. It is the farmer's privilege to study them when the tester visits his place. The value of this information to the members of the association can scarcely be over-estimated.

A system of marketing the dairy product of the community, whether it be milk or butter-fat is another feature of successful co-operation. The dairyman located near the city present time the membership of a co- his demand is in little need of co-operation with his fellow dairymen. On the other hand where many small dairymen are supplying milk of nearly the same quality to the city a central distributing point will place such a business on a firm foundation. The patrons guarded by the rules of the organization will pay a higher price for their milk and can always rest assured that they are getting a product that will bear inspection and be of uniform quality. Such co-operation forces the swindler and unclean dairyman out of the business. The contaminated product never finds the city man's table and a more wholesome, cleaner and better product carries the stamp of the inspector's approval.

The co-operative creamery is an old landmark in the more densely populated dairy countries. Wisconsin reports 1,009 local co-operative creameries with an average number of cows per creamery of 767 and an average membership of 83. In Belgium at the present time the membership of a co-operative dairy is 108 farmers and the average number of cows for each creamery is 260. In Germany the average number of members is only 97, but the number of cows is as great as in Belgium.

The co-operative creamery spirit has not flourished in the less developed dairy sections owing, sometimes, to the poor and injudicious management on the part of the stockholders. In many instances co-operation failed to pay the expected percentages and the scheme failed. However, this poor management and loss may be eliminated and satisfactory results obtained by first appointing a man as president who is thoroughly acquainted with the dairy business. He will endeavor to interest the men in the community to buy stock upon which the company agrees to pay a fixed per cent. of interest besides assuring a stated price for the butter-fat, equal or greater than he may secure otherwise. The required stock is obtained; the contract let and the creamery opens. Money should not prevent the company from securing a thoroughly reliable and able man to manage the creamery. The management having done their part it is up to the members to do two things: deliver their milk or butter-fat at a certain time in the day, and guarantee that the product shall be free from any contamination. Should this rule in any way fail, it is readily seen that a man who contributes a gallon of contaminated butter-fat will lower the quality of many pounds of butter. The advantages to the patron are that he is able to feed the skim-milk to his pigs and calves in a sweet condition and he has the opportunity of securing the buttermilk at a reasonable price and can always depend upon getting a reasonable and satisfactory price for his products.

The co-operative spirit has no less influence upon bettering the social conditions of the community. Organizations and clubs are the results of improved methods in dairying and general agriculture. The milkers' club is organized and has for its purpose the discussion and ultimate betterment of the milkers' situation. Milking loses its drudgery and becomes an art and accomplishment when mixed with thought. The impetus for doing better and more efficient work is stimulated among the milkers by the employer offering a prize to the milker whose cows return the highest production per month.—Kimball's Dairy Farmer.

Weeds Must Go.

The clean meadow produces 47 per cent. more than the weedy meadow. The clean potato fields 49 per cent. more than the weedy fields. The clean oat fields 33 per cent. more than the weedy fields. In these statements, we have the reason for the eradication of weeds on the farm.

There are large areas of land so situated that fields cannot economically be cleaned by cultivation and it is necessary to use other means for destroying the weeds.

Many years ago in Germany a method was developed for the destruction of wild mustard and radish in localities in which the social and economic condition made the mechanical method of cleaning the fields impossible. This method followed the discovery made in France that a solution of Iron Sulphate applied in the form of a spray to wild mustard, killed the plants, furthermore that the mustard plants in a grain field can be destroyed and this without injury of a permanent nature to the grain crop. As this way of killing weeds spread over the country, the problem soon became one of applying the solution.

It was soon discovered that there was no question about the destruction of wild mustard by this method, but the trouble would be in securing high-grade, home-made spraying machines for the application of the solution.

The success or failure in spraying grain crops to kill weeds, depends on how the Sulphate of Iron is applied and when. For instance, if the solution is applied in drops, as from a watering-pot, the weeds will shed the drops without any damage being effected. Large drops strike the leaves and roll off; small drops run together and form large drops, but a mist from a good sprayer settles down upon and completely covers the leaves.

WHEN TO SPRAY.

Spray on a bright, warm day, or on a dark, damp day; it does not matter so long as rain does not come within 18 to 20 hours. Spraying on dark, damp days gives quickest and surest results. Spraying on bright, warm days must be followed by the dew the next morning to be effective.

The white coating or spots seen on leaves sprayed on dry, warm days, is the dried-out Sulphate of Iron; the dew dissolves this so that it acts on the leaves.

SIZE OF THE WEEDS.

It was formerly thought that the best time to spray was when the mustard plants were in the third or fourth leaf; now we know that the best time is when the first buds appear on the majority of the plants, for then only is practically all the mustard seed in the soil germinated.

HOW MUCH SOLUTION TO APPLY.

To do the best work, apply 52 gallons solution to the acre.

HOW TO MAKE THE SOLUTION.

To make the spraying solution, empty a 100-lb. sack of Sulphate of Iron into kerosene, spirit or vinegar barrel, fill with water and stir with a hoe a few minutes until dissolved. Strain through several thicknesses of cheesecloth over the manhole of the spraying machine.

HOW TO APPLY.

The solution must be applied with a powerful spraying machine, producing a real mist, free from drops. The pressure is 80 to 100 pounds, measured at the nozzle, not at the pump—at 100 lb. pressure the mist is driven all to the plants and rolled and rolls over and over, wetting the underside of the leaves as well as the upper side.

Driving over the grain that is from four to six inches high, will in no-wise injure it in two weeks it will recover. Be sure that each strip sprayed laps over the last one sprayed. Have the boom high enough so that the point at which the spray fans meet is above the highest plant. Keep raising the pressure when you spray until you secure a perfect mist, then lock the pressure regulating valve. Do not go any higher but maintain this pressure.

ACREAGE SPRAYED IN TEN HOURS.

Depending on the facilities for preparation and handling the 20 per cent. solution of Sulphate of Iron used for killing weeds, a two-horse spraying machine will spray from 20 to 40 acres of grain in a ten-hour day.

Best Way to Use Poultry Manure.

Poultry droppings are the richest of all barnyard manures, because that part of the excrement which corresponds to the urine of animals is included in a semisolid state. The proportion of nitrogen is especially large and that of phosphoric acid comes next. There is a deficiency of potash, but even so, the percentage is larger than in the manure of most farm animals.

As ordinarily fed, farm poultry receive a ration which tends to make the manure rich in fertilizing value, and the birds being full fed, the amount is relatively large. Certain Belgian experiments would indicate that each fowl makes about 12 pounds manure a year, but Prof. Brooks, after experimenting in a small way at Amherst, Mass, considers this figure too low. Anyway, the value of the manure made by each hen is probably between 8 and 15 cents a year. Ducks and geese yield a larger amount than hens.

The nitrogen in poultry manure escapes easily, so that the droppings must be handled intelligently or much of their value will be lost. When scraped from the dropping boards the manure should be placed in bins, barrels or boxes or piled under cover. Then it may be sprinkled with earth, land plaster or kainit. The first named will help to save the nitrogen, but land plaster is better. Enough should be used to whiten the pile of manure. Kainit has the advantage of adding potash, but tends to prevent the manure from drying. Fine earth added at the same time will help to dry it.

DO NOT USE ALONE.

Being a quick acting manure, poultry droppings can be used to best advantage in the garden and probably with best results just before the seeds are planted. It ought not to be used clear, for then there is great danger of burning the plants. Even when mixed with earth or plaster, it ought to be spread very thin, and lightly but thoroughly harrowed or raked into the ground. Perhaps the best plan is to use the manure in the hill or drill, mixing it well with the earth. It should be fine and only a little used.

Not being a complete fertilizer, it may be balanced by the addition of muriate of potash and acid phosphate.

(Continued on page 589)

HORTICULTURE.

Buying Inferior Trees a Great Mistake.

Many years of observation and experience in commercial orcharding in three states have convinced the writer that buying poor trees is one of the greatest and commonest of mistakes. The nurserymen are not to blame for selling inferior goods; because the planters demand them it is [illegible] business to supply the demand. How men can be so short-sighted is to me a constant source of wonder and amazement. The best trees cost only a few cents each more than the poorest ones, yet when full grown they are worth several dollars more. It is simply a question of losing dollars to save cents—a good illustration of the folly of being penny wise and pound foolish. Some men are said to be so short-sighted they cannot see a dollar if there is a nickel lying in front of it. Lots of these men are in the orcharding business. They reason that a penny saved is a penny earned, and the sight of present gain, however small, blinds them to future profits, however large.

DEMAND DETERMINES QUALITY.

These are strong statements, but the situation demands them. Go to the average nursery and observe the methods used to meet the demand for cheap trees. Cions cut from any old trees, or even from nursery stock; careless grafting on small piece roots, trees badly dried out after being dug, many roots broken and otherwise injured in digging and packing, yearling trees—mere whips—sent out to keep down the freight bills and get quick returns; runty, ill-shaped trees consigned to retail dealers when they should have been consigned to the brush heap—and yet we wonder why such a small percentage of trees planted live and bear fruit. Nurserymen give value received; their profits are not large. When growers demand better trees and are willing to pay for them the nurserymen will gladly furnish the goods.

The first great need for improvement is in the selection of cions. It is not enough that cions should be cut from bearing trees, although this should always be insisted upon, but only the best specimens should be selected for propogation purposes. The live stock grower looks carefully into the pedigree af his animals, why shouldn't the orchardist be equally particular about the ancestry of his trees? We know there is a vast difference in individual fruit trees, just as there is in the genus homo, and the progeny of runty, scrubby trees is no more desirable than the offspring of unhealthy, incompetent men and women. Give us nursery stock propogated from mature, thrifty trees; heavy, regular bearers of first-class fruit. For this class of goods planters should be willing to pay a handsome premium over ordinary stock.

WHAT TREE AGENTS TALK.

Some tree agents talk a great deal about the superiority of whole-root over piece-root trees. As a matter of fact, all grafted apple trees belong to the latter class, since the entire root of a seedling is never used in grafting. It is simply a question as to the size of the piece used. Some prefer one straight root and others a branched stock for grafting. Those who use small pieces of roots for grafting contend that this permits the use of a long cion, which extends deep down into the ground and soon throws out roots of its own, so that the tree is soon supported by its own roots. The alleged advantage lies in the fact that the cion is generally from hardier stock than the seedling. However that may be, a good-sized root is necessary to grow large trees and small, piece-root grafts should never be used to cheapen the cost of production.

The way trees are permitted to dry out in transplanting is a fruitful source of failure in starting an orchard. The writer has seen trees dug and allowed to lie uncovered all day in the sun and wind and then loaded onto wagons like brush and hauled for miles with unprotected roots. A great many trees are stored all winter in cellars with no covering whatever over the roots. The planter may give trees the best of care after being received by him, but after having been dried out as above described there is little life or vitality left in them, and the wonder is not that so many die, but that so many live. The price of trees should be high enough so the nurserymen can afford to protect the roots from the time they are dug until delivered to the planter.

In some localities there is danger of the roots being partly killed by freezing if the trees are left all winter in the nursery row. This injury is sometimes not apparent when the trees are dug early in the spring and shipped at once, but is noticeable later when they black-heart, or rot in the center. This is one reason why some nurserymen dig trees in the fall and store in cellars over winter. If, however, the ground around the trees is well mulched there is little danger of winter-killing.

Fruit trees are often graded and sold according to length and diameter; this makes it impossible for the buyer to determine whether he is getting a thrifty 2-year-old or a runty 3-year-old—a very important matter. Buyers should insist upon the age as well as the size of trees being given. Trees that are small for their age, as well as ill-shaped specimens, are dear at any price and should never be planted. Many buyers do not understand this point, judging a tree entirely by its size.

RIGHT AGE TO TRANSPLANT.

The right age at which a tree should be transplanted is a question upon which there is a wide difference of opinion. The strongest argument in favor of yearlings is the one which should carry the least weight, namely, cheapness. Where is the economy in saving $5 per acre in buying yearling trees and then cultivating the orchard a o
orchard a year longer before it comes into bearing? Not only is one year's work saved by buying 2-year-old trees, but one crop is gained. To say that the yearlings will catch up with the 2-year-olds is unreasonable and disproved by experience. The theory that the former stand the shock of transplanting better than the latter is not borne out by experience. As a general proposition young trees stand transplanting better than old ones, but the difference is not noticeable until the trees are at least 3 years old. Here in the Pacific coast country yearlings are planted almost exclusively. Most of such trees make little or no growth the first year, which is certainly no better than 2-year-olds. The latter are the kind planted over most of the country, showing that they are preferred by a majority of planters. There is no reason why younger trees should be planted here than elsewhere—there is certainly no place where trees are more easily transplanted than in this moist Puget Sound section. It is true that buying yearlings enables the orchardist to shape the top to suit himself, but it is easy to buy suitably headed trees, or to have them pruned to order.

"The best is none too good" should be the motto of the orchardist in buying trees. A few dollars difference in the price of several hundred trees is a mighty small thing compared to the superior value of an orchard grown from the very best nursery stock obtainable.—O. H. Barnhill, in Twentieth Century Farmer.

Heading Apple Trees Too Low.

There is seldom the necessary distinction made between a low-headed and a short-bodied tree; or between one that is high-headed and one that is long-bodied. It is becoming more and more customary to head them at a height of 2 feet or less from the ground. Now heading low does not produce a low-headed tree, and it is questionable if it is the best policy. The idea is that the trunk acts as a storehouse for the accumulated sap which is to be used in making the growth of, at least, the earlier part of the following year. If we eliminate the trunk by heading low, we destroy the storehouse and thus impair the vitality of the tree. This forces the tree to develop fruit spurs and fruit buds and thus early bearing is induced. But owing to its lessened vitality it will die of old age while a long-bodied tree is still in its prime.

If a tree be headed 5 feet from the ground and the top kept rather thick for a few years the tree will throw out a strong and nearly horizontal framework. The trunk will be large enough to amply support it and its height will permit the development of numerous low secondary branches. These may be headed back and trained to any desired height. Hence we may have a broad, low-headed, dome-shaped tree with a trunk large enough and high enough to support it. At 40 years of age such a tree should be in its prime and capable of carrying eight to 10 barrels apples. This is the ideal form for a big, old tree and resembles the type of tree grown in western New York, where immense yields of single trees are reported.

UPWARD GROWTH UNSATISFACTORY.

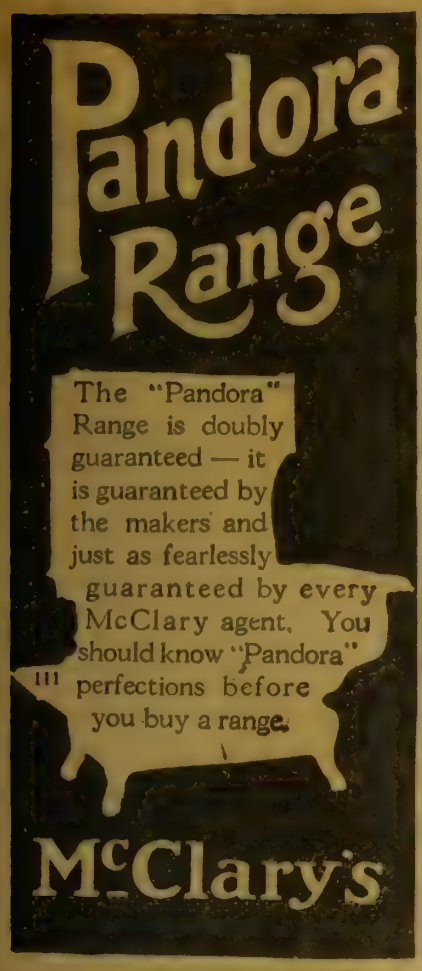
If a tree is headed 2 feet or less from the ground, the tendency of the framework will be to assume an upright position. There will not be sufficient vitality in the trunk, or light and air circulation below to enable the framework to extend horizontally, and for the same reasons the lower limbs will be unproductive. If left to itself such a tree will form a high-headed tree with two or more long unproductive trunks. Under careful pruning it will assume a vase form with a small head capable of carrying two or three barrels apples. Still from its small size four times as many trees may be grown on an acre as of the large dome-shaped type of western New York. So the difference in yield per acre is not material. This is the favorite type in the Ozarks, where immense returns per acre are reported. This, too, is the type that is becoming common in newly planted orchards over nearly the whole of New England.

On the Pacific slope where perfection of form, high color and size of individual apples rank above the yield, we find the same type with the exception that the trees are planted fully as far apart as the giants of western New York, and the tops severely thinned and the remaining branches cut back to about one-third of the annual terminal growth. In southern Ohio, and especially in Kentucky, we find orchards more than 100 years old, with scarcely a missing tree. These were trimmed to a height of 6 or 8 and often 10 feet and then allowed to grow at random. In the Piedmont mountains, the most common type is that of a tree with branches to the ground like a Christmas tree, and growing to a single trunk until it reaches the required height and then the top is cut off and the tree is kept from growing any higher.

There are perhaps a dozen other types each common in some locality and each profitable and the question is: Which type is the more profitable and which is the better for a man to adopt. No one knows. There are no data upon which to form an opinion. The question cannot be decided by any argument. Necessary experiments would need to be extensive and to extend over a period of more than a century. So a man should choose the type that best pleases him and plant and prune and grow to that type and none other. Never attempt to change to a different type. It is true that this change may be and often is made, but it requires the knowledge and experience of an expert and his almost constant attention for several years. It is seldom, if ever, as profitable or as satisfactory as it would have been had the trees been pulled out by the roots and new trees planted. Another factor is the variety. If one wished to grow an orchard of the New York type it would be foolish of him to plant trees of the Wealthy type; and equally so to plant Roxbury Russetts if he wished to grow 100 trees per acre.—C. H. Ormsbee in N. E. H.

Details of Strawberry Success.

Probably the most popular small fruit is the strawberry. Relative to its successful culture E. H. Hallet, lecturer of the Vermont state grange, recently gave his experience at the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Our reward has been ample and satisfying, our last year being by far the best in our history of 45 years.

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96 Acres; 1-4 mile to P. O.; near neighbors, schools, churches and depot; everything is here to make farming an ideal occupation; borders salt water; splendid 2 story, 12 room house; 2 barns, one 40x60; 600 apple trees; picking 1000 bbls. in season, cuts 75 tons hay; abundant supply wood and timber; accident to aged owner induces him to throw in horse, cows, pigs, and farm machinery, if taken immediately the low price for this valuable farm is only $7800, part cash; for traveling instructions to see this and a 228 acre Annapolis Valley fruit farm for only $1900, write THE MARITIME FARMER, St. John, N. B.

Hay Higher

W. J. PHELPS
Chamber of Commerce, Boston, Mass.
Reference: BEACON TRUST CO.

Prolific stock for breeding should be chosen wherever possible. A mare or cow that has reproduced annually for fifteen years or more is sure to leave this valuable quality with some of her offspring. The same is true of a stallion, a bull, a boar or a ram. If they are sure breeders they are of considerable value even if they do not possess all the fine points looked for in show ring animals. The first function of an animal is reproduction. After that it is up to the breeder to mate so as to bring this to the end desired.

Vermont farmers' week. Mr. Hallett says soil and location are first considerations. Land that has carried the previous year some hoed crop is preferred. Strawberries should not be set on sod land because of the white grub. Slope is quite important, a southeast cant being preferable to any other, thus avoiding about two hours of the forenoon sun. An application of twenty loads stable manure per acre is sufficient and land should be well plowed, thoroughly harrowed and fined until all lumps are destroyed.

Buy only the best plants and green or light colored roots. Those with old black roots should be discarded. Buy in your own vicinity, taking varieties that have given satisfaction in the neighborhood. Plants should be cut back at least a third thus favoring the formation of feeding roots.

Make rows 3 feet 4 inches apart and set plants 15 to 20 inches distant. It is well to start cultivation immediately after setting. Hoeing should be frequent. Pick off all fruit blossoms the first season. Do not allow the matted row to form more than two feet wide. Keep weeds out until freezing time. Mr. Hallett believes in mulching during the winter after a depth of 6 or 8 inches of snow has fallen. This is done for two reasons: First, to hold the berries back until the southern berries have left the market; and second, to avoid the late May and June frosts. The only spring tillage consists af raking the straw from the first and second row, running the cultivator lightly through, then drawing the straw from the next row on to the surface, cultivate, and so on until the piece is completed. Then the field should remain untouched until the picking.

Grade the berries preferably in the field instead of the packing grounds. No 1 berries should be of a good fine quality and baskets should be filled rounding full. Baskets with closed corners are preferred, as they are stiffer and berries will not work against each other and cause them to decay. After the picking season the ground should be plowed rather than allowed to raise a second crop.

The Charm of a Flower.

Saadi, the old Persian poet, said: "If thou hast two loaves sell one and with it buy a rose, for the bread is but food for the body, whereas the rose is food for the soul."

The one thing that brightens the farm home and its surroundings is culture, love of beauty and refinement evidenced in flower and tree around the farm house. Flowers are easily grown in a variety that is wonderful to the person who has never noticed them. A farm with no vines, no trees, no flowers is a sad place indeed. It looks as though the owners in their rush for financial returns begrudged the time, the soil and even the sunlight to any growing thing that could repay in beauty alone.

A half hour spent in a pretty garden by a tired housewife will cause her to forget her toil, fill her soul with pleasant thoughts and give her such a buoyant spirit that the whole tenor of the day's work and routine is changed. It is as if a ray of sunshine had fallen over the place and like millers to the lamplight, friends enjoy her radiance.

To provide such a recruiting ground for the farm family is, therefore, the best kind of common sense. April is the month to begin operations. No man is so poor who cannot support a rose, a row of hollyhocks and a bunch of sweet peas or a bed of ferns. A bed of asters whose plain green stems struggle through the summer, bursts suddenly into bloom in the fall and turn the common place into a perfect paradise. Any flower is a good companion and may give thoughts that sometimes the preacher fails to suggest.—Farmers' Magazine.

An I H C Manure Spreader a Necessity on Every Farm

If you expect to continue farming and raise a paying crop every good year, you must arrange to return to the soil the plant food taken from it by growing crops. Neglect to do this will reduce the productivity of your farm, and, in the end, to ruin it. When a farm is once run down it takes years of slow, careful upbuilding to bring it back to its original fertility.

If you attempt to fertilize by spreading manure with a fork, you fertilize unevenly and waste fully half the manure. When you use an I H C manure spreader properly, the fertility of your soil remains at a constant standard, while its physical condition improves from year to year, assuring bumper crops in good years, and the best possible stand when weather conditions are unfavorable.

I H C Manure Spreaders Corn King and Cloverleaf

will spread manure as it should be spread; in an even coat all over the field, light or heavy as may be needed, and pulverized so that the plant food elements in it combine with the soil.

An I H C spreader has many mechanical advantages. The apron moves on steel rollers running on steel tracks. This construction reduces draft and prevents the apron from slipping under the load. The apron feed mechanism and beater gears are provided with shields which protect them from sleet, snow, and manure A strong, durable feed moves the apron steadily toward the beater at any desired rate of speed. This steady movement insures even manure spreading whether the spreader is going up hill or down

Compare the I H C apron feed mechanism with that of any other manure spreader and see how much stronger and more positive it is. I H C spreaders are so constructed in every detail that they do their work positively, with the least effort on the part of driver or horses.

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DAIRYING.

Cheddar Cheesemaking.

Commercial Starter.—A good starter is the foundation of cheesemaking, as it is composed almost entirely of lactic acid bacteria; and, in adding it to the milk, millions of desirable germs are introduced and help to crowd out the undesirable ones. Use from ½ to 1½ per cent. according to the sweetness of the milk.

Above all, never use whey for a starter. Sour whey always contains undesirable germs, and these will be transmitted from one day's milk to the next.

Heating the Milk.—The temperature of the whole milk should be raised to 84 deg. or 88 deg., according to its richness. In spring, a lower setting temperature and a comparatively larger quantity of rennet should be used. As the season advances, and the milk gets richer, the setting temperature should be raised.

Testing Acidity of Milk.—The milk is now tested with the acidimeter test to ascertain its acidity. The acidities which give the best results are .22, .225, and .23, depending on the condition of the milk and the amount of starter used.

Coloring.—The coloring depends on the strength used; from 1 oz. to 1½ oz. to 1,000 lbs. of milk gives the right color. It should be mixed in half a gallon cold clean water, and gently stirred into the milk.

Rennet Test.—Before setting the milk, a rennet test should be made. From 18 to 20 seconds is the proper time for normal working milk. The time will vary with the seasons, condition of milk, and strength of rennet The quantity of rennet used is from 3 ozs. to 4 ozs. per 1,000 lbs of milk, and it must be diluted with half a bucket of cold clean water to each vat before pouring into the whole vat of milk. The water delays the action of the rennet for a few seconds.

The rennet should be stirred into the milk with the curd rake or agitator for 2 to 3 minutes at a fairly fast rate; then slow down for 2 minutes so as to have the milk perfectly still before coagulation takes place. Withdraw the rakes or blades of the agitator and skim off any dust or fat that may have accumulated on top of the milk. Put canvas cover over the top of the vat to keep the temperature from falling.

Coagulation.—Watch for the coagulation of the milk. If this occurs within 10 minutes, the curd should be ready to cut in 35 minutes from the time the rennet was added to the vat; or the time it takes to thicken by 2½ from the time it thickens, i.e., 10 by 2½ equals 25 plus 10 equals 35 min. from the time rennet was added.

Cutting the curd.—To ascertain when the curd is ready to cut, wet the forefinger and insert it carefully into the curd and then raise. If the curd breaks cleanly and shows clean whey it is ready for the knife.

The horizontal knife should be used first, lengthwise on the vat. The curd then keeps in place better and allows a more uniform cut to be made with the perpendicular knife. The latter is used crosswise and once lengthwise. The cubes should be even and not over ⅝ in.in size.

The curd should be stirred gently by hand for 10 minutes and the curd adhering to the sides or bottom of the vat taken off before applying the curd rake or blade of agitator.

Testing Acidity of Whey.—A test of the whey should be taken before turning on the steam so as to know how the acid is working. With some milks and some starters showing a test of 0.14 per cent., three-quarters of an hour from rennetting will bring the curd on quite fast enough, while others even at 0.15 or 0.16 per cent., may work too slowly in the same time.

Heating the Curd.—Steam should be applied through the medium of water under the v at, as there is less danger of scorching the curd. Turn the steam on slowly at first and gradually apply faster as the curd gets firmer. Stir constantly during the heating process, wnich should take from 40 to 45 minutes to raise the temperature to98 or 100 degs. as the case may be.

After the curd is at the desired temperature, it should be stirred occasionally to keep it from matting and to insure even and thorough cooking.

Testing Acidity of Curd.—If the whey is showing 0.175 in two hours from setting in the milk, remove the whey until the top of the milk curd may be seen; this checks the acidity from getting too far ahead. Mix the curd up by hand so as to get it nice, firm, springy, and elastic, so that when a handful is squeezed together it will fall apart readily on relaxing the pressure, before running the whey off.

If the curd is well cooked, allow from 0.195 to 0.22 per cent. of acid before throwing the curd up on the racks in the vat.

Well cooked curd requires very little stirring as the whey leaves it freely. It is of the greatest importance that the curd be cooked firmly, and that it contains sufficient acid before the whey is run off.

Racking Curd.—The racks are made in 2 feet sections, from 4 to 6 ins. in depth, to fit inside the vats. Tilt the vat so that the top end is about 6 inches higher than the bottom, and draw curd downwards. Put in the first section of rack and cover over with rack cloth. Dip enough curd on to the rack to make space for second rack. This process is continued till all the racks are in place.

Stir curd gently and level it back 8 to 10 inches deep to mat. Test the acidity of the whey after racking; it should show from 0.258 to 0.30 per cent. in 2½ to 3 hours from setting the milk.

Matting the Curd.—Put cover over the top of the curd and allow it to mat from 10 to 15 minutes; then cut in strips lengthwise and crosswise in 8 to 10 in. blocks and turn over. Repeat the process until the curd becomes "meaty," and when pulled apart it splits instead of breaks. At the last turn, place the curd on the bottom of the vat and remove cloths and racks before milling, which generally takes two hours from racking. The temperature of curd at this stage should be 94 degs.

Milling Curd.—Knife mills should be used, giving a clean cut ⅜-in. to ½-in. in size. If smaller, they injure the curd, causing unnecessary loss of butter fat and spoiling the texture of the cheese.

Mellowing the Curd.—After the milling is completed, the curd should be turned over by hand, and covered to maintain the heat and prevent the curd from bleaching. Repeat the same process every 15 minutes for one hour after milling.

Testing Acidity of Curd.—Fifty minutes from milling make a small hole in the center of the curd, so that the moisture will gather sufficiently to allow a test to be made. Aim at 1 per cent. of acidity, three hours after the curds are dry on the racks.

Turn the curd over by hand and cover up, repeating the previous process of mellowing. In half an hour the curd becomes soft and velvety and exudes a moisture of half fat and whey testing 1.05 to 1.10 acidity. The curd is then ready to salt.

Salting the Curd.—The amount of salt to be added depends upon the moisture in the curd and upon the length of time for ripening. Moist curd requires more salt than quickly ripening cheese. The rate varies from 2½ to 3 lbs. per 1,000 lbs. of milk.

If the temperature of the curd is 88 degs. let the water run from under the vat. The curd should be turned over and spread evenly over the bottom of the vat. Sieve half the salt on the curd and stir up thoroughly and evenly through the mass. The remainder should be put on and also well mixed.

Piling the Curd.—Pile the curd up in the centre of the vat so as to allow the whey to escape. The temperature of the curd at this stage should not exceed 84 degs. Cover the curd over for 20 minutes until the harsh feeling caused by the salt has disappeared; mix the curd up by hand and it will then be ready for the hoops.

Dressing Cheese Hoops.—In the bottom of the hoop place a clean cap cloth (hessian preferred). Use two cloths (seamless bandage). Wet the first cloth before putting it on, and do not have any on the bottom. Put the other cloth on and lap about 1-in. on the bottom of the hoop and cap cloth. When two cloths are used a silky skin is put on the cheese. The outside cloth is taken off in the morning and washed ready for the day's hoops.

Hooping the Curd.—The curd is now firmly packed into the hoops and weighed, and put into the press with the jointing of the inner hoops facing the gutter of the press.

Pressing the Cheese.—At first, the pressure should be applied gradually to the curd. When the whey starts to come away freely, stop screwing for 10 or 15 minutes; then screw up, repeating this process for one hour. A quarter of an hour before dressing the cheese, pour three or four buckets of water gently over the hoops at a temperature of 180 deg., to assist in putting a good rind on it.

Dressing Cheese.—After about one hour has elapsed the cheese should be removed from the press, and the operation known as dressing the cheese performed. This consists of trimming round the edge of the cheese, wetting the cap cloth with clean hot water, and pulling up the bandage and removing wrinkles so that the binding will lap ¼-in. over the end. Wet the outer cap cloth and replace the cheese in the press, joining the inner hoops on the top. Pour three or four buckets of hot water on top of the hoops and gradually screw up fairly tightly. The maximum pressure is not put on until late at night.

The cheese should be turned in the hoops, end for end, and the outer bandage taken off in the morning, and any defects in appearance remedied. They are again returned to the press and allowed to remain in the hoops until they are required for the day's cheese. The outside bandage should be washed in hot water and spread over the top of the hoops to air and dry, so as to be ready for use when required.

After being taken from the press, the cheeses are removed to the maturing to ripen.

Maturing.—The cheese should be turned every morning on the shelves in the maturing room, which should be well ventilated. The cheese shelves should be kept scrupulously clean and thoroughly washed at the end of the season with boiling water and washing soda. This keeps the cheese clean and helps to prevent mould. The floor also should be scrubbed and kept clean. Clean and neat cheeses placed evenly on the shelves give the room a nice appearance.

Hoops and presses should be washed thoroughly once a week, and cap cloths should be kept clean and sweet. The cheese vats, curd racks, curd cloths, etc., need special care in washing in order to keep them in first class condition. Curd racks should be left outside and well aired.

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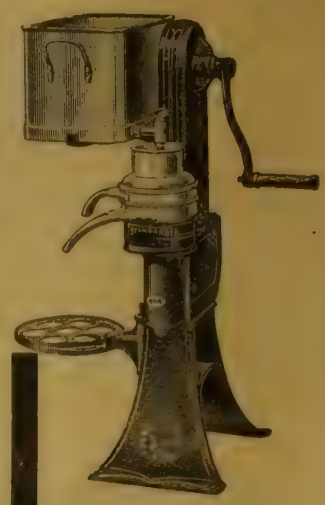

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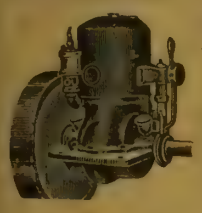

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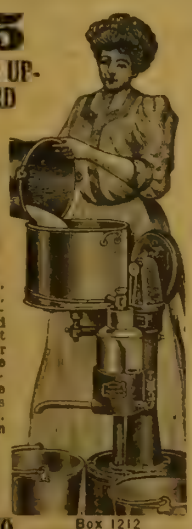

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as possible during spells of hot weather, as over-heated cheese loses flavor, discolors, and becomes bitter.

If the acidity is allowed to overdevelop while the curd is in a soft condition, a more or less sour cheese will be the result. It is not the amount of acid in the curd at the time the whey is run off that indicates whether a cheese will be sour or not, but rather the condition of the curd as regards firmness when the acid develops.

Openess in the cheese is due to not allowing the curd to mellow down sufficiently before adding the salt and putting into press too soon. A sweet cheese is always open, because it resists the pressure and puffs and swells after removal from the press.

Mottled Coloring.—An uneven development of acid and moisture in the curd. This can be avoided by uniform cutting, heating and stirring, using ⅜ horizontal knife lengthwise of the vat and then cutting with the ⅜ perpendicular knife crosswise of the vat and lengthwise. Mix the curd up by hand and then give it an extra cut lengthwise of the vat, giving a smaller cut which makes it much easier to get the curd firmed.

Starters should always be strained through a layer of cheese cloth and added to the vat of milk before coloring.

The curd left over from the previous day should be placed in the corner of the vat after the day's curd has been piled up on the racks. The drippings from the curd will warm it up. Drain off the curd before milling, pull the curd into a heap, and salt apart. When hooping the fresh curd, put the stale in the bottom of a hoop.

The chief advantage of matting the curd is to improve the texture and body of the cheese. The curd must be turned frequently on the racks in order to prevent the whey forming in pools on the curd.

The effects of salt on the curd are to expel the moisture; to improve flavor, body and texture of the cheese; to retard ripening or curing; and to add keeping quality to the cheese. If salt be applied to the cheese before it becomes velvety, the the quality of the cheese is not so good.

A realy fine Cheddar cheese should have a clear pure silky and firm appearance when drawn by the trier. There should be no stickiness or pastiness on touching it; neither should there be any holes in the meat, or streakiness in the color. It should be pleasant to the eye, and sweet to the nose and the palate.—Journal of Agriculture, Victoria, Australia.

Tin Cream Cans.

Prof. H. H. Dean recommends tin cream cans. As a result of several tests made with cans and crocks, covered and uncovered, cream cooled and uncooled before placing in the can or crock, all kept on a cement floor in a cellar, Prof. Dean says it was found at the Ontario Agricultural College that a bright, clean tin can is just as good for keeping cream in as a crock, and it is much lighter to handle and not so easily broken. A chipped or cracked crock is apt to cause bad flavours in the cream. Cream should be cooled before placing a lid over it. Where cream is added to the container daily, it ought always to be cooled before mixing with cream from previous separations. Undoubtedly the best place to hold cream is in a suitable box or barrel having cold water or ice and water surrounding the can of cream. This method causes much more rapid cooling of the cream than air cooling, which prevents fermentation and enables the farmer to deliver sweeter and better flavoured cream for butter-making.

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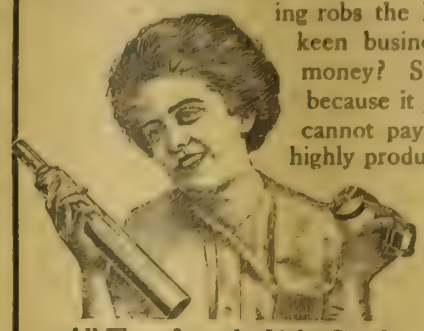

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for similar good reasons. Tubulars have twice the skimming force of others, skim twice as clean, pay profits no other can pay.

The widely known T. Eaton Estate, here shown, near Georgetown, Ont., is but one instance out of many too numerous to mention. Dairy Tubulars are used both on this farm and at Mrs. Eaton's summer home.

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with the H. P. SPRAMOTOR [illegible] that the trees will be adequately protected. The Horse does everything but direct the nozzle and that you will prefer to do yourself. The Spramotor can be operated by hand where preferred. Has 8 nozzles with 175 [illegible] pressure. The [illegible] size of trees. No tree too large. The Spramotor [illegible] efficient for vineyards, row crops or grain, and the nozzles [illegible] not clog.

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LIVE STOCK.

Docking and Castrating Lambs.

Out near the sheep pen a new fire was kindled. I was getting ready to dock my lambs, yet many farmers would only associate the idea of an early morning fire with branding cattle or killing hogs. I wanted a fire and some hot irons with which to sear the wounds. Some do not agree that docking is a good business proposition. At first it seems painful and so cruel, yet long ago farmers had to learn that some things look cruel which must be done. The good of the lambs and the farmer's pocketbook favor docking and castrating while the lambs are still young. A sheep's tail is a collector of filth and a nest for blow flies and maggots. Their presence is highly objectionable in the ewe flock also.

When the fire was hot and the three small iron rods had heated to a cherry-red color I was ready to start work. One assistant caught the lambs after they had been penned in a small place, while another held the lamb for me to do the "de-tailing." He held then with their backs against his chest and a front and hind leg in each hand. In this position the lamb was up at a convenient height, its feet were out of my way and all things arranged themselves conveniently. Taking a sharp knife in my right hand and the lamb's tail in my left, I severed it with one downward stroke. Then the blood began to spurt from the severed arteries in a surprising manner. On the inner side of the stub left was one large artery and on the outer side were two smaller ones. From these the blood spurted rapidly. To stop this bloodflow I took a red-hot iron from the coals and touched the throbbing arteries. This seared them and stopped the blood with but little pain to the lamb. It was only the work of a minute yet it stopped all the waste of blood that might have sapped the life.

I have at other times tried cutting the tails off with a block, mallet and a chisel, but besides taking more helpers such a practice requires more tools, and so I prefer docking the tails with a knife. Many times I have used different styles of docking pinchers. Some are heated cherry-red hot and pinched down on the tail that is being amputated. Their use, however, necessitates the use of an extra helper to hold the tail out straight and to hold the small board which was slipped over the tail to protect the lamb's body from the heat. For fast work there would also be needed more than one pair of pinchers.

It is very important to leave the skin longer than the bone in order that when the stub heals there will be no bone sticking out unprotected. To allow for this when using the pinchers one simply uses a snugly-fitting board. When using a mallet and block it is necessary to put the skin back before setting the chisel on the tail, and to leave plenty of skin when simply using a knife all that is necessary is to hold the tail down in a straight line with the backbone when cutting off the tail. This pushes the skin on the back somewhat, so that an end is left to slip over the bone after the stub starts to heal.

Castrating lambs is a more serious matter. Certain I am that the average sheep farmer can well afford to castrate or "trim" his ram lambs.

It is no more difficult to castrate a lamb than a pig or a calf. First wash the hands and knife clean, and if it is to be had wet the lamb's scrotum with disinfectant. Then cut off the lower end, pull out the testicles, and let the lamb go. Have your assistant catch the lambs and hold them so that you can keep your hands clean. In holding them he should hold their backs against his chest and hold a front and hind leg in each hand. This brings them up to a convenient height and is the most convenient position. Some who have trouble and lose lambs after castration often have trouble because they try to cut a lengthwise slit in the scrotum. When cutting this way they fail to cut to the end of the scrotum and so the wound does not drain and inflammation starts. Some of the first lambs I ever castrated gave me trouble, for I cut the scrotum and then the covering of the testicle, pulling the testicle out and leaving the covering inside to collect pus and inflammation. This was wrong, for I should have simply cut off the end of the scrotum and then pulled out the testicles with the covering and all the cord I could get. In following this practice now I seldom if ever have trouble. To keep the testicles from slipping back, I cut the scrotum rather short, thus pushing the testicles so far out that they seldom slip away.

For best results the lambs should be castrated at a few weeks of age. If this is impossible one should not delay the operation indefinitely, but castrate them even if they are two months old. If they have grown to nearly marketable age before time is taken to castrate them, it would be better not to do it, but although the lambs may have become too old to dock and castrate this time, no farmer ought to be so old that he will not change his ways and dock and

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"I thought it was easy. It was hard. It was a big contract. I didn't dream of what any roof has to stand. I thought about all a roof did was to let rain run off it, and keep in place the rest of the time. I found I had about twenty-five problems to answer at once in a single design.

"My roof had to have 'give' in it, so it would stretch in the hot sun and shrink in zero weather. It had to be ice proof, or lodged thaw-water would gouge seams apart. It had to be smooth, or lodged dirt would rust it. It had to cover its own nails, or the roof would leak. My roof had to be layable by anyone.

"My work was, I had to design a shingle that couldn't be laid face-down, or sideways, or upside down, or crooked, or be marred in the laying, or be smashed on the road between my factory and the place where the roof was. I found my shingle needed ventilating places in it that would let air out but wouldn't let water in. It had to be wind proof. Yes, sir, these things were all worked out by me in 50 years.

"I started to make a spark-proof and lightning-proof roof. I ended by getting one of the best roof shingle designs ever made. My roof has more experience and skill and years behind its design than any roof you can get in metal."

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"All this time I was getting my design right little by little. But, do what I could, I had been troubled by the metal in it. It seemed impossible to get a metal which might not rust. I had to take the best metal I could get. I needed a strong, light, absolutely non-rusting metal. At last, I found a hint in Europe.

I followed up this metal. At last I devised a non-rusting 100-year metal, which was non-corrosive. The moment I put this metal into my shingle design, I got at one step a 100-year roof. This is the roof you can get from me at a low price."

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castrate his lambs early the next spring. Docking and castrating mean dollars and cents.—J. C. Courter, in Breeders' Gazette.

Foot Rot in Sheep.

Foot rot is of two kinds, viz., contagious and non-contagious. The latter is a simple disease usually due to excessive wear of the hoof and the irritation caused by the introduction of dirt to the sensitive tissues of the foot. It is therefore, most prevalent on low, wet land and in filthy yards and barns.

Prevention is better than cure. Sheep should not be fed in wet, muddy or filthy places. Their hoofs should be examined and pared when necessary to remove superfluous horn. When the disease appears in a small flock the hoofs should be trimmed down closely and the feet washed or soaked in a solution of copper sulphate, 1 ounce to 2½ pints of water, then dress with watery solution of chloride of antimony, or preferably with a mixture of equal parts of chloride of antimony and tincture of myrrh. After such dressing the raw surfaces should be protected by a coating of pine tar or gutta percha varnish. Then remove the animals to a dry, clean pasture. If the disease is not of long standing this treatment will generally effect a cure, although in confirmed cases where much destruction of tissue has taken place it may be necessary to repeat the dressing several times.

For large flocks on the range or elsewhere a more general treatment is necessary. A suitable solution is made in the proportion of ten pounds of copper sulphate, dissolved in five gallons of water. Solution is put in troughs two or three inches deep. The sheep after being driven through water, preferably running water, to cleanse their feet, are, by using a narrow chute, made to pass one by one through the preparation. As an alternative to the above, affected sheep may be held for a short time on a floor sprinkled to a depth of three inches with freshly slaked lime.

Canadian sheep men may be thankful that the contagious form of foot rot is almost unknown in this country. The few cases seen are as a rule in recent importations. For this reason imported sheep and others that have travelled in dirty cars should be carefully examined on arrival and treated at the same time as they are dipped. Prevention of the trouble is much cheaper than effecting a cure. Treatment is similar to that described above, although owing to the persistent nature of the disease recovery is generally much more protracted. As in this form the trouble begins in the skin of the interdigital space and works downwards through the sensitive laminae, it is advisable to dress the skin between the dew-claws with a mixture of one part carbolic acid to ten parts of glycerine, or with vaseline twenty parts to one part of iodine. Dr. J. G. Rutherford.

In buying a breeding animal don't buy fat. With fat goes a low prolificacy. The rule is good in any class of animal, hogs, sheep, horses, cattle, chickens or dogs. A fat animal cannot be as vigorous as one in clean, thrifty condition. When the body is storing up fat it cannot be building another animal as is required by the laws of reproduction. This is the reason that steers gain flesh better than bulls or cows. The same applies to capons and barrows.

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HOW do you buy a wagon? Do you wait till you need one and then take the first that's offered you, or do you find out in advance which wagon will give you best service, and buy that one? Why not get as much as you can for your money? Buy the wagon that will stand up for the longest time and be easiest on your horses. That wagon is an I H C wagon. Here is why: Each I H C wagon is thoroughly inspected. I H C wagons—

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have just one standard—the highest. The lumber used is selected from large purchases. Every stick of this lumber is carefully inspected. Another inspection is made when the parts are ready for assembling. This inspection assures perfect shaping and ironing.

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All these inspections are for your benefit, so that any farmer who owns one can say with truth, "My I H C wagon is perfectly satisfactory." The I H C local agent will show you the wagon best suited to your needs. He will supply you with literature, or, we will send it if you write. Address—

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After years of scientific research and experimenting, we have succeeded in finding a preparation that will rid domestic animals of flies, mosquitoes and other vermin that not only worry them but positively injure their health.

Cow Comfort is the most powerful insect destroyer and exterminates lice, ticks, fleas, etc.

Its curative effects are simply marvelous in cases of skin diseases, scabs, tetters, etc.

Sold in gallon cans at $2.00 each, but as the contents of a can is to be diluted in four gallons of water, it makes the price really 40 cents a gallon,

Write for descriptive circular, it will interest you.

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FOR HORSES, CATTLE, PIGS and SHEEP

If your dealer does not carry it write to THE BRAYLEY DRUG CO., LTD., ST. JOHN, N. B.

THE HORSE.

The Colt's First Year Most Important.

In handling a colt make him grow all he will the first year. This is when he should make his greatest growth, easiest growth and at the least cost. If you have a colt from a mare and a stallion that have the blood and weight and quality you have the material that should give you big horses when ready for the harness or the market at three or four years of age.

To start at the beginning, which is the proper place, naturally, don't allow the mare to do heavy work necessitating any excessive straining or jerking for a month previous to time to foal. Give her some alfalfa or clover in the ration. This will relax her. If neither of these hays can be had, feed some oil meal in the ration.

When the colt comes tie up or sear with a hot iron the navel and wash with some antiseptic solution daily for a week or ten days. The first nine days of a colt's life is the period when this fatal disease gets in its work through the navel cord. Many horsemen prefer to have the cord protected by a belt tied over the back of the little fellow in addition to the daily wash. The cleanest stables are none too clean to dodge the germ which causes navicular disease, or navel ill, as it is usually called, so that precautions as to frequent cleaning out of stables and changing of bedding can not be over done. Plenty of sunlight is a great aid.

In a few days the mare may be put to work, but it is a good plan not to work her hard for a time. Don't allow the colt to run with her in the field. He is sure to get in a wire fence or on a disc or mower sooner or later and may be the cause of a runaway. Have two mares foal about the same time if possible, and work one mare in the forenoon and the other in the afternoon shutting the colts in with the mare that is resting. The colts soon learn to suckle both mares and do not fret and worry. The mares should be milked out a bit to loosen the udders when working without the colts following.

When the mare comes in from the field don't allow her to have all the water she wants and don't let the colt rush to her side and take all the milk at once. Strip out a few streams from each teat and make him wait a few minutes until the mare has cooled somewhat. Otherwise bowel trouble will develop and many colts are lost through this disease.

Get the colts to eating grain as soon as possible. The earlier the better for both colt and mare. Give the colt a feed box from the beginning and put a handful of oats in it by the time he is two weeks old. In a few days he will be chewing these. Feed three times a day as much as he will clean up. It is a good plan to learn him to clean up his feed box, and he will never learn any younger. Feed oats and bran, half and half, by the time the colt is a month old, with a dash of oil meal once a day. Have some alfalfa or clover hay that was cut and cured early so as to get all the nutrients. The protein in these hays will make bone and muscle to put the flesh on for your ton horses.

By the time the colts are five or six months old they may be weaned without trouble. Three quarts of oats and two of bran with plenty of clover hay when in the barn and the run of a good pasture during the day is considered a fine ration by one prominent breeder.

Get the colts ready for winter with a thick coat of baby flesh and never allow them to lose this. Close stabling is expensive and unnecessary. Open sheds that are well bedded are fine as they allow plenty of exercise and air. The colts will look shabby with their ungainly limbs and rough coats, but if the feed is kept coming at them all winter they will come through as healthy as you wish. The breeder who can get his colts through the first winter in as good shape as they entered it is an artist and should achieve success.

As feet and legs are the most important parts of the horse they should receive attention. The growth of the feet during the first year makes or mars the set of limbs and the shape of the feet. Trim the feet every six or eight weeks whether they look bad or not. Trim so that the feet are flat on the frogs and the front of the hoof has a 45 degree slant. The foot becomes large and well rounded and the hoof head develops large and strong, giving a base that will carry the ton horse when he develops.

Care of the Harness.

It is a business proposition for every farmer to take good care of his harness, for not only does the harness last longer, but danger of accident is much lessened. Many, many runaways occur every year just because some weak place in the harness is let go and not attended to in time. Sometimes in spite of the utmost vigilance little things will escape us, but nine times out of ten the drivers are aware of the condition of the harness and do not fix them out of sheer negligence. Many broken bones and large repair bills testify that this is very expensive neglect.

The life of a harness may be greatly prolonged by proper care and handling; heavy pieces should never hang over the lighter pieces. It is best to have a separate hook for the bridle. It pays well to have a special room for the harness constructed so as to be handy and free from moisture. It is a very bad plan to hang harness behind the horses in the stables, as the gases and moisture from the manure rots the leather very fast. Harness should be cleaned and oiled two or three times every year.

In cleaning the harness it is best not to use water. If water is used the leather is filled with moisture and the oil does not penetrate it very well. Soaps are hard on leather, as most of them contain lye, which does much harm. The harness can be cleaned thoroughly and easily without moistening it.

It is a good plan to keep a supply of rivets and other articles handy in repairing harness on hand and mend the harness as soon as it shows signs of weakness. Much money can be saved in this way. Another important thing is to always have the harness fit the horse which is wearing it. If the harness is big for the horse there is a great strain upon the harness and great discomfort to the horse. The same is true even in greater sense if the harness is very tight. Some part is liable to give way at any time. No matter in how big a hurry, the harness should be readjusted to fit the horse before starting if it was used upon a different horse peeviously. I believe the time I spend in caring for my harness is very well spent and believe that I save quite a little each year in this way.—C. J. Griffing.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevets the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunche sof all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDRES

After Using

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it. Very truly,

RODERICK McKENZIE.

Hillsboro, N. S.

DEAR SIR:--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.

March 28th, 1911.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),

Hawkshaw, N. B.

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When you want to find out the merits of an article, you will receive that knowledge by testing it yourself, or from one who has already tried it. When you want to know the surest and safest horse collar on the market make enquiries from some of the largest dealers in the Maritime Provinces. Ask them if they stock the Currie Collar and if they find it satisfactory ask the man who buys it if it works satisfactorily on the horse. When you make these inquiries you will be satisfied that it is worthy of personal test. If you have never used this collar, make no delay in ordering from your dealer, if he does not sell it, send to

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"BETTER FARMING SPECIAL TRAIN"

Dates and Hours Along the I. C. R. System.

The Farming Demonstration Special Train will start its tour of the Intercolonial Railway in New Brunswick under the auspices of the provincial government on Friday, June 21st, from Fredericton.

The "Better Farming Special" will be composed of seven cars; three baggage cars being fitted with exhibits and specimens of farming products chiefly from the McDonald College Farm near Montreal, supplemented by a number of native exhibits from New Brunswick, including apples and other fruits, as well as grains, etc. There will be two first-class coaches for the lecturing staff and assistants; one sleeping car and one dining car.

The Intercolonial Railway has arranged for the issue of return excursion tickets at single fare from all stations to the nearest point where the demonstration car will stop.

On leaving the Province of New Brunswick at Campbellton, the train will pass under the jurisdiction and control of the provincial government of the Province of Quebec.

The dates and hours over the Intercolonial system and which intending visitors to the cars and lectures should preserve, are published as follows for the convenience of farmers and those interested.

FRIDAY, JUNE 21.—Train leaves Fredericton on the Canada Eastern Division of the Intercolonial and halts for lectures at Durham, Cross Creek, and Boiestown.

SATURDAY, JUNE 22.—At Doaktown from 9 to 11.30 a. m.; at Blackville from 13.00 to 15.00; at Millerton from 16.00 to 18.00; and at Chatham from 19.30 to 22 o'clock.

MONDAY, JUNE 24.—At Sackville from 9 a. m. to 11.30 a. m.; Memramcook 13.30 to 16.00; and at Moncton from 19 o'clock to 22 o'clock.

TUESDAY, JUNE 25.—At Salisbury from 9.30 a. m. to 11.30 a. m.; at Petitcodiac from 13.30 to 16.00; and Sussex from 19.00 to 22.00.

WEDNESDAY, JUNE 26.—At Norton from 9 a. m. to 11.30 a. m.; and Hampton from 13.00 to 15.30.

THURSDAY, JUNE 27.—At Harcourt from 13.00 to 15.30; at Rogersville from 16.30 to 18.30; and at Barnaby River from 19.00 to 22.00.

FRIDAY, JUNE 28.—At Bathurst from 9 a. m. to 11.30 a. m.; at Nash's Creek from 13.00 to 15.00; at Charlo from 16.00 to 18.30.

SATURDAY, JUNE 29.—At Dalhousie Junction from 9.00 to 11.30; and at Campbellton from 13.30 to 16.30.

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Cures Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Bolls, Sores, Wire Cuts, Bruises, Swellings, Lameness, and allays Pain quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. $2.00 per bottle, delivered. Describe your case for special instructions and Book 5 E free.
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Lampas.

The cruel operation of burning the bars for the cure of lampas is still much more common than is generally supposed, or can be gathered from the smaller number of prosecutions that take place—small because such cases do not come to the knowledge of those in a position to prefer a charge of cruelty. It is humiliating to think that in these days of free and compulsory education, when elementary anatomy and physiology are taught in the National Schools at the expense of the ratepayers, and continued at the cost of the same by veterinary lectures under the auspices of county education authorities, and there is an abundance of cheap literature relating to the management of farm animals and the treatment of their simple ailments, there should be found such culpable ignorance. One of the principal reasons for its persistence, apart, of course, from tradition, which is powerful in the stable and the forge, is its recommendation in old works on farriery, to which their owners cling with an obstinacy surprising when reliable popular works on the treatment of animal diseases are so cheap and easily procured as to be within the reach of everyone, and so simple as to be capable of being understood by those of average intelligence, or whose education was not acquired at a public school or university. In an old book reference is made to lampas as an excrescence. It does not seem possible that in these days the swelling of the bars popularly known as "lampas" could be regarded as an excrescence requiring to be destroyed, but the fact remains that it is, and that the hot iron is often employed to burn it away.

The swelling behind the bars is not an excrescence, but arises from congestion of the blood-vessels in the lining membrane of the palate, the swelling being mostly met with in young horses during the process of teething. It occurs occasionally in old horses from irregularities of the teeth, or may arise in any horse from inflammation set up by bit injuries, but for all practical purposes it may be regarded as a juvenile trouble. Owing to inflammation of the gums, set up by the irritation caused by the eruption of the permanent incisors, extending to the palate, it swells and becomes level with, or projects beyond, the nippers and causes feeding to be a painful business. Colts at grass rarely suffer much, as their food is cooling, tender, and easy of digestion, but it is the young horse that has been taken into work and fed on hard corn and dry hay that the condition affects most severely. The spring of the year, when the dental changes are in progress in horses under six years old, is the season when lampas gives most trouble.

In addition to the slight fever and constitutional disturbance associated with difficult dentition in most young animals, including the human baby, the colt falls off a good deal in condition, because an insufficiency of food is eaten, and what is taken is badly masticated. Generally, an alternation in the diet to wet bran and boiled oats, tender green meat, or other soft food, at the same time easing or stopping the work, will suffice to cure because in a few days the inflammation and soreness pass away and the colt can feed again in comfort. In cases where the congestion is considerable and the palate projects below the incisors, all that is necessary is to scarify the swollen bars lightly with a lancet or sharp, clean penknife, these superficial incisions resulting in the abstraction of a little blood. It is, however, only in extreme cases that lancing with a knife is necessary. Given a few doses of alterative and cooling medicine, and a soft diet, the swelling soon disappears. Green meat in season, pulped roots, preferably carrots, in winter, crushed or boiled oats, and bran and linseed mashes with some scalded hay, form the best diet for the stabled colt. Under no circumstances should the hot iron be applied to the swelling, not even lightly, for it is not only illegal and cruel, but calculated to aggravate matters by destroying the mucous membrane of the palate and causing more swelling.—Pateley Bridge.

Gombault's Caustic Balsam
The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.
Supersedes All Cautery or Firing. Invaluable as a CURE for
FOUNDER,
WIND PUFFS,
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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.
The Accepted Standard VETERINANY REMEDY
Always Reliable. Sure in Results.

None genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S.A. CANADA. CLEVELAND

Finds Caustic Balsam to be Reliable.
I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam
I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.
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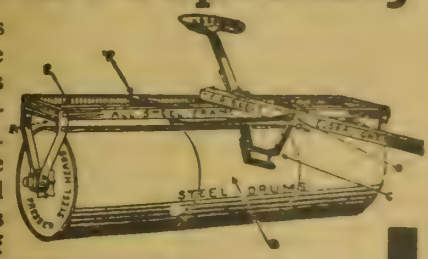
"Bissell" rollers are a specialty



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The 18 cold rolled anti-friction Bearings ½ inch thick with lathe cut ends, held in the one piece Malleable Iron Cage, is a single point placing the "Bissell" Roller away ahead.

Look for the name "Bissell" on every Roller. No other is genuine. Ask Dept. M for free catalogue.

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Valuable Book on Barn Building FREE

Write at once for this valuable book. It contains information that every farmer should have regarding the sanitary housing of dairy cows. It explains every fundamental of correct construction and gives proper dimensions and arrangements. It describes lighting, ventilation, stable floors, and their construction, and contains suggestions about silos, site, exposures, appearance, design, drainage and inside equipment. Besides, you will find in this book a number of practical barn plans and other information that may point the way to your saving many a dollar. We have designed many of the finest and most modern dairy barns in this country and this book is based on our long experience and expert knowledge in dairy barn construction. The book contains in concise, clear and condensed form, information necessary to any farmer who is planning to build or remodel. Understand, we send you this book absolutely free without any obligation on your part—just for answering these few questions: Do you intend to build or remodel? How soon? How many cows have you? Will you want a litter carrier? Will you want a hay fork outfit? Send to-day.

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A Windsor Lady's Appeal.

To all women: I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or Growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser." also sent free on request. Write to-day. Address Mrs. M. Summers, Box H. 309, Windsor, Ont.

Now is the time to get rid of your rheumatism. You can do it by applying Chamberlain's Liniment and massaging the parts freely at each application. For sale by all Dealers.

POULTRY.

New Method of Relieving Crop-Bound.

Practically all the writers on above subject recommend the operator to stitch up the incision after the operation, and as I have found by experience there is a simpler and better way, I would respectfully submit a new method of relieving such cases, for the consideration and practice of your readers. I will pass over all preliminaries leading up to the point where an operation is necessary to save the life of a bird, and treat only the way to do it quickly and safely. The only instruments necessary are an ordinary pocket knife with one sharp blade, a button-hook, and a bottle of peroxide of hydrogen.

If you have ever noticed a half-grown chicken with a full crop, you have observed that at right of neck and top of crop you could see contents quite distinctly owing to transparent nature of tissue and practical absence of blood vessels. This is the place to make an incision about one-half inch long after plucking a few feathers. With button-hook remove cause of obstruction and practically all the contents. Cleanse the wound well with hydrogen, and confine bird for few hours, then give wound another dressing with peroxide by dropping it on. Feed the bird soaked stale bread lightly for the first day and turn out with others. After twelve hours there is absolutely no danger of over- eating or drinking, as the wound is sufficiently sealed to cause them pain as soon as they eat or drink enough to cause distention. The wound seals up and heals naturally, no stitches being necessary. Dress the wound night and morning for four or five days with peroxide, by dropping it on.

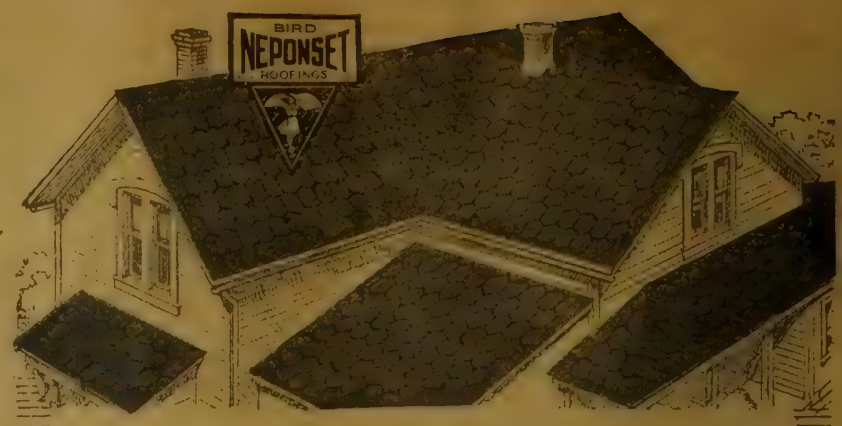
After one or two operations, this method is so simple, safe and sure you will not give the matter a second thought, and by taking the case in time all offensive features of sour or foul odors are overcome, and the bird is not checked by the process. In fact, one night or day's suffering before given relief sets them back more than an operation.

I have used this method (without stitches) upon my own and neighbors birds for the past four years, and have never lost a bird or had even an unfavorable symptom, the most notable of which was in the spring of 1911, an operation on a chick fifteen days old for ptomaine poisoning, with complete success.—S. K. Burdin in Poultry Advocate.

Handling Eggs through the Creamery.

There are several other lines that might be enumerated, but handling eggs seems to be the most satisfactory in connection with a creamery.

Handling eggs has been found an ideal side line for the creamery when properly regulated. The teams that bring milk and cream to the creamery can also bring eggs produced by the patrons, with practically no extra expense. In this way the creamery can secure the eggs at frequent intervals and under such restrictions as will insure their being absolutely fresh and of finest quality. It can also cool the eggs if necessary and market them in a manner that will secure a premium above the quoted prices for the finest grades. Statistics show that under ordinary conditions of marketing there is a great loss on account of poor eggs. There is also much dissatisfaction from the consumer for the same reason, but where the producer is made responsible for the quality and the creamery, with its facilities for handling them properly, is made the central market, the consumer finally gets a grade of



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FREE THIS MAGNIFICENT DOLL'S HOUSE AND HANDSOME IMPORTED DOLL

also TWO complete sets of beautiful furniture for the house and this lovely gold-finished jewelled ring

GIRLS, THIS IS A CHANCE OF A LIFETIME. DON'T MISS IT. This magnificent doll house is a perfect little palace, **EXACTLY LIKE THE DRAWING IN EVERY DETAIL,** with its quaint gothic roof with two chimneys, fine porch, lovely verandah and broad handsome front steps. The outside of the house is finished in red brick, the inside is beautifully papered throughout, and every window has curtains. **IT IS FURNISHED COMPLETE** with the loviest furniture you have ever seen—two complete sets, including sofas, chairs, tables, beds, bureaus, wash-stands, etc.

THE HANDSOME DOLL WE GIVE YOU WITH THE HOUSE is a little beauty. Fully jointed so that she can sit down, turn her head, move her arms and legs, and she is dressed with fine underwear, shoes, stockings, etc., complete from hat to shoes.

Girls, if you want to secure **ABSOLUTELY FREE** this handsome doll house, lovely doll, the two sets of furniture and the beautiful jewelled ring, send us your name and address at once and agree to sell only 25 of our delicious perfumes at only 10c. each. They come in six lovely odors, rose, carnation, lily of the valley, violet, lilac and heliotrope, and with each package we send a beautiful piece of gold plated jewellery to give free to your customers. This makes them sell like hot cakes. When sold, return us the money, only $2.50, and we will promptly send you all 5 handsome presents carefully packed, exactly as represented We arrange to stand payment of all charges right to your door with free goods covering same. **DON'T DELAY,** write us to day, and in a few days you can have the magnificent house and all the beautiful presents. Address— **NATIONAL SALES CO., Ltd. TORONTO, ONT.**

Dept. H '264

The Advertisers in The Maritime Farmer are worthy your confidence.

eggs for which he is willing to pay a high price.

The plan that has proved most successful is for the creamery to deliver egg cartons and a private stamp to each patron. The eggs are stamped, placed in the cartons, sealed as soon as gathered, and kept cool until delivered.

In securing a market for guaranteed fresh eggs through a creamery, patrons are usually pledged to comply with certain rules, and in case of failure to do so they are forbidden the privileges of the market. They usually agree to deliver eggs that are not over a specified number of days old and to gather them twice daily; to grade the eggs to secure uniform size; to keep white and brown eggs separate; to keep eggs clean and to store them in a cool, dry place; to stamp each egg and the carton in which they are placed; and not to sell eggs stamped with the creamery stamp to any other parties.

Prices received for eggs produced and marketed in this way usually range from 2 to 5 cents a dozen over the ruling price, and in some instances where special markets have been developed even greater premiums are secured. Doubtless many creameries can in this way improve their condition and secure closer co-operation with their patrons with little if any added expense.

Feeding Laying Hens.

Throught their entire life those birds intended to be kept for egg production should receive a relatively narrow ration. This owing to the comparatively rapid growth which a bird makes during its early life, and later on those hens that lay throughout the year should receive a narrow ration, in order that they be able to supply material for egg production. First of all, the birds should be fed a wide variety of clean, wholesome foods. These can be easily divided into four groups—grains, green feeds, meat and grit. The last three the birds will supply for themselves during the summer when they are on the range; but through the winter they must be supplied them in some way. At present the most popular ways of feeding green feed are in the form of cabbage, mangels, or sprouted oats—the birds being given one feed each day. Clover is an excellent feed and much relished by the hens. It can be cut into short pieces, or clover chaff can be fed with good results. The meat feed can be supplied in the form of meat scrap, green cut bone, or milk. The birds crave this food during the winter, and if it is supplied they will respond with an increase in egg production. A variety of grains should be fed, both in the form of cracked grain and mash.

In feeding laying hens, the poultryman should have at least one object in view—to feed in such a way that the birds will be kept active and hustling throughout the day and to supply them with an abundance of wholesome foods. The system of feeding recommended by the Maine Experiment Station accomplishes this, and has proven to be most satisfactory:

Dry grain (fed in litter). Early morning feed—cracked corn; 10.30A. M. feed—equal parts of wheat and oats. These grains are fed at the rate of two qts. to 50 birds.

Dry mash—first month in laying house; wheat bran, 300 lbs.; cornmeal, 100 lbs.; Daisy flour (or other low-grade flour), 100 lbs.;meat scrap, 100 lbs. Second month in laying house—Wheat bran, 200 lbs.; cornmeal, 100 lbs.; Daisy flour (or other low-grade flour) 100 lbs.; gluten feed, 100 lbs.; meat scrap, 100 lbs. Third month in laying house—The mash has the same composition as that of the second month, with the addition of 50 lbs. linseed meal. Fourth month—The mash is the same as that for the second month . Fifth month—The same mash is used as for the third month.

From this time on 50 lbs. of linseed meal are added to the mash, as given for the second month, every alternate month. This dry mash is kept before the birds all the time in open hoppers.—W. F. Schoppe, U. of M.

THE PEERLESS INCUBATOR AND THE PEERLESS WAY HAVE DOUBLED THE PROFITS OF 20,846 FARMERS

ANY farmer can raise "poultry-for-profit" on the same plan and under the same conditions as we do it at the Poultry Yards of Canada, Limited, and make just as big a success as we have made of this, the largest and most profitable poultry farm in the Dominion. You can do it. You can put to work for you The Peerless Way and the Peerless Incubator and double or treble your profits right from your first month. Over 20,846 Canadian poultrymen have proven this. By following our system, they are making their poultry pay them greater profits than they ever dreamed was in the business.

THE book, "When Poultry Pays," tells what hundreds of followers of The Peerless Way have accomplished. It tells why the price of eggs doubled in seven years it tells about a market that exceeds the supply by 200%;—it tells about a plan that is more than merely a system of poultry-raising—a plan that raises poultry **at a profit**; it tells about co-operative marketing—how the highest prices are secured in either large or small quantities; and, by no means least, it tells you exactly how to get started in this field of profits that lies right at your door. You will find this book full of facts and figures and other information that will make you open your eyes to the real profits in poultry **Do not put it off. There is no time like the present. Send for the book NOW.**

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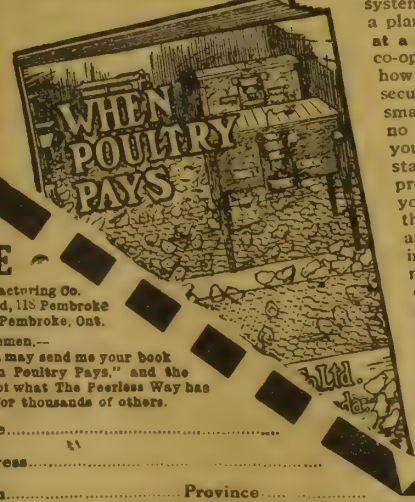

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You may send me your book "When Poultry Pays," and the proof of what The Peerless Way has done for thousands of others.

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We Will Show You The Best Way To Start.

YOUR start is important; without experience or guidance, you can badly handicap yourself in the beginning. It may take years to overcome a bad start. The Peerless Way will put your first step on the right road to success, will show you the incubator and brooder that meets the climatic conditions of Canada's cold winters, and will furnish you with plans, blue-prints and complete specifications of poultry houses, etc., that are actually being successfully used today in Pembroke at the Poultry Yards of Canada, Limited.

We Will Show You How To Get Better Prices

THIS alone is a valuable part of the service included in The Peerless Way. We guarantee to find for all your poultry products, buyers who will pay you the highest spot-cash prices and who will charge you no commission for the service either. You do not need to be dependent upon the middleman and cold-storage buyer when you understand co-operative marketing. You do not need to give away part of your profits; the last few cents on every deal is your own "velvet"—and goes into your own bank account.

You Can Learn At Home or Come To Pembroke—As You Prefer.

THE Peerless Way, combined with the free, personal advice of our Poultry Advisory Board, will make poultry-raising profitable for you. If you will take the Peerless Incubator and Brooder and just follow the plain, explicit directions of The Peerless Way, step by step, you cannot go astray. Or if you prefer it, you can come to Pembroke and, on payment of a small tuition fee, take a course of personal instruction at the Poultry Yards of Canada, Limited.

Use the Coupon 40 LEE Manufacturing Co. Ltd. 118 Pembroke Rd. PEMBROKE ONTARIO CANADA

Proper Temperature For Keeping Eggs.

A discussion regarding how much cold eggs intended for incubation can withstand and still hatch into normal chickens has been going on lately in some of the agricultural papers. The statement has been made that no exact scientific studies have ever been carried out to determine this point. Dr. Raymond Pearl, biologist of the Maine Agricultural Experiment Station, in discussing this matter, points out that careful investigations regarding his point were made by European workers many years ago. As early as 1875, an Italian investigator, Colosanti, showed that eggs could be kept at temperatures down as low as 12 degrees, Fahr., for from one to two hours with absolutely no injury to the germ. Twenty years later, a Frenchman, Pictet, studied the matter in still further detail and showed that if the time of exposure to cold was for a long time, the egg was killed, even at considerably higher temperatures. This investigator found that about thirty degrees Fahrenheit, was the lowest temperature at which the egg would survive an exposure of any more than one or two hours' duration. It has been shown by another Frenchman, Raubaud, that the germ of a hen's egg can withstand a very extreme degree of cold for a short time. He kept eggs at a temperature of about one-half a degree below zero for half an hour without killing the germ. It is thus plain that this interesting matter has been studied scientifically.

For the practical poultryman keeping eggs for incubation, however, the important thing is not to know the lowest temperature which an egg can possibly endure for a brief period and still hatch, but rather to know what holding temperature for eggs will give the best results in the subsequent hatch, in respect to both number and quality of chicks. Careful experiments on this point have shown that one gets the best results by holding eggs pending incubation at a temperature somewhere between 50 and 55 degrees, Fahr. Eggs held in this way turn out more and better chickens than those held for incubation at either higher or lower temperature.—Chas. D. Woods, in Maine Farmer.

Storing Eggs for Hatching.

Place the eggs, on the day they are laid, in a room where the temperature is constant. Eggs are, says Farm, Stock and Home, at their best for incubation purposes at the time of hatching, but it is not always practicable to set or incubate them immediately. A low temperature of from 40 to 60 degrees Fahrenheit, will be found best. It is a common practice in some quarters to turn the eggs daily during this resting period. Experimental data on this point is lacking, and it is doubtful whether the practice has any merit. The fresher the egg the more viable the germ. After the age of two weeks, depending much on the temperature, it is not usually safe to use eggs for incubation purposes.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

With Mirandy Away.

Mirandy's been away from home the
last two weeks or so,
Not off at some resort, but jest a-
visitin', you know;
An' I've been cookin' fer myself, be-
sides a-doin' chores
Aroun' the house, like churnin', wash-
in' dishes, sweepin' floors.
I've done the very best I could t'
keep things trim and clean,
An' yet the house is cluttered up the
worst you've ever seen.
I'm wonderin' if disorder's imps
'gainst wifeless man connived
When Adam batched in Eden ere his
better half arrived.

I've known some rather handy men
about the house, 'tis true;
But, sakes alive! some woman had t'
tell 'em what to do.
An' though she'd find in all their
methods nothin' t' condemn
It kept her busy traipsin' 'round t'
pick up after them.
When femininity has flown there's
scores of things misplaced,
There's litter if there isn't dust, un-
tidiness and waste.
Did home, not having known her
touch, see empty an' deprived
When Adam batched in Eden ere his
better half arrived?

I ask myself such things, I guess, a
hundred times a day.
It's, somehow, been so lonesome since
Mirandy went away.
Of course, in that primeval day there
wasn't roof or floor;
There wasn't churnin', sweepin', then,
or any little chore
But even that far back there must
have been some work fer man;
I'm sure there was when woman came
an' home-life first began!
The question is: Were things mussed
up, though endlessly he strived,
When Adam batched in Eden ere his
better half arrived?

—By Roy Farrell Greene.

Love's Barrier.

(Continued from last issue).

CHAPTER XXIV.
THE CONFLICT.

Secretan came in from the early service to find his wife busy with her letters. He observed her slip one into her pocket at his entrance, and though he made no remark, his face perceptibly hardened. There was now a wall of restraint between them. The old sweet comradeship had undoubtedly suffered serious hurt. She scarcely smiled at his entrance, and no word of pleasant greeting or inquiry passed between them. They had ceased apparently to have a common interest in the happenings of daily life. It was now in the month of October, and the world in these high latitudes was full of the premonitions of an early winter. Already the robins were hopping familiarly about the garden paths and on the smooth lawns, where the hoarfrost had not yet been melted by the morning sun.

Four cups and saucers stood on the tray in front of Helen, the children's visit to Midcar having been prolonged far beyond their anticipation. Their mother was still abroad, where apparently she had found something to interest her; but Helen had that very morning received some definite information regarding her movements.

"I've had a letter from Cynthia," she said as she proceeded to make the tea. "She is coming actually this afternoon! So like her! She never troubles to consider the convenience of others."

"It is certainly very sudden. Where does she write from?"

"Baden-Baden, and she is down on her luck. She says another of the mushroom friendships, for which she has a peculiar penchant, has burst like a bubble. Consequently she rails at the world in general. Will you read her letter?"

"No, thank you. I will speak for the fly as I go down. I am going to London myself this afternoon."

"To London!" she repeated, and looked at him with a swift inquiry. Time was when she would have known all his movements; when even his intentions would not have been hid. But the barrier had grown up, had been growing steadily since the breaking of Audrey Hayes's engagement, and nothing had been done to break it down. If Helen felt that she had been unjustly blamed, she gave no sign. She loved but her pride was very high. She would not stoop to beg the explanation for which her soul craved. She hungered for expression of the love which had become so dear a part of her life, but she would not beg for it. She had no idea of the depth and darkness of the passion that smouldered in Secretan's soul. He was the prey of distrust, of foreboding fears, of a jealousy as cruel as the grave. He misunderstood her silence and magnified every trifle to her condemnation. They had never spoken of the matter since that miserable day when they had met in Mardocks Wood. Secretan had fully expected an explanation but when none came he hugged his suspicions to his soul and sat in judgement.

He no longer believed that the story she had told him that day in the Castle Gardens was true; at least, it was not the whole truth. He felt himself aggrieved; he was the prey of the most miserable feelings that can rend the heart of a man and rob him of the zest of life.

Outsiders saw no change in the Rectory life, and even their few intimates were deceived. Helen was absolutely mistress of herself. She was less bright, perhaps, and there was a habitual seriousness in her eyes, but she made no change in the order of her life. She was busy all day, apparently, with affairs of the house, with the work of the parish, which had gradually increased on her hands. None hesitated now to come to the Rector's wife; she never failed them. And there was a particular depth of sincerity in her sympathy which helped more than anything. The woman who has suffered never makes light of the suffering of others.

More change was visible in Secretan. He possessed less share of self-control. Helen came of a race of soldiers, and had learned to endure and make no sign. Secretan chafed under the cloud that obscured his personal happiness, but did not know how it was to be removed. There were moments when he bitterly regretted those hours in the Luxembourg Gardens, which had made such an upheaval in his life. He showed a lack of charity, a harshness of judgment, which would have surprised those who only knew him as a genial person, always ready to do a kind act. Helen resented his coldness, and had no idea how his soul was tormented for himself and for her. A chance word dropped one morning as she had been getting ready for the early service, caused her to understand that he was not certain that she was eligible. It was only a word, but it sped like an arrow to the mark. She quietly laid off her things, and from that day had not entered the church. As yet, however, the parish had not passed any strictures; they imagined another reason sufficient to excuse anything. But both Secretan and his wife were aware that this sort of life could not go on.

"I think I will take a holiday this month. It will be a suitable opportunity when you have Mrs. Revell with you."

"Very well. Where do you think of going?"

"To Holland and Belgium. Westerton, who disappointed me last year, is free now. If you have no objections I will go to-day. I have made full arrangements for supply. You will only have the preachers for the week-ends. The Iffley curate has undertaken the rest of the work."

"Very well," she repeated. "How long do you expect to be away?"

"About three weeks." At that moment the children came bounding in, with their morning faces full of the usual fun and high spirits, which were perceptibly damped when they heard who was coming.

"But we shan't have to go to Colchester, shall we, Helen?" cried Margot. "You won't let mummy take us away!"

The look of appeal sent sudden swift tears to Helen's eyes. Secretan noticed them, and they stabbed him to the heart. She was still dear to him, though he had tried to harden his heart against her. He thought she had failed in duty to him; that he deserved a fuller confidence regarding what had happened at High Ridges. That it was Helen who had broken the engagement he had no manner of doubt; it was the cause that tormented him.

For it was a big thing to do and her reason must have been of the most insistent kind.

"You are happy, then, with poor old Helen; you don't want to leave her?"

"Shan't leave her!" said Margot, with a touch of the old petulance which under Helen's firm, wise dealing had become less troublesome. "Geoff and me's made up our minds to hide on the moor right up at Mardocks Ghyll, if she wants to take us away. And Aunt Jane has promised to take us in at the farm, too."

Helen smiled across the table at her husband; but his eyes were on his plate. Her tears haunted him. She was unhappy, her face was pathetic and he had not the right to comfort her. She had refused him that right, and until she came to him of her own accord he could do nothing. But he did not see gathering slowly in her heart a resolve to mend or end this state of affairs that had become intolerable to her. Early in the afternoon, when all the arrangements for the journey had been made, she tapped at the study door. Secretan, making a few last notes of forgotten duties, bade her come in. She was rather pale, but her lace wore an expression of great sweetness.

When she spoke her voice was without a tremor.

"I have come to ask before you go, Claude, why I am treated like this; and whether, when you come back, you will go on treating me in the same way?"

His face flushed, and something flashed in his eye.

"It is a painful subject to go back upon, Helen," he answered. "But surely there is no need to ask such a question! You did not treat me fairly about the affair of Major Hunt and Audrey. You have never explained that ghastly day when I saw you and him together in the Mardocks Wood. I am a mere man, Helen, and you left me to draw the usual deductions."

"What were they?" she asked, a little hardly.

"Why, that you had kept something back, of course."

She put up her hands suddeny as if the words wounded her.

"You took my word that day at Colchester. I told you all that was necessary. Yo u believed me then, Claude, when you had less cause. I mean I was then a stranger to you. I have been your wife to very little purpose indeed if you can condemn me now."

"It was a matter on which I had the right to your full confidence the right of a husband. I have been waiting for that confidence. So long as it is denied me I must continue to draw my own conclusions."

'Against me?"

Her sad eyes, full of that haunting pathos, made him feel miserable and mean. He avoided their steady gaze, and, moving towards the writing-desk which stood across the smaller window, fumbled in his pocket for the keys.

"There was nothing to tell," she said, with extreme difficulty. "The matter was entirely private. It concerned the happiness of another. I thought it my duty to intervene. A year ago I should have been less insistent on duty. Life got a new meaning for me here; but now the clouds have rolled up again, and I don't know where I am or how I stand."

WOMAN SICK FOR YEARS

Wants Other Women to Know How She was Finally Restored to Health.

Hammond, Ont. — "I am passing through the Change of Life and for two years had hot flushes very bad, headaches, soreness in the back of head, was constipated, and had weak, nervous feelings. The doctor who attended me for a number of years did not help me, but I have been entirely relieved of the above symptoms by Lydia E. Pinkham's Vegetable Compound, Blood Purifier and Liver Pills, and give you permission to publish my testimonial." — Mrs. Louis Beaucage, Sr., Hammond, Ont., Canada.

New Brunswick, Canada. — "I can highly recommend Lydia E. Pinkham's VegetableCompound to any suffering woman. I have taken it for female weakness and painful menstruation and it cured me." — Mrs. DeVere Barbour, Harvey Bank, New Brunswick, Canada.

Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotic or harmful drugs, and to-day holds the record of being the most successful remedy for female ills we know of, and thousands of voluntary testimonials on file in the Pinkham laboratory at Lynn, Mass., seem to prove this fact. Every suffering woman owes it to herself to give Lydia E. Pinkham's Vegetable Compound a trial

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

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I dyed ALL these DIFFERENT KINDS of Goods with the SAME Dye. I used

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ONE DYE FOR ALL KINDS OF GOODS

CLEAN and SIMPLE to Use.

NO chance of using the WRONG Dye for the Goods one has to color. All colors from your Druggist or Dealer. FREE Color Card and STORY Booklet 10. The Johnson-Richardson Co., Limited, Montreal.

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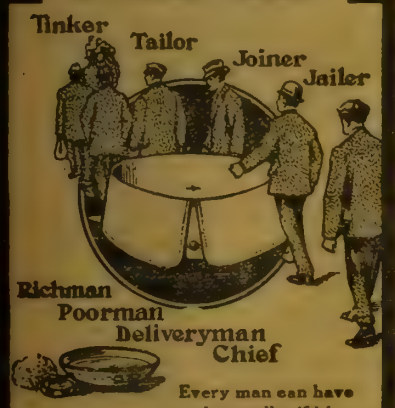

Every man can have a clean collar if it's a Challenge Waterproof Collar. Best to wear at work or for dressing up after work. Not shiny, but look just like linen. Always neat and comfortable and are cleaned with soap and water.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for Sample Collar.

CHALLENGE BRAND WATERPROOF COLLARS

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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

Her words moved him mightily, again he hardened his heart. Fitting the key in one of the drawers, he drew forth an envelope and took a folded piece of notepaper from it, which he handed her with-out a word. She glanced over it; her face flushed deeply, aod with a sudden gesture of passion she threw it into the fire.

"So you condemned me on that, on an anonymous letter! Then, indeed, there is no more to be said."

She went out of the room with her head high in the air. They had no further opportunity of private speech that day; indeed, neither sought it. Secretan's quick temper had been roused by her action, and his jealous heart continued to be tormented by her silence. It was a miserable day.

He bade her "Good-bye" in the presence of the children, and not one word of a tender or hopeful nature passed between them. Helen did not know that he had another appointment with the bishop before he set out on his holiday. It was well that he had kept his intention from her. She would certainly have misunderstood and resented it.

Secretan did not show himself strong in this crisis in his life. He had not Jane's clear fixity of purpose and calm ind ement. In his marriage he had perhaps shown himself at his best; all his manly qualities had come to the front; he gloried in the idea of being a tower of strength to the women who had trusted him, and whom he loved.

But the close strain of married life, the daily round, the common task, had found him wanting. He preached charity, forbearance, long-suffering to others, and lacked them all himself. He had even, through the strain of his mental anguish, become irritable, fault-finding, wholly changed. Helen, on the other hand, had changed but little. She had been trained in a harder school, and had grown accustomed to disappointment, to disillusionment and to silence. Once more disappointment was hers, and the tower against which she had leaned had failed her; that was all. She became a little more self-contained, a little less demonstrative, but was invariably gentle. Otherwise more acute friction must have ensued. She was conscious of a great relief when Secretan left the house. No longer subjected to the strain of the dual life, they might arrive at some better understanding; at least, there would be time to face the situation fairly and frankly without prejudice from without.

Soon after Secretan left the house, Jane arrived to spend the afternoon. She had given Sir Anthony Bede a provisional promise to marry him some day, and she was astonished at her own happiness. Perhaps happiness makes us selfish; certainly Jane had not observed anything amiss between her brother and his wife. As a house of defence she, too, had failed. She was unaware that Helen had anything to do with the breaking of Audrey Hayes's engagement.

"Claude has gone away on his holiday, and alone," she cried incredulously. "Why, I never heard of such a thing! Why couldn't you have sent the children up to me? Or I could have come here. You ought to have gone, Helen! You need a holiday desperately. I was only thinking so the last day I saw you."

"Claude is going with Mr. Westerton to Holland and Belgium. Besides, I could not have gone in any case. I am expecting Mrs. Revell this evening."

"She comes to take the children away, I suppose? Then you will follow Claude—join them somewhere? Do, Helen; it would do you immense good; and I am sure Claude will never get the good out of his holiday unless you are there."

"On the contrary he will enjoy it better," replied Helen, with a slight

Fragrance

WHEN you open a tin of Red Rose Coffee, you will surely be pleased with its unusual fragrance, and you will note particularly the small, even grains, free of the yellow flake or chaff which you have always been accustomed to see in the ground coffee you have used. This is the result of our new crushing process. The small grains settle quickly, so the coffee is never muddy, but always bright and clear. You will be convinced before you taste it, that it is a coffee of unusual quality.

Red Rose Coffee

7% GUARANTEED 7%

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Authorizd Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of the largest businesses of its kind in the world.

The Company do their own financing, and pay **interest twice a year,** on 1st of June and December, and allow the investor to withdraw his money at end of one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features,** and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

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Our big book full of photos, plans and detailed descriptions of more than 60 attractive homes, stores, schools, barns, garages, etc. (mailed on request) shows how you can save time and nearly 50% of the cost by buying everything complete from us.

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In it you will see exactly what the completed house looks like and know exactly its entire cost. No extras. No delays. Shipped anywhere promptly. Our plan is not an experiment. It will pay you to investigate. Send 6 cents in stamps and ask for Book No. 50

SOVEREIGN CONSTRUCTION Co., Ltd.
859 Lumsden Bldg., Toronto.

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's Indian Root Pills

Ocean Limited Early on Route.

SUMMER TIME CHANGE ON INTERCOLONIAL RAILWAY JUNE 2.

The summer change of time on the Intercolonial Railway will go into effect on June 2nd, when the famous Ocean Limited will be placed on the route between Montreal, St. John, N. B. and Halifax, N. S. with connections for and from the Sydneys and Prince Edward Island in anticipation of an early rush of summer travel. The time schedule is expected to be practically the same as last year, which means that the "Limited" will leave Montreal at 7.30 p.m. reaching Levis at midnight, and giving through passengers the opportunity of seeing the famed Matapedia Valley during the earlier hours of the morning and a view of the Restigouche River and the blue waters of the Baie des Chaleurs. The beautiful valley of Wentworth, N. S. will be seen in the more mellowing light of early eventide, and the train will reach Truro at 8.00 o'clock connecting with the through night express for the Sydneys and arriving at Halifax at 10.00 p.m.

The Maritime Express under the summer schedule will leave Montreal at 8.15 a.m. and through passengers will have the daylight journey through Quebec, and a view of the majestic St. Lawrence as it widens in its course to the sea. Making connection at Moncton with morning express for St. John the Maritime continuing eastward will reach Halifax at 13.30.

The Ocean Limited will leave Halifax westbound at 8.00 a.m. and the Maritime Express will leave as usual at 15.10 thus there will be a through week day service by two trains equal to the best on the continent.

Have City Conveniences

REPLACE the pestilent, dranghty, dangerous and offensive out-of-doors closet with an indoors closet which requires no sewer, no plumbing, and no flnshing system. Have city conveniences in your home. Safeguard family healih by installing a

"Tweed" Closet

Sanitary and Odorless

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list.

THE STEEL TROUGH & MACHINE CO., LIMITED,

DEPT. 103 TWEED, Ont.

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your appetite. Thousands have been benefited by taking these Tablets. Sold by all Dealers.

cold smile. "Well, and how are you, dear Jane? We don't see much of you in these days. Prospective matrimony seems to be an absorbing occupation."

Jane sat back in her chair and laughed cheerily.

"It isn't that. My hands are full with Tom! What a baby he is! I believe he is going to marry Anne Coyne's niece. Things are shaping that way, and it would be a very good thing for her."

"But isn't she very young?"

"Not so very; six-and-twenty, and an uncommonly sensible girl. She's very fond of the children, too, and she has both tact and firmness. She isn't at all afraid of Tom. Oh, poor Emmy! What mistakes she made! I can see them now. She ought never to have been Tom Courtney's wife."

"It seems to me ," said Helen, hardly, 'that most husbands and wives would be happier yoked to some-body else."

Jane pondered these words later and remembered their significance.

When Helen met Cynthia at the station she was surprised to feel that she was quite glad to see her. Dressed in a most becoming costume and a coquettish hat, Cynthia was looking her very best. She kissed Helen effusively and appeared really glad to see the children.

"So your parson has run away! I'm very sorry, I was looking forward to seeing him, you may tell him. I think he might have at least waited to receive me; especially as I have only two days to stop. Yes; they've left the house, and I must get home at once to put it in order. I have visitors coming on the twentieth. I'm really awfully obliged to you for looking after the kids so long. They look bloomin, both of them, though I expect they will never be happy in Colchester any more."

A little later in the evening, when Cynthia had explored the house and expressed herself enchanted with everything, she put the question Helen had been dreading.

"I met Lady Adela Hunt at Adelboden, Helen; she's going to stay there for the winter. I want to hear what happened about Major Hunt's marriage. Did you put the spoke in the wheel?"

"Yes."

"But, why, Helen? It couldn't do you any good. Lady Adela was sure you had done it, but I protested you were above such a mean trick. It was a mean trick, you know; the sort of thing I might easily descend to; but you, a parson's wife, too! and such a charming person! Why did you do it?

Helen remained silent, wondering whether it would be possible to make Cynthia understand. She was surprised that she felt relief now that the ice was broken, and that she was even anxious to vindicate herself.

"I didn't think he was a fit husband for Audrey Hayes; you would not have thought so either if you had known her."

"But, heavens, Helen, what had that got to do with you? I should have thought, now, you had enough to do with your own affairs. I'm sure I have. I never meddle with anybody. Besides, it wasn't a Christian act. I thought you had got religion. Somebody told me that, but, like most gossip, it can't be true. Of course, no Christian would have done such a thing. Whatever the man was, you were done with him, and he ought to have had his chance."

Helen sat very still, and something seemed to close about her heart. Cynthia's opinion might be taken to represent the world. She felt uncomfortably stabbed. After all, it might be true; it was no concern of hers. She had destroyed her own happiness, and the happiness of others for an idea of duty wholly mistaken. The cup of her misery seemed full.

(Continued in next issue).

FREE TO MEN

You Yourself Can Restore Your Vitality

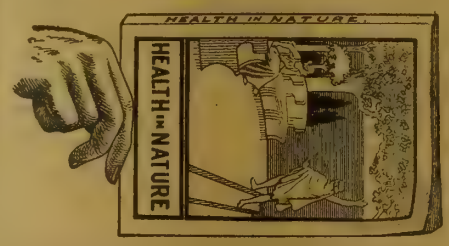
VITALITY is the greatest power in the world. If I renew your VITAL VIGOR I restore you to full and complete manhood. No matter what your age, whether you are young or elderly, no matter what early indiscretion may have sapped your courage. If I resupply you with new VITALITY I give you the strength that all healthy, vigorous men possess. I know the source of this VITAL SUPPLY. My HEALTH BELT, with suspensory attachment, pours a great stream of VITALITY into your system hour after hour all night while you sleep. Thousands have said it immediately benefits and takes the pain and weakness out of the back from one night's use. No drugs, no medicines, no restrictions of any sort excepting that all dissipation must cease. The man who indulges an excesses and unnatural practices can never be other than a weakling, but if you promise me as man to man that you will be decent, take ordinary care of your health and then use my HEATH BELT every night for 60 to 90 days, I should then be able to do in your case exactly what all these other thousands of men have said I did for them. Please write for my booklet to-day. Never mind about purchasing a Health Belt now; first get into communication with me, read what my book says, then later, if we decide between us that you should have a Belt and if you decide that you want to use it, I will arrange for you to have one to wear until you are cured. My Health Belt is the greatest vita izer the world has ever known. With special attachments it is a remedy for kidney, liver, stomach, bladder disorders, rheumatism. etc.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man, young or old, who would be strong in manly vigour. It is a word of hope, a carefully written, interesting booklet which should be in every one's possession. Therefore, send to-day. If in or near the city, call at my office. Hours 9 to 6

DR. M. F. SANDEN CO., 140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free.



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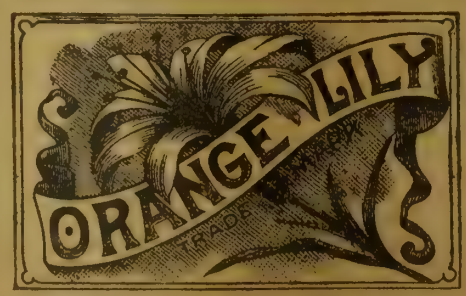


WOMEN CURED AT HOME

Women's disorders always yield from the very beginning of the treatment to the mild, but effective, action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address. MRS. FRANCES E. CURRAH, Windsor, Ont. 6

Burdock Blood Bitters

CURES ALL

SKIN DISEASES

Any one troubled with any itching, burning, irritating skin disease can place full reliance on Burdock Blood Bitters to effect a cure, no matter what other remedies have failed.

It always builds up the health and strength on the foundation of pure, rich blood, and in consequence the cures it makes are of a permanent and lasting nature.

Mrs. Richard Coutine, White Head, Que., writes:—"I have been bothered with salt rheum on my hands for two years, and it itched so I did not know what to do. I tried three doctors and even went to Montreal to the hospital without getting any relief. I was advised to try Burdock Blood Bitters, so I got three bottles, and before I had the second used I found a big change; now to-day I am cured."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

MOTHERS' CORDIAL OR HERBAL TONIC 17

Lessens the dangers of childbirth—aids quick deliveries, making them easy—shortens confinement and pain—strengthens mother and child—makes recovery rapid, and both mother and baby healthy and good-spirited.

Mothers' Cordial or Herbal Tonic is also a sure preventative of delayed and painful menstruation. Young girls will find it invigorating, and women nearing the change of life will find it a friend indeed.

This time-tried medicine contains no stimulants—it is simply a scientific blend of Indian herbs, famous for their medicinal value. Write for free circular. At your druggist's—or by mail, $1.00 per package, 6 packages $5.00. Dr. Cooniey Medical Co., Windsor, Ont.

There never was a time when people appreciated the real merits of Chamberlain's Cough Remedy more than now. This is shown by the increase in sales and voluntary testimonials from persons who have been cured by it. If you or your children are troubled with a cough or cold give it a trial and become acquainted with its good qualities. For sale by all Dealers.

Sanitation in Country Homes.

Living in the country should, of right, be the panacea against all diseases arising from impure air, impure water and adulterated or unfit food. But, population considered, there would appear to be little difference in the extent to which such diseases prevail in country or city. As says a contemporary:

"Every case of tuberculosis, city or country, proves that with pure air 40 miles deep over our heads we have chosen to breathe impure air. Every case of typhoid fever—and we cannot deny that the farm home has them—proves that the drainage from stables or outbuildings has somehow gotten into the well, or that our worst enemy, the common housefly, has washed his dirty feet in our food. Every case of diphtheria proves that filth is not far off."

Lack of ventilation in sleeping and living rooms—a superstitious dread of cold air—is probably responsible for a large majority of the cases of tuberculosis occurring on the farms. People who sleep practically out of doors—that is, with windows wide open—seldom contract tuberculosis. So long as the bed is warm, it matters little how cold the room is. The arctic traveller, ensconced in g fur sleeping bag and with no canopy but the stars, takes his rest under almost ideal conditions.

Typhoid fever will never originate on a farm if the water supply is kept pure. Such purity is assured by the driven well, sunk deep enough to be secure against the contamination of surface drainage. And it often happens that such a well is cheaper than a dug well, the security of which against seepage from barns and outhouses is always a matter of doubt unless tests have proven that the drift of contaminated under-surface waters is away from and not toward the well.

As for the housefly, the protection of the house by screens over doors and windows, and the quick removal to the fields of the manure heaps, in which it breeds, will add not only to the healthfulness but to the general comfort of the home.

Backward Children.

At the recent conference of London County Council teachers, Sir James Crichton-Browne, in a striking address, dealt with the question of backward children. Impaired nutrition, he said, was a frequent cause of temporary backwardness, and if long continued might dwarf the brain. Every brain-worker must know the dulling effect of the want of regular meals, and in children any want of nourishment was promptly reflected in a lessening of their learning capacity. For thirty years he had been proclaiming that feeding came before education, and that much backwardness in school children was attributable to insufficient nourishment during the school period.

Dried Fruits.

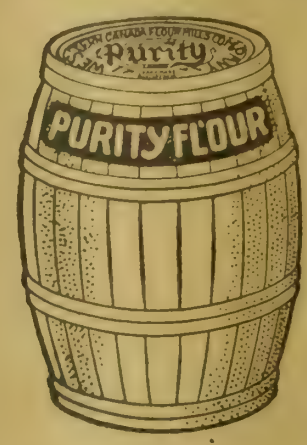
Dried apricots are of a higher food value than the fresh fruit, and stimulating to the appetite through the flavor and pretty color when properly cooked, acting also as a milk laxative. It can be used for filling for pies, for stews with sugar, for dumplings, shortcakes, and in many other ways. When stewed with sugar it makes a very excellent conserve.

Cooking dried fruit should, says the Commoner, be done in such a manner as to preserve every atom of flavor and restore it as nearly as possible to a condition resembling fresh fruits before cooking. It should be looked over carefully, removing any spotted or suspicious looking pieces, taking special pains not to leave anything that will suggest "worms"; then put the fruit into plenty of cold water, washing it quickly and thoroughly, piece by piece, if necessary; transfer to a colander, let drain, then rinse through a second water, wasting no time about it. For most of fruits, a soaking of ten to twelve hours is necessary to plump the pieces, and this should be done in a clean vessel with plenty of clean water, with a cloth covering to keep out the dust and admit the air. When soaked sufficiently, take the fruit out by handfuls and put into the cooking vessel, allow the water in which it has soaked to settle, then drain it off carefully, leaving the dregs, and pour over the fruit. Cook in this water, and if not enough, more may be added, as there should be sufficient juice on the cooked fruit to cover it. Boil gently until tender, and add any sugar or spices just a few minutes before it is to be removed from the stove. Apples, apricots, peaches, prunes, may all be prepared in this way, anh can be made very appetizing indeed. Raisins, grapes, cherries, and all dried berries are excellent treated in this way. Delicious butters can be made of the fruits by cooking as directed, then passing through a coarse sieve or colander, and stewing down until as dry as wanted, stirring either constantly, or frequently, as the fruit may call for.

CURIOSITY Prompted Many Women To Try PURITY FLOUR

THEY were curious to see exactly what results would be produced by flour *consisting entirely of the high-grade portions* of the best Western hard wheat.

They were curious to know more about a flour that contained none of the low-grade portions, which are found in every wheat berry, but which are separated and excluded from the high-grade in the process of milling PURITY FLOUR.



THEY were curious to know whether an ALL HIGH-GRADE hard wheat flour was really superior to a mixed hard and soft wheat flour.

They were curious to see and taste the kind of bread, buns, biscuits, cakes and pies PURITY FLOUR would make.

Curiosity prompts you to seek the knowledge they discovered. It's urging you to try PURITY FLOUR.

REMINDER: On account of the *extra* strength and *extra* quality of PURITY FLOUR it is necessary, for best pastry-results, to add *more* shortening than you are accustomed to use with an ordinary flour. Add *more* water when making bread.

Add PURITY FLOUR to your grocery list right now

PURITY FLOUR

"More bread and better bread"

110

Lame back is usually caused by rheumatism of the muscles of the back, for which you will find nothing better than Chamberlain's Liniment. For sale by all Dealers.

SASK-ALTA STEEL RANGE

guaranteed by McClary's--the largest stove and range makers in the British Empire. We also guarantee the "Sask-Alta" to give complete and lasting satisfaction.

411

McClary's

A DAILY SERVICE BY OCEAN LIMITED EXPRESS

Commencing with the summer change of time on June 2nd, the Intercolonial Railway will put the famous through Ocean Limited Express on the route between Montreal and Halifax as a daily train leaving Montreal at 7.30 p.m. and departing from Halifax at 8.00 a.m. The "Ocean" will go on the route this season with renewed and refurnished equipment of luxurious sleeping cars, and easy riding first class coaches, and colonist cars. In point of equipment the "Ocean" is quite the equal of any of the best through trains on the continent, especially in regard to the excellence of the dining and sleeping car arrangements. Traversing a route of wonderful scenic beauty the "Ocean" enjoys a popularity with the travelling public that is annually increasing the traffic between East and West. Via the "Ocean" is the shortest, best and most comfortable route between Montreal and points along the lower St. Lawrence, New Brunswick, Nova Scotia and Prince Edward Island. The train arriving at Montreal at 7.35 a.m. enables westbound travellers to make the most convenient connections by the through train leaving Bonaventure Station daily for Ottawa, Toronto, Buffalo, Detriot, Chicago and other points.

Minards Liniment Co., Limited.

Dear Sirs,---Your MINARD'S LINIMENT is our remedy for sore throat, colds and all ordinary ailments.

It never fails to relieve and cure promptly.

CHARLES WHOOTEN.

Port Mulgrave.

It would surprise you to know of the great good that is being done by Chamberlain's Tablets. Darius Downey, of Newburg Junction, N. B., writes, "My wife has been using Chamberlain's Tablets and finds them very effectual and doing her lots of good." If you have any trouble with your stomach or bowels give them a trial. For sale by all Dealers.

FLORICULTURE.

H. A. N., Dorchester, Mass., writes asking for instructions regarding the culture of Fuchsias and Heliotrope, weather, sunlight and shade and nature of soil. Also as to the culture of Pansies as regards sunshine or shade.

The Fuchsias will do best in a partial shade in any place where they get plenty of air. They require very the Heliotropes like sun and warmth. little sunshine. On the other hand, Both plants require a rich light soil. That is, a rather sandy soil with good drainage. Give them pot room as fast as pot becomes filled with roots and spray or sprinkle the foliage of the Fuchsia occasionally, if kept where the rain will not get at it.

Pansies require a shady spot and light, well-drained soil. They are a cool weather plant and do not stand the heat well. Keep all seed pods off them and pick the flowers frequently. Do not allow the beds to become dry. Pansies like a cool shady situation with a moderate amount of moisture. The little moths on the Fuchsias can be destroyed by one or two applications of pyrelbrum insect powder dusted on lightly and washed off a few hours afterwards. Many thanks for kind words.

J. P. R., Rothesay:—Is it the best thing to do to cut off the Peaony tops as soon as the flowers fall? My Peaonies were fine last spring and I do not wish anything to go wrong with them.

Unless you wish to save seed by all means cut off the flower stalks as they only enfeeble the plants.

Last year I received several complaints of Sweet Peaonies about the shore becoming mildewed during the foggy weather. If the plants are very bad dust with finely powdered sulphur, but unless they are covered with mildew it is not necessary as the absence of fog for a few days and the warm sunshine will bring them around all right.

A. S., writes:—What shall I do with my bulbs in my beds? I want to plant my Annuals. Please write me at once.

As soon as your beds of spring blooming bulbs are done blooming cut back the foliage and plant Annuals among them.

Verbenas, Aster and Stocks do well and if the beds are covered each winter with a good mulch of coarse manure, the bulbs will not suffer much from this treatment. If, however, the soil is poor, liquid fertilizer should be given to the plants in summer after growth is fully established. All who have suitable room out of doors should either plant out or repot all needing it and plunge to the rim of pot all house plants that have been in active growth during the winter months, giving them a chance to recuperate and get strong for next winter's work. Cut back long straggling growth to keep the plants bushy and compact before planting out and most soft wooded plants such as Geraniums, etc., should be severely cut back. All seeds of tender plants can now be safely sown and if the soil is shaded from the sun in some manner until after the plants are well rooted it will give a better stand of plants.

SHERWIN-WILLIAMS PAINTS & VARNISHES

For the Farm

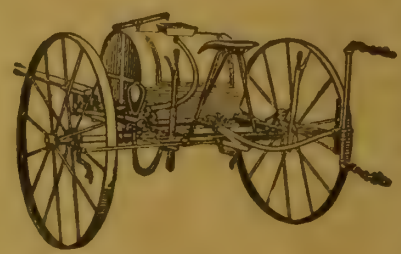
For an all-round metal protective paint use Sherwin-Williams Metalastic No. 2, prepared ready for the brush. Made on a graphite base with pure raw linseed oil. Dries hard and quickly and gives a durable elastic wearing surface. For sale in two colors—black or brown. Ask the local Sherwin-Williams Agent.

58

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

O.K. CANADIAN

Four Row Sprayer



Don't waste your time and risk your crops by using a hand sprayer. An "O. K. Canadian" will spray a Potato Field or Cabbage Patch, while you are getting down a few rows with a hand sprayer.

Potato Bugs, Cabbage Worms, Blight, etc., don't have the ghost of a show of escaping when you drive over the fields spraying Arsenate of Lead or some other bug-killing compound, **"O.K. Canadian" sprays evenly** because it has the **best pump** on the market. Linings won't corrode. **Relief valve** regulates the pressure. **Agitator** is a positive mixer—and prevents ingredients from settling while the sprayer is in motion. Barrel holds 45 gallons of liquid. Get an "O.K. Canadian" Sprayer and keep your vegetables free of bugs.

"O.K. Canadian Potato Digger has taken the prize wherever exhibited as the champion potato digger of Canada and the United States.

Write For Our Book It tells how to make up your own sprays—and how to use them. Ask for Catalogue H

CANADIAN POTATO MACHINERY CO., LIMITED, - GALT, Ont. 6

The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.

One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

An Everyday Story.

Perhaps you remember the time. It was not so long ago. The papers printed much about the farmers of the West using their corn for fuel. They burned it—burned their corn—for two very good reasons. To begin with, it was cheaper than coal; and to end with, the price of corn was so low that it didn't pay to haul it to market.

In 1894, and for two years there after, corn sold in Kansas for 10 cents a bushel. In other words, a man had to raise a bushel of corn for the price of a shave. If a farmer wanted to buy a pound of binder twine, he had to sell two bushels of corn to get it.

To-day binder twine sells for about 7¼ cents a pound. And what is the price of corn? Why, corn is 65 cents a bushel.

Well, back in '94 a farmer bought a farm wagon of a Hutchinson, Kansas, dealer for $60. It was a good wagon, and the farmer took good care of it. It pays to treat a good thing well. This makes it better, and gives it long life.

The other day the farmer came back to this same Hutchinson dealer, and said he wanted to buy another wagon just like the one he got in '94.

"It was a good one," he said. "That's why I want another one just like it. How much are you going to charge me for it?"

The dealer rubbed his chin, and passed his fingers through his hair. "Well, now, let me see. It seems to me you paid $60 for that wagon, didn't you?"

"That's right," said the farmer, "$60."

"All right, that same kind of a wagon—a little better, perhaps, some improvements have been added—that wagon will cost you now $75."

"What!" exclaimed the farmer. He was surprised, and began to object, and then wanted to know the whys and the wherefores of the rise in prices.

"Well," said the dealer, "the material, like lumber and iron and steel, has gone up in price, wages have advanced—and it costs me more to buy a wagon now. Maybe the tariff has something to do with it, too."

At the mention of the word "tariff" the farmer went straight up in the air. He began to expound against the theory of the whole thing.

The dealer let him run along for a while and then asked again: "Say, when you bought that wagon from me in '94, I think you paid for it in corn, didn't you?"

"Yes—sure I did," said the farmer, "but what's that got to do with it?"

"And, let me see. Corn was 10 cents a bushel, and you had to give me 600 bushels of corn for that wagon, didn't you?" asked the dealer again.

"Yes, I guess I did," answered the farmer, after recalling in his own mind that corn was selling at only 10 cents a bushel in those days.

"I'll tell you what you do," said the dealer, "bring me in 600 bushels of corn tomorrow, and I'll give you this wagon——"

"Well, say, hold on——," began the farmer.

The dealer interrupted him in turn. "But that isn't all," he said. "In addition to the wagon, I'll let you and your wife go over to the warehouse and pick out a carriage. Then you go and help yourself to the best 6-foot self-binder in the shop. And——

"Here, wait a minute——," started the farmer.

"I'm not through yet," said the dealer. "When your wife comes in I'll let her go to the hardware department and pick out one of the best ranges we've got. And, just for good measure, you tell your wife that she can have enough kitchen utensils to refurnish her kitchen. Now, I'll give you that—all of that for 600 bushels of corn. In '94 the same amount of corn got you just the wagon. That's a fair proposition, isn't it?"

The farmer was stunned. He hemmed and hawed, removed his hat, and scratched his head.

"I'll just work this out in figures and show you what you are getting," continued the dealer. We'll put the wagon down at $75; the self-binder at $125, and that'll get you a beauty; the carriage at $125; the kitchen range at $50, and that certainly ought to be a good one; and the kitchen utensils at $15, and that ought to buy a few. Add that together and you have $390. Figure 600 bushels of corn at 65 cents a bushel and you have $390.

The farmer dug up his $75 for the wagon without saying another word, and motioned to the dealer to join him at the cigar stand for a "smoke."

There is a moral to this little story. It is that——but there, there, what's the use? You already have the moral—all of it.—International Harvester Co.

THE SARNIA FENCE CO.

SARNIA, ONT.

ROYAL FARM FENCING

Since February first of this year the Sarnia Fence Company sold direct to the farmers of Canada over 350 carloads of Royal fence.

Our enormous capacity which is the largest in the Dominion has been taxed to its utmost to fill the demand for Royal fence. We have, by working night and day, kept to our standard of shipment the same day order was received, and every order has been shipped promptly, and we are in receipt of thousands of letters from Farmers in every part of the Dominion to the effect that Royal fence is the most perfectly woven, the best wire and the best value they ever received. They tell us how many dollars they saved by purchasing direct from the factory. Don't you think you have been supporting agents long enough? Here is an opportunity for you to save for yourself dealers profits and agents commission. We know our fence is right both in perfection of weaving and quality of wire. We know that our method of direct from factory to Farmer means one third saved on your fence purchases. We are justified in offering a more liberal guarantee with our fence than is offered by any other fence company because we know our fence is better. Every bale of Royal fence is shipped with the following guarantee.

If you find for any reason that the fence received by you is not of the best wire, full government guage No. 9, the best galvanizing, the most perfectly woven fence you ever purchased at any price, you are at liberty to return it and we will pay charges both ways and refund every cent of your money."

By opposing the renual of the Steel Bounties by refusing to join the fence combine and publishing our direct to the farmer prices, we have saved the farmers of Canada many thousands of dollars. We want your support, we want your order and we want your neighbors order, and in return we will give you the best fence value in Canada. The following styles are carried in 20, 30 and 40 rod bale only, and shipment will be made same day order is received.

5-40-0 Has 5 line wires, 40-in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 10, 10, 10, 10. Price per rod 17c

6-40-0 Has 6 line wires, 40-in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 7, 7, 8, 9, 9. Price per rod 19¼c

7-40-0 Has 7 line wires, 40-in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing, 5 6, 6, 7, 7 1-2, 8 1-2. Price per rod 21¼c

8-40 Has 8 line wires, 40-in. high, 2 stays to the rod. All No. 9 hard steel wire. Spacing 3, 4, 5, 6, 7, 7, 8. Price per rod 25¼c

7-48-0 Has 7 line wires, 48-in. high, 99 stays to the rod. All No hard steel wire. Spacing 5, 6, 7, 9, 10, 11. Price per rod 22½c

8-48 Has 8 line wires, 48-in. high, 12 stays to the rod. All No. 9 hard steel wire. Spacing 4, 5, 6, 7, 8, 9, 9. Price per rod 26¾c

9-48-0 Has 9 line wires, 48-in high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 3 4 5, 5, 6, 8, 8, 9. Price per rod 26¾c

9-48 Same as 9-48-0, with 12 stays to the rod. Price per rod 29c

10-50 10 line wires, 50-in. high, 12 stays to the rod. All No. 9 hard steel wire. Spacing, 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8, 8, 8. Price per rod 31c

Stretcher An all iron stretcher top and bottom draw very heavy single wire stretcher and spreader, freight paid with fence orders only $7.50

The above prices include freight prepaid to any railroad station in Old Ontario, south of North Bay (steamboat and electric lines not included). To points in New Ontario, Quebec, Maritime Provinces, and the Northwest, deduct two cents per rod from our printed prices, customer to pay his own freight from Sarnia.

REMIT CASH WITH YOUR ORDER BY BANK DRAFT, POST OFFICE OR EXPRESS ORDER.

The Sarnia Fence Company, Limited SARNIA, Ontario.

Slaughtering Pigs on the Farm.

A certain amount of skill and practice is necessary in order to dispatch a pig properly without risk of injuring the quality of the bacon. There are a number of important points to consider which if neglected all have a detrimental influence on the process. In most rural districts there will usually be found an individual who rejoices in the distinction of being an expert pig-killer. His services are in constant demand at this season of the year, although on many farms there is usually someone, maybe the farmer himself, who is quite capable of killing his own pigs. The two chief points in slaughtering are cleanliness and humane practice. No doubt the most humane method is to stun the pig first by striking it on the forehead with a heavy mallet. The animal is then killed by thrusting a long, keen knife into the throat down towards the heart, so letting out all the blood in a gushing stream.

According to some pig-killers, however, the stunning of the pig beforehand has the effect of preventing the blood running freely. Perhaps the stunning may not be necessary from the humane point of view when the pig is in the hands of an expert slaughterer, but where, as in many cases, the killing of the bacon hog is entrusted to someone who is more or less of an amateur at the business, it is certainly essential to render the animal unconscious first, otherwise there may be the pitiable sight of the pig running about the yard screaming with pain and terror until it drops from exhaustion and loss of blood. Of course, it must be remembered that a pig intended for slaughter must be given no solid food for twenty-four hours beforehand; pure water may be drunk in abundance, however, as this is said to cause the animal to scrape much more easily, while the intestines are cleaner and more tough. The state of the atmosphere is also a point to consider in slaughtering pigs; it should be such as will enable the carcass to become thoroughly cold within twenty-four hours. Beginners usually find some difficulty in inducing the doomed pig to meet its fate with resignation. The poor animal is naturally very much adverse to it, and expresses its dislike of the whole proceeding in no gentle tones. A great deal of trouble and excitement will be avoided, however, by slipping a thin, strong cord with a sliding noose over the mouth and beyond the tusks, the cord being then drawn tightly.

In the south of the country it is the usual practice to singe bacon hogs and scald porkers after killing. The singeing of the larger pigs is said to impart firmness and flavour to the bacon, and I have also found that it assists in the curing process to a much greater extent than when the skin is rendered flabby by scalding. A dry, shallow bed of clean straw must first be prepared, wisps of straw being placed between the hind and forelegs of the pig, together with a thin layer of straw over the exposed portions of the body. The straw is then set alight at the windward end, and the hairs will be quickly charred, when they can be removed by brushing the carcass lightly with a birch broom. While still hot, the hoofs may be easily dislodged by giving them a sharp twist. Great care must be taken in singeing not to blister the skin by applying too much heat to any one side of the carcass. As regards scalding, the quickest and most effective method is to thrust the carcass into a large tank or vat of water that is just boiling. As soon as it is apparent that the hair can be scraped off, the carcass should be removed to a strong "scuttling" table, where it may be scraped clean and free from hair by means of any blunt instrument or even the back of a knife.

Don't let repairs eat up your profits

Whether they represent actual cash outlay, or only the time of yourself and your help, repairs are *waste* just the same. When you make an improvement—no matter how small its cost may be—let it be *permanent*. Then it is a real investment, something on which you can realize in *cash* should you decide to sell your property; and something that will pay you constant dividends in convenience, sightliness and comfort as long as the farm remains your own.

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They last as long as the very hills themselves. They do not require experts to build them. Their first cost, in most cases, is no more than for inferior materials.

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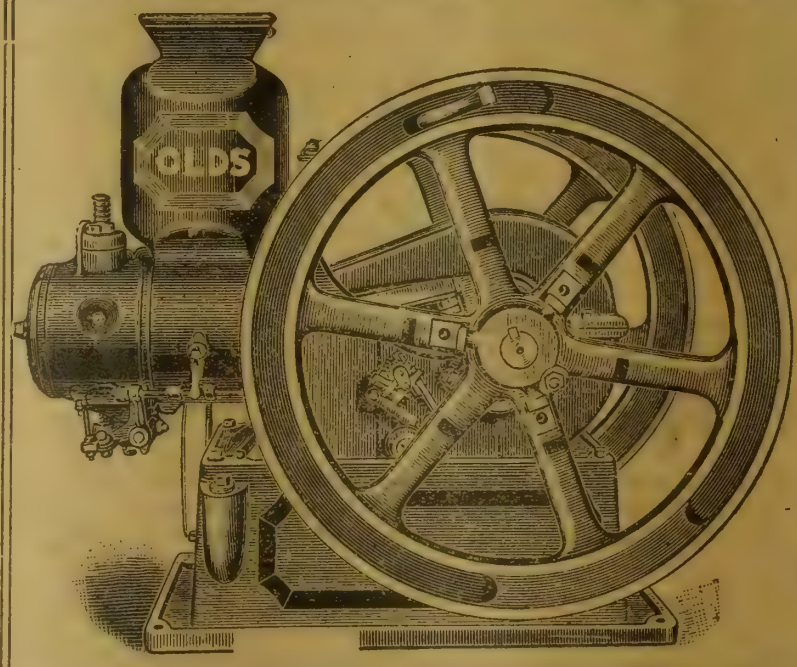
IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole SaleRepresentatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

Before commencing to open the carcass, it should be hung in a clean, cool place, where a through draught of cold air can circulate. The carcass must also be washed down thoroughly with pure cold water, and any remaining hairs carefully removed. In the north it is hung to a beam or rafter so that the head is suspended about a couple of feet from the ground. The body is then opened by inserting a knife under the skin and ripping the belly open, removing the vent at the same time so that the tail is left untouched. As soon as the intestines have been removed, the liver, lungs, and heart may be brought out intact, being attached to the windpipe and other minor organs surrounding them. Then the inside of the carcass is carefully wiped out with a cloth wrung out in boiling water, after which the leaf lard is removed and placed on one side for

rendering. It is very important that the carcass should hang not less than one day in order that it may cool and stiffen properly, and the side should be propped open so that there may be a free circulation of air to assist in cooling.

Where bacon is cured for home consumption, it is immaterial to the farmer how the carcass is cut up, provided, of course, that allowance is made for the proportion of fat to lean meat in different parts of the body. Generally speaking, however, farm bacon-curers follow the practice that is customary in the district. In southern districts, for instance, the "belly-piece" is first removed so that the intestines may be more easily taken out. The Cumberland bacon-curers remove the spine in one piece, taking with it the breast-bone and the two small ribs nearest the shoulder; the ham is usually taken off at about the third joint of the spine from the tail. In the Scottish bacon factories where Ayrshire bacon is largely cured, the carcasses are skinned in the first place and the fore feet at once removed, then they are split down the middle, severing the vertabral column in two, and the separate sides are hung by means of hooks inserted through the gammon hough upon track bars. Whatever method of cutting up is adopted, it is invariably the custom to remove the head first, then the "chines" or backbone are cut out. The latter, by the way, must be removed with great care, so as not to take too great a proportion of the lean meat, for they are indeed the richest portion of the pig. The hocks and forearms may then be removed, likewise the spare ribs if the pig is a large one, and there is a large family to provide for. These spare ribs are excellent for roasting. The fillets or lean meats may also be removed from the large flitches, and the hams cut out unless the pigs are small, when they are left in. Jowls or cheeks, eye pieces, and nose pieces, tongue and ears all are cut out of the head, and not a scrap of the carcass from the head to the tail need be wasted.

Early Importations of Noted Horses to P. E. Island.

(Continued from page 578).

well known horses of which we have record, from the earliest date to the present time, but this would add too much material to a sketch already far more lengthy than was anticipated. He has therefore chosen rather to confine it to those imported prior to 1890, and which were generally regarded as the most successful sires of their day.

It will therefore fall to the lot of other and more capable writers to chronicle at some future time the achievements on the turf and at the stud of such highly successful, latter day trotting sires as "Brazilan," "Oakley Baron," and many others well known to our readers. Also recent importations of a number of very good well bred draft stallions.

In concluding this imperfect sketch, the writer would take this opportunity to again express his optimism as to the future of our horse breeding industry. He does not believe, as some pretend to do, that the day of the horse is past. Machinery will not supercede him, nor will the automobile nor tram car, though in time they may run on our public roads. The horse will live and flourish through it all as a necessary beast of burden, as a delight to the lover of this noblest of animals, and as a luxury to the wealthy. The farmer will find a horse of the right stamp and breeding a safe and sure source of revenue throughout our time.

Best Way to Use Poultry Manure.

(Continued from page 581).

A good combination for the garden is made of 1000 pounds poultry manure, 100 pounds muriate or sulphate of potash and 300 to 400 pounds acid phosphate. Of course, if kainit is used to fix the ammonia during the winter, less potash will be needed. Wood ashes are a good supplement to poultry manure, but must never be mixed with it, either on the dropping boards or after the droppings are scraped up, for they liberate the ammonia and so rob the manure of its most important element. Coal ashes do not do this to the same extent as wood ashes, but it is better not to use them. Lime, too, should be avoided for the same reason.

Poultry manure may be used to advantage in the form of manure water, being thrown into a barrel and water poured on it, or placed in a bag and allowed to soak in a barrel or bucket of water. It should be used in a weak state and to force plants. It is a good substitute for nitrate of soda and is excellent to use on house plants which need a nourishing stimulant in the course of the winter. It is also good for rejuvenating porch and window boxes which ordinarily exhaust the soil in which they are planted, to a large extent, at least, by the middle of summer.

FELL FROM A HAY LOFT

Suffered Tortures With His Kidneys Until He Tried Gin Pills

You might think that Mr. Baker needed a surgeon more than GIN PILLS. But there were no bones broken. His back was strained, which was harder to cure because nothing seemed to do any good. It is the same with a sprained ankle and broken leg. You can set the fracture and it will be well in six weeks—but the sprain may take months to get well.

However, Mr. Baker found the quick way to get relief from the pain—here are his own words.

AULTSVILLE, ONT.

A BAD FALL

"I have been a great sufferer from Kidney Trouble from an injury to my back caused by falling from a hay loft about six years ago. This left my kidneys weak, so that every cold I got would settle in my kidneys and cause intense suffering. I was advised to try GIN PILLS. I found, to my surprise, after taking two boxes, that the pains were relieved and I began to feel better. I am still taking GIN PILLS and feel sure I will be completely cured. I recommend GIN PILLS to all who suffer from any Kidney Trouble". C. BAKER.

You see, the fall had strained the kidneys and they were affected by the slightest chill. GIN PILLS immediately strengthened the kidneys—soothed any irritation and thus enabled the kidneys to overcome the effects of the fall.

If you are having pain in the back—or trouble with kidneys or bladder through accident or overwork—do just as Mr. Baker did—take GIN PILLS. They will help you—cure you—or we will promptly refund your money Buy six boxes at your dealer's. If, after taking them, you feel that Gin Pills have not helped you, return the empty boxes and get your money. We will take your word for it. 50c. a box, 6 for $2.50. Sample box sent free if you write National Drug and Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS regulate the bowels and cure Constipation, Biliousness and Indigestion. 25c. a box. 111

Lice.

G. S.:—Will you kindly advise me through your paper the best method of getting rid of lice in the dairy and barn. Of course our climate is very severe in winter here. It will not do to spray our cows and even if they are thoroughly washed, they stand a certain amount of danger in contracting cold.

Stable and cattle have to be perfectly free of lice in fall and then will stay free in winter. Lice mostly infest dark, badly ventilated damp stables. Put in a ventilating system and four square feet of window glass for each cow. Clean up, fumigate, disinfect and whitewash the stable to rid it of lice. Kill lice on cattle by applying a decoction of one ounce of stavesacre seeds to a quart of boiling water used cold.

Cream Separator Facts Worth Knowing

THERE are *six* important things a cream separator should do in order to be a paying investment.

FIRST: It should get *all* the cream.
SECOND: It should get the cream in *perfect condition.*
THIRD: It should *save* you money.
FOURTH: It should *save* you work.
FIFTH: It should be *durable.*
SIXTH: It should *make money* for you.

There are a host of machines that are claimed to do these six things. But Empire separators are the only separators actually doing the whole six. That's certainly a bold statement. It's the truth, nevertheless.

Frictionless Empire

FIRST: Empire Cream Separators skim to .02 per cent. and often less. That means the loss of only one pound of butter fat in every five thousand pounds of milk, which is equal to the loss of one pound of butter fat in all the milk a cow gives in one year. The Frictionless Empire *gets all the cream*

EMPIRE

Cream Separators

SECOND: The few smooth-skimming devices of Empire separators are as easily and thoroughly washed as glass tumblers. This cannot truthfully be said of skimming devices with corners, sloths and crevices that soon get clogged up and cannot be thoroughly cleaned. *Cream in perfect condition* —cream without a taint—can only be obtained from a separator that can be thoroughly cleaned.

THIRD: Empire separators get thirty per cent. more cream than old style methods. *The more cream saved the more money saved.*
FOURTH: Empire separators do the skimming in a fraction of the time required with old style methods. *They save many hours of work.*
FIFTH: You can judge the durability of Empire separators when we tell you that the average cost per machine has been less than thirty cents a year for repairs during ten to fifteen years of service.

SIXTH: Empire Cream Separators get thirty per cent more cream than old methods. The cream is first quality—commands a higher price than gravity cream. More cream and higher price cream necessarily mean more money. The Empire will give you enough more profit than a cheap separator to pay for itself in two years. No other separators will fulfill all these six requirements. They cannot do so because they cannot use the Empire patented devices and mechanism.

Empire Disc.

These patented features are found only in the Frictionless Empire cone method and Empire Disc. Wherever you choose you are bound to be satisfied. Every Empire Separator is sold under a binding guarantee —a *guarantee as good as a gold bond.*

Write for a copy of our latest catalog. It describes both machines completely and is handsomely illustrated.

The Empire Cream Separator Co. of Canada, Limited. Toronto, Winnipeg, Montreal, Sussex

AGENTS EVERYWHERE IN CANADA—LOOK FOR THE EMPIRE SIGN 35

Disinfecting the Stable.

One might, at first glance, wonder what this subject has to do with the health of human beings, but as we study the subject we find much—very much. The many diseases that come to us direct from the stable are typhoid fever, through the breeding of flies; anthrax, tuberculosis and glanders. There are others, but of these you know, and they alone justify sanitary conditions in the stable.

A dark, damp basement barn, where sunlight can not freely enter, is a very unsanitary place at best, even though it is disinfected several times per year. As a matter of fact, such stables should be disinfected monthly. A few hours' work on a rainy day, or, better still, when the sun is shining brightly, means a very small expense and you are conserving not only the health and strength of your horses and cattle, but of your family and the families of those who purchase your milk or butter, your eggs, poultry, mutton, pork, veal or beef. Instead of a possibility of diseased products, you have the consciousness of pure, clean, healthy material for your own table as well as the tables of your patrons.

Sunlight is the greatest and best natural disinfectant, but there are places in every stable where the sunlight does not reach and these must be disinfected by artificial means. There are many drugs which have the power to destroy the organisms of disease. They are known as disinfectants. Some of them are dangerous to the user and to the animals intended to be protected and, although they are all named and their action described in the scientific works for practical purposes, I will recommend only one because the results of its use have demonstrated that it does the work in a perfectly satisfactory manner, is cheap, safe to handle and not harmful to animals.

Among those frequently recommended are bichloride of mercury, chloride of lime, formaldehyde, carbolic acid, crude carbolic acid, cresol, and compound solution of cresol. The last named is quoted by the United States Pharmacopoeia as an official preparation and, as it has all of the disinfecting qualities of the others and is safe in every way, it is useless to seek further for an agent. A common barrel spraying pump, such as all farmers should be equipped with for orchard spraying, is the simplest and most economical apparatus.

Before beginning the use of a disinfectant it is essential that certain preliminary work be done in and about the stable that is to be treated. The various surfaces, such as ceiling, walls, partitions and floors, should be swept until free from cobwebs and dust. Any accumulation of filth should be removed by scraping. In some cases the woodwork may have become softened and so porous as to be a good medium for the absorption of disease germs. Such woodwork should be removed, burned and replaced with new material. All refuse and manure from stable and barnyard, known to be infected, should be removed to a place inaccessible to live stock and, if possible, be burned or thoroughly mixed with a solution of chloride of lime in the proportion of six ounces to one gallon of water. If the floor is of earth, it will doubtless have become stained with urine and contaminated to a depth of several inches. In such cases four inches or more of the surface soil should be removed and treated as above suggested for refuse and excreta. All earth removed should be replaced with soil from an uncontaminated source, or better, a new floor of concrete may be laid, this being the most durable and sanitary material for the purpose.

All things considered it is probable that compound solution of cresol, already mentioned, is best for all purposes. It should be used in the proportion of four or five ounces to each gallon of water. As an accessory preparation and for use after the application of the disinfectant, it may be advisable to make ready a lime wash to each gallon of which there has been added four ounces of chloride of lime, or if it appears desirable to use the disinfectant and lime wash at one application, the following method may be followed in preparing five gallons: Slake seven and one-half pounds of lime, using hot water if necessary to start action. Mix to a creamy consistency with water. In case compound solution of cresol is used, add 30 fluid ounces to the lime wash. Stir thoroughly. If to be applied through a sieve. Stir frequently when applying and keep covered when not in use. spray nozzle, strain through a wire In case a large surface is to be disinfected it will be advisable to prepare a liberal amount of the disinfecting solution before beginning the application. Such solutions, however, should not be permitted to remain in receptacles which are accessible to animals.

The efficacy and economy of the work will depend in a great measure upon the method of applying the disinfectant. Economy requires that the disinfecting solution be applied rapidly; efficiency requires that it be not only spread in such manner as to cover the entire surface requiring disinfection, but that sufficient quantity and force be used to drive the solution into all cracks and crevices. Where a very limited surface is to be treated, as, for example, one stall, it may be possible to apply the disinfectant in a satisfactory manner by means of a whitewash brush. In all cases, however, the best method of applying the disinfectant and the lime wash is by means of a strong spray pump. Such should be equipped with not less than 15 feet of hose, to which may be attached a five-foot section of iron pipe of the same caliber. With a spraying nozzle at the end of the pipe the operator will be enabled to proceed with the greatest possible

Z 8-1553.

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WHY SAY ONE HUNDRED CENTS MAKE A DOLLAR!

We claim Seventy Five Cents can, and often does, equal a Dollar when making your purchase of merchandise, but this depends WHERE YOU BUY. Just think of One Dollar value for Seventy Five Cents; wonderful isn't it? Every shopper should take advantage of the great bargains we offer. Remember our Guarantee of Satisfaction covers every purchase. For over a quarter of a century

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OS1600—Waist of good quality Persian lawn, made in a very attractive style, with sailor collar edged with fine lace, pleated jabot with lace edging, box pleat, open front and pearl buttons; front finished with pin tucking sleeves, finished with tucking and insertion. Our price ..... 98¢

ZS1553—Women's White Wash Skirt of best quality Linen, made in a good serviceable and easily laundered design, plain gored panel back and front. White only, exceptional value $1.25

ZS1534—This beautiful Dress is one of the most becoming models it has ever been our privilege to offer our customers. It is made from a good quality of linen, sailor collar; front of waist and skirt is finished with buttons, piping and striped strapping, open front. Colors: sky, cadet, tan, pink, navy and mauve. Our very special $2.98

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BUILT low, especially for farm use, a T-A Handy Wagon SAVES MUCH HARD WORK. It is easier to load and unload, and will haul bigger loads without tiring horses, more than a small load.

T-A **Handy Farm Wagons and Wide-Tire Steel Wheels**

T-A Wide-Tire Steel Wheels are lighter, stronger, cheaper, and better IN EVERY WAY than ordinary wooden wheels. MAKE YOUR OLD WAGONS NEW by fitting them up with these superb wheels.

Our FREE BOOKLET (which please ask for) tells how you can make farm work easier and more profitable.

Tudhope-Anderson Co., Ltd., Orillia, Ont.

dispatch and the least possible inconvenience.

The entire interior of the stable should be saturated with the disinfectant. Special attention should be given to the feeding troughs and drains. After this has dried, the surface may be sprayed with lime wash, and when this process has been completed it will be advisable to open all doors and windows of the building for the admission of air and light.—Kimball's Dairy Farmer.

Ventilate The Barn.

Farmers who are going to build barns next summer should make arrangements now to put in the King system of ventilation in their stables. It is not expeusive if you make calculations in time.

The Washington Agricultural College has the following to say on the necessity of such ventilation.

Dairy barns are very frequently poorly ventilated. The dairy cow is then not only required to live but to work, under unfavorable influences and she often falls a victim to such diseases as tuberculosis, pneumonia, bronchitis and colds. Foul air is one of the prime factors in the production of such diseases, Since the advent of sanitary science in connection with ventilation the air space allowed for each animal has been increased, and a number of methods of ventilation have been devised. The exercise of a little care in such matters will protect the health of animals, prevent premature death,and also make possible the highest working efficiency of the herd.

World's Production of Wheat.

Final estimates of the production of wheat in 1911 have been received by the Institute from all the important countries. The total production in the Northern Hemisphere is 3,154, 360,000 bushels against 3,185,565,000 in 1910, a decrease of 31,205,000 bushels. The exceptional decrease of 266,000,000 bushels in Russia was almost balanced by large increases in Canada and in most of the countries of Europe. The total for the Southern Hemisphere (preliminary estimate) is 290,988,000 compared with 275,810,000 in 1910. This makes the world's total, according to the Institute 3,445,348,000 bushels as against 4,471,375,000 produced by the same countries in 1910. Adding the production of a number of smaller countries as given by Dornbusch we have 3,568,148,000 bushels for 1911 against 3,575,375 for 1910. The world's total for 1910 according to Broomhall is 3,451,972,000 bushels, according to Beerbohm, 3,456,000, 000.

OTHER CEREALS IN 1911 AS REPORTED BY THE INSTITUTE.

The total production of Rye in the Northern Hemisphere was 1,574,633, 000 bushels against 1,660,469,000 in 1910 ; Barley 1,377,746,000 against 1,377,388,000 ; Oats 3,655,650,000 against 4,003,261,000 ; Corn 3,181, 133,000 against 3,550 786,000.

The production of Oats in Argentina is estimated at 57,255,000 bushels against 34,337,000 in the previous year; New Zealand 17,597,000, against 11'578,000. The Argentina corn crop is 275,577,000 bushels against 27,558,000 last year when most of the area was abandoned.

THE 1912 WHEAT CROP OF INDIA.

The wheat harvest will begin in Central India in March, in Upper India in April and will be completed in May. A complete estimate of the acreage to be harvested this spring has not been made, but figures received from the Institute referring to about 89% of the wheat regions, give the acreage for these regions as 25, 570, 000; acres or 99 per cent. of the acreage of the same regions last year. The total area harvested in1911 was 29,970,000 acres, and the production was 370,414,000 bushels. According to Broomhall's latest report the outlook for the crop about to be harvested is very good and a bumper yield is expected.

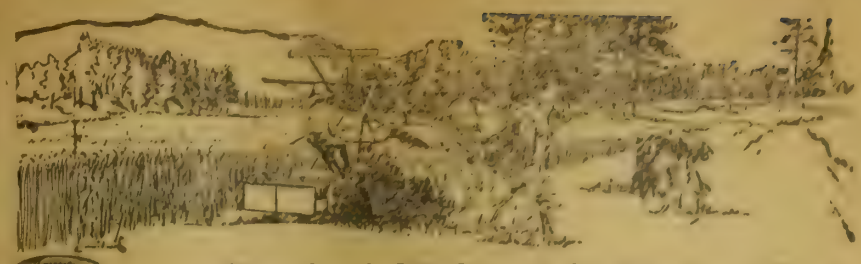
Garget.

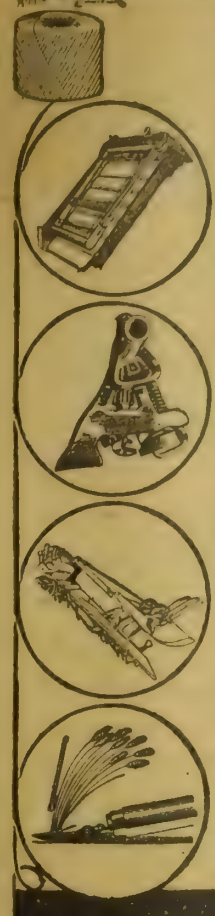
J. B.:—I have a Guernsey cow that has a swollen bag, that is, the two hind teats. At first she would give some milk and now she doesn't give a cupful out of these two teats, although she was a good milker last year.

"Garget" is merely the popular term for mammitis or inflammation of the udder in any one of its several forms. Your cow has had a bad attack of mammitis (garget) at some time or another, or possibly she has tuberculosis of the udder. Anyhow she will never prove profitable in the dairy and if she is free from tuberculosis it would be best to sell her to the dealer for slaughter, or to fatten her off for slaughter.

Whitewash Recipe.

Take a half bushel of unslaked lime, slake it with boiling water, cover it during the process to keep in steam, strain the liquor through a fine sieve or strainer and add it to a peck of salt, previously dissolved in warm water, three pints of ground rice boiled to a thin paste and stir in while hot. Add five gallons of hot water to the mixture, stir well and let stand a few days, covered as nearly air tight as possible. It can be colored by adding ochre, lamp black, ground keel or bluing to suit.





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FARMERS who know the McCormick binder best are its best friends. McCormick machines have been giving satisfactory service for over seventy years, with a constant increase in the number of sales, proving that the binder has unusual merits and gives satisfactory service.

The McCormick binder harvests successfully grain that is short or tall, standing, down, or tangled, or full of green undergrowth. It is built to last and has every necessary adjustment to keep it working up to full capacity. The reel can be adjusted high or low. The platform can be tilted to cut close to the ground, to pick up down or tangled grain without pushing trash ahead of the knife, because the bottoms of the guards are nearly level with the bottom of the platform. The third packer pulls down the grain from the top of the elevator. The third discharge arm keeps the bound sheaves clear of unbound grain. The floating elevator does not clog. The McCormick agent will show you how well the McCormick improved knotter works without close adjustment. Either smooth section or serrated knives can be used in the cutter bar.

Eastern Canadian farmers will appreciate these features when the McCormick binder is put to work in their fields. The local agent will show you the many good features of McCormick harvesting and haying machines and tools. You can get catalogues from him or by writing the nearest branch house.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any farming questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U S A

McCormick

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

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When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
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Can you arrange the above sets of jumbled letters into the names of eight well known fruits. Many YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZES. It is easy. But by patience and perseverence you can probably make out seven of them. To the person making out the most we will give the sum of One Hundred Dollars. To the person making out the next number the sum of Fifty Dollars, To the person making out the next number the sum of Twenty Dollars, To the fourth largest number the sum of Ten Dollars, To the next two persons who send in the correct answers, the next two prizes will be divided between them, each receiving $5.00. To the next seven correct answers, the first three prizes will have been awarded, (each receiving $10.00), Six Dollars to each of the next seven, the whole sum of $200.00 will be equally divided (each receiving $5.00), to all persons sending in answers if they comply with a simple condition a few of which we will mention. We do not want any money. WE DO NOT WANT A CENT OF YOUR MONEY When You Answer This Advertisement. If you are anxious to get anything like a complete list, write us at once enclosing 2 cent stamp, for our reply. DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDICINE CO., Dept. 68 MONTREAL, QUE.

Air and Fertility.

(Continued from page 579).

given at 11 a. m., and still another at 2 p. m. At the latter turning, most of the material was in condition to pass through a screen with mesh three-sevenths of an inch in size. In this way all the lumps were caught, and were then chopped into minute pieces. At 5 P. M. another turning and screening was given, and at 7 P. M. the whole mass passed easily through the screen. There was no odor; that is, none of the original odor; only a faint, wholesome smell of rich soil. The bacteria in the mellow garden soil, aided by the air, had done the work in a complete manner.

This particular experiment was made under exceptional circumstances, during a long, hot, July day. Usually the end in view required three to seven days; partly because of less frequent turning. In fact, I usually turned and aired the mass only once a day.

Night soil is one of the most neglected of all the natural plant foods, and yet when properly treated it is one of the most valuable. This is evidently true when one reflects that human foods are highly nitrogenous in character. The theoretical yearly value of human excreta is something like $7.50 per annum. Whatever may be said of the so-called bad effects on vegetation produced by night soil in its ordinary raw, lumpy condition, or after months of air-tight storage, there seems to be nothing whatever against it when properly composted with air and screened loam. On the other hand, there is good reason to regard it as one of the best and most truly valuable by-products of the farm, and quite as effective and available as any of the fertilizers.

My excuse for alluding to night soil, and commenting upon it, is that it so well illustrated the idea on which this article is based, for no other manure is naturally so impervious to the air as this one. In its behavior, as commonly stored and treated, it resembles a bit of wet marsh land; full of plant food, but wholly unavailable until supplied with air.

CONCLUSIONS.

The general conclusions are obvious. Air is neither a direct nor an indirect fertilizer, as commonly understood; and yet it is both. A steel-tooth cultivator is not a dung cart, yet it adds vast amounts of plant food to the supply previously available in the soil.

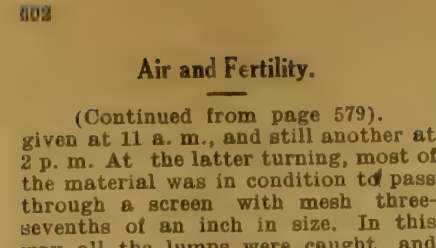
When a farmer or gardener examines a soil chart, and finds the amazingly large amounts of nitrogen, phosphoric acid and potash already present in his own soil, and in all good soils everywhere, he is sure to ask whether it is not possible to use at least a part of what already belongs to him, instead of depending wholly on commercial articles to piece out his stable manure.

It somehow reminds one of the story about acres af diamonds; how the young man started out to explore the world for precious gems, and how he returned home, late in life, to learn that his own birthplace was in a rich diamond-producing belt.

It is much the same with our soils. On every farm there are tons of the very elements sold by the fertilizer manufacturers; the home products not always in readily soluble forms, but almost always in such shape that tillage will release them.

It will presumably pay, in all cases, to add stable manure and fertilizers to every sort of land, but those farmers will succeed best who till most thoroughly, and who thus unlock their own storehouses of fertility.

No writer or lecturer can "ring the changes" too much on this matter of developing the latent, inexhaustible fertility of the soil. It is not extravagant, but to speak of a cultivator or harrow as one of the greatest fertility producers in the world.



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St. John Exhibition, September 2—7, 1912.

Halifax Exhibition, September 11—19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th, 1912.

The Blackhaw Treatment for Mares.

"Last year I had some trouble with mares slipping their foals. What is the black haw treatment for preventing abortion?"—J. G. M.

The blackhaw treatment for mares inclined to abort has been frequently described in our veterinary columns. By its use mares which have repeatedly slipped their foals have been brought successfully through the entire natural period of pregnancy. The treatment should be begun just before the time of pregnancy at which the accident has usually occurred, or immediately upon recurrence of the first preliminary symptoms of restlessness.

The treatment consists in giving the mare half an ounce of fluid extract of blackhaw and 20 drops of pure carbolic acid in water every other night. At the slightest sign of impending abortion place the mare in a secluded stall and give this mixture daily, and add half an ounce of fluid extract of Cannabis indica if the mare is restless, shows pain or strains. When the latter symptoms are seen, the blackhaw may be given twice a day until the symptoms subside.

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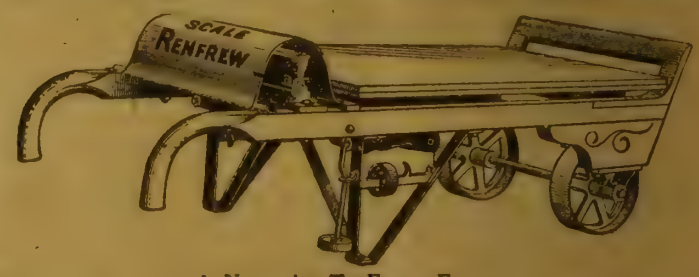

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If Your Advertisement was in this space just for one issue it would be read by over 50,000 Farmers.

MARKETS.

St. John.

GRAIN—Oats, 58c. to 63c.

LIVE STOCK—Milch Cows, $56.00 to $65.00.

DRESSED MEATS—Beef, (retail), 10c. to 20c.; Mutton, 10c. to 16c.; Veal, 8c. to 15c.; Pork, 9½c. to 11c.

HORSES—Drafters, $200 to $225.

POULTRY AND POULTRY PRODUCTS—Eggs, 18c. to 21c.; Fowl, $1.25 to $1.75; Spring Chickens, $2.00.

FRUIT—Maple Products, $1.10 per gallon.

MISCELLANEOUS—Hay, $16 to $18; Straw, $9.00 to $10.00 a ton; Wool, 13c. to 21c.; Beef Hides, 11½c.; Calf Skins, 18c. lb.; Sheep Skins, $1.00, good; Lamb Skins, 10c.

VEGETABLES—Carrots, $1.50 to $1.75; Potatoes, $2.25; Turnips, 90c.; Beets, $1.50.

The market has been poor this week. Very little stock moving. Eggs are dropping, also butter. Potatoes are easier and still dropping. Pork is going up. Beef is somewhat scarce this week.

Halifax.

GRAIN—Oats, 59c. to 60c. per bus.; Peas, $6.50 to $7.00 per 196 lbs.; Barley, feed, $1.50 to $1.60 per 100 lbs.

FEEDSTUFFS—Bran, $28.50 to $29 ton; Shorts, $29.50 to $30.00 ton; Middlings, $30 to $30.50 ton; Linseed Meal, $2.35 to $2.40 per bag; Corn Meal, $1.90 to $1.95 per bag.

GRASS SEEDS—Timothy, $18.50 to $19.50 per 100 lbs.; Com. Red Clover, 24c. to 25c. lb.; Alsike, 22c. to 23c.

LIVE STOCK—Milch Cows, $40 to $45; Lambs, $3.50 to $4.00; Hogs, 8c. to 10c. per lb.

DRESSED MEATS—Beef, (carcass), 9c. to 12c. lb.; Beef, (retail), 16c. to 24c. lb.; Mutton, 12c. to 15c. lb.; Veal, 10c. to 12c. lb.; Pork, 12c. to 15c. lb.

HORSES—Drafters, $225 to $300; Roadsters, $250 to $300; Carriage, $250 to $350.

DAIRY PRODUCTS—Sreamery Butter, 28c. to 30c. lb.; Dairy Butter, 24c. to 26c. lb.; Cheese, 15c. to 16c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c. to 25c. doz.; Fowl, 16c. to 20c. lb.; Chickens, 23c. to 25c. lb.; Ducks, 18c. to 20c. lb.; Turkeys, 22c. to 24c. lb.

FRUIT—Apples, $4.00 to $5.00 bbl.

MISCELLANEOUS—Hay, $15 to $16 ton; Straw, $10 to $12 ton.

VEGETABLES—Potatoes, $2.80 to $3.00 bag, 3 bus.; Turnips, $1.60 to $1.70 bag, 3 bus.

Charlottetown.

GRAIN—Oats, white, 55c. to 60c.; black, 58c. to 65c.; Barley, 85c. to $1.25; Buckwheat, 85c. to $1.25.

FEEDSTUFFS—Bran, $1.50; Shorts, $1.60 to $1.70; Middlings, $1.60 to $1.75; Oil-cake, $2.30 to $2.50; Corn Meal, $2.10 to $2.15.

GRASS SEEDS—Timothy, 16c. to 18c.; Com. Red Clover, 25c. to 28c.; Mam. Red Clover, 26c. to 30c.; Alsike, 23c. to 26c.

LIVE STOCK—Butcher's Cattle, 6c. to 6½c.; Stockers, $18 to $35; Milch Cows, $25 to $50 Sheep, 3½c. to 4½c.; Lambs, $3.00 to $4.00.

DRESSED MEATS—Beef, (carcass), 9c. to 12c.; Beef, *retail), 8c. to 16c.; Mutton, 10c. to 14c.; Veal, (carcass), 4½c. to 6c.; Pork, (heavy), 8c. to 9c.; (select), 10½c.

HORSES—Drafters, $150 to $225; Roadsters, $150 to $225; Carriage, $150 to $225.

DAIRY PRODUCTS—Creamery Butter, solids, 29c. to 30c.; prints, 30c.; Dairy butter, 25c. to 29c.

POULTRY AND POULTRY PRODUCTS—Eggs, 20½c.; Fowl, 10c. to 14c.

FRUIT—Apples, $2.00 to $3.50 bbl.

MISCELLANEOUS—Hay, $12 to $13.50 ton; Straw, $6 to $7 ton; Wool, 25c. lb.; Beef Hides, 10c.; Calf Skins, 12c. to 14c.; Sheep Skins, 80c. to $1 each; Lamb Skins, 15c. to 25c.

VEGETABLES—Carrots, 60c. bus.; Potatoes, Blues, 50c. to 55c.; Reds, 55c. to 60c.; Turnips, 20c. to 25c. Beets, 60c.; Parsnips, $1.50 per 100 lbs.

Since last report spring has opened up and business is brisk. Shipping has been brisk and a lot of produce has been shipped, and large consignments of goods have been received, every boat that has called here this spring having full cargoes both in and out. Potatoes are lower and the demand at the moment is quiet, but we think that prices will hold around present level. Other vegetables have been very scarce and the demand much heavier than the supply. Butter is lower and still further decline is expected. Eggs have held at about the same prices and the prices paid are certainly away beyond what dealers expected and are record prices for this season of the year. Cheese is about out of the market and there will be nothing to offer for shipment until the new cheese is ready. Grain feeds of all kinds are scarce and prices high.

Fattening Poultry.

The method used by most of the large establishments engaged in fattening poultry in this country is to feed the chickens in crates from troughs, according to information collected by the United States Department of Agriculture. From six to 10 birds are placed in each division of the battery or feeding coop, depending on the size of the birds and the ideas of the feeder. Two or three chickens do better in a division together than when only one bird is placed in each compartment, and the cost of equipment and labor per bird varies inversely with the number of birds in each division. Another method which is used to a considerable extent on a small scale in this country is pen fattening. This method is adapted for use on the farm where the farmer does not care to go to the trouble of crate fattening, or where the price received for well-fed birds does not warrant the extra labor and feed cost of the crate method.

Most "milk-fed" chickens are fed for fourteen days, but results indicate that a more profitable gain can be secured in a shorter feeding period, provided the same price per pound can be obtained for the finished product. Practically all of the special feeding in this country involves the use of milk, thus producing "milk-fed" chickens. Milk, while the least expensive, seems to be the most essential constituent of the ration, and when a feeder cannot get milk in some form he generally does not attempt to fatten poultry commercially. Fresh butter milk, condensed butter milk, and skim milk are preferred in this relative order. The feed is mixed to the consistency of thick cream, or so that it will drip from the tip of a wooden spoon. Rations of 50 percent. cornmeal, 40 percent. low-grade wheat flour, and 10 percent. fine shorts; or of 58 percent. cornmeal, 36 percent. oat flour, and 6 percent tallow, by weight, give very good results, producing gains which cost from 6.45 cents to 7.74 cents per pound. Low-grade wheat flour is a more economical feed than oat flour at the present prices of grain.

We employ hit-or-miss methods in the place of system about the farm and are soon "in the hole," till there is no hope of ever digging out, when systematic effort would put us on top of good soil, with both feet on a firm footing.

An I H C Gasoline Engine Will Pay You Best

IF you really want your money's worth when you buy a gasoline engine, buy an I H C with plenty of power to do your work.

A gas engine that is not well designed, that is built roughly or of inferior material, is worse than none at all. It costs almost as much as a good engine to begin with, and costs much more afterward in repairs and loss of time.

Buy a reliable I H C engine and save yourself an endless amount of worry, lost time, money, and temper.

I H C Gasoline Engines

are simple, dependable, durable. The carburetor or gasoline mixer is the simplest and most effective known. Anyone can regulate it perfectly. Ignition is positive. The ignition apparatus is so simple you can understand it at a glance. The fine-grained, grey, cast iron cylinders and pistons are worked together to a perfect fit. The ground piston rings insure maximum power from the explosion.

All moving parts are perfectly balanced. The bearings are unusually large and carefully fitted. Every part is amply strong and no part is too heavy to be most efficient. In every detail, the I H C is a good engine—one you can depend upon for years to do your work when you want it done.

I H C engines are made in all styles—vertical and horizontal, portable and stationary, air and water-cooled; in sizes from 1 to 50-horse power, to operate on gas, gasoline, naphtha, distillate, kerosene or acohol. Gasoline and kerosene tractors, 12 to 45-H. P. Grinding, sawing, pumping, and spraying outfits, etc.

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The purpose of this Bureau is to furnish free of charge to all the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

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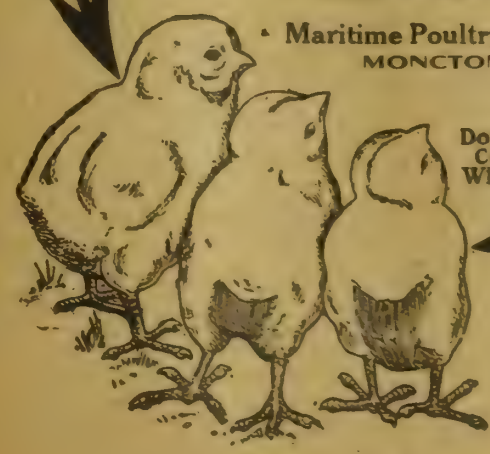


Seed Growers' Association.

Some important changes in the regulations of the Canadian Seed Growers' Association, in regard to the selection and registration of seed, were made at the annual meeting of the association held in Ottawa, February 8th and 9th. The sections relating to the definition of terms and the registration of seed were changed to simplify the system of selection and registration, provide for the production of a much larger amount of registered seed and maintain or raise the standard for registration by a more thorough system of inspection. Under the new regulations there will be two main classes of seed eligible for registration: (1) "Elite Stock Seed", which is the general product of the hand-selected seed plot of at least three years' satisfactory selection, or a pure stock of seed originating from a single plant or seeds the progeny of which has proved in field tests and other means of examination to be worthy of distribution, and (2) "Registered Seed", which is the product of Elite Stock Seed up to and including the third generation.

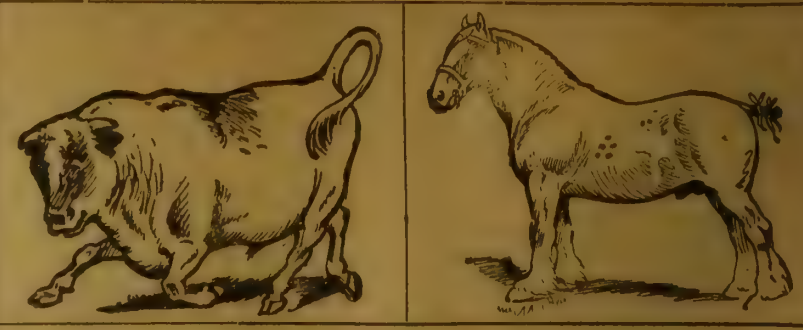
Elite Stock Seed corresponds to what was previously known as "improved" seed, and it is hoped that the association will be able to provide facilities whereby applicants for membership may obtain a quantity of this seed or the progeny thereof not further removed than that of the first generation. Such seed will be obtainable to devote all the available area or from members of the association. Applicants are advised to procure sufficient to sow at least a one-quarter acre seed plot. By starting with "Elite Stock Seed" or "Registered Seed" of recognised quality a grower will save the three years of hand selection which are necessary to produce the Elite Stock Seed by selecting from an ordinary unimproved variety. The period during which seed descended from hand-selected stock is eligible for registration is extended two generations, which should greatly increase the amount of Registered Seed available, as even members with large farms will be able to devote all the available grea to the production of Registered Seed; or they can have it grown by other farmers under their supervision. Any danger of lowering the standard that might have arisen through extending the period for registration is met by the new system which has been adopted for the inspection and sealing of sacks. Up to the present inspection has been confined to the field plots, but in future not only the standing crops but the threshed grain will be inspected, and that which comes up to the standard of quality fixed by the association for Registered Seed will be sealed in the bag and a tag bearing a number corresponding with that of the certificate of registration attached. In this way the quality and identity of Registered Seed will be guaranteed, and the interests of both the grower and the purchaser will be protected. After some discussion it was decided that for this year at least only seed that is grown by members should be accepted as eligible for the registration seal of the association. That is, if a non-member purchased Registered Seed for the first or second generation removed from Elite Stock Seed the association will not recognize the product of this seed as Registered Seed and seal it, even though it complies with the standard of quality. It was thought best to restrict for the present the privilege of registration to members of the association who had operated a seed plot for at least one year and had been favorably reported upon by the inspectors.

With the object of getting more reliable information regarding the suitability of varieties for different districts, two committees were appointed, one for eastern Canada and one for western Canada, each consisting of the superintendents of the experimental farms under the Dominion Department of Agriculture, the district officers of the Seed Branch, and the agronomists of the agricultural colleges, to make recommendations to the association regarding the value and suitability of different varieties. The evils resulting from growing a large number of varieties, many of them new and untried, were recognized, and an attempt will be made to restrict the operations of the members to standard varieties that have been tested and are known to be suitable to the conditions under which they are to be grown. The principle of conducting trial plots when necessary to get information to supplement that collected by the committees was approved.

The results of the investigation regarding the suitability of the grain crop of western Canada for seed purposes have been published in a bulletin entitled "The Seed Supply, 1912, Manitoba, Saskatchewan and Alberta", 20,000 copies of which have been distributed. The bulletin contains a summary of the inspection reports up to the first week in January. Conditions in each of the prairie provinces are summarized, and a more detailed statement is given according to federal electoral districts. The report indicates that there are large areas in both Saskatchewan and Alberta where the settlers are without seed or the means of obtaining it. This applies almost entirely to those districts which have been very recently broken up and the settlers are not in a position financially to meet the situation. There is plenty of good clean seed available if arrangements can be made for having it distributed.

Standard samples of seed representing the minimum standards of quality on account of general appearance that will be recognised in seed testing and seed inspection work this season have been made up and distributed to seed merchants. These samples represent the standards for No. 1 and No. 2 timothy, red clover and alsike seed apart from the standards of weed seed content defined by the Seed Control Act. There are no standards as the minimum standards are fixed for general appearance for No. 3 seed, by the weed seed content only. For this season two standards for No. 1 timothy seed are recognised, the regular No. 1 and No. 1 American Standard. Owing to the abnormal conditions which prevailed last season over the timothy seed producing area tributary to Chicago and the resulting low general quality of the seed, it was decided to recognise for this year No. 1 American Standard for seed that contains even a considerably larger proportion of hulled seed than the regular No. 1 grade allows, but which complies with the No. 1 standard in regard to freedom from inert matter and other impurities.

There has been this season a large increase in seed testing work, both for purity and germination. Up to date 3,830 samples have been received from seed merchants and farmers at the Ottawa seed laboratory, and in addition to these 1,350 samples have been received for germination test in connection with the seed supply investigation, making a total of 5,180 samples since September 1, 1911, compared with 2,349 for the same period last season, an increase of 83 p.c. At the Calgary seed laboratory the proportionate increase has been much greater. During January 2,001 samples were received, compared with 135 tested the same month last year and 1,281 received during the whole year ended March 31, 1911. The increase is almost entirely due to the seed supply investigation and the samples sent for germination test by farmers in the frosted areas. During January 1,421 samples were received at the Ottawa seed laboratory from



What Do You Feed Your Animals?

Have you seriously considered the question of returns for your good money spent buying Middlings, Bran, Cornmeal, etc., at the present high prices?

But, you say, what shall I feed to get good results? The answer is MOLASSINE MEAL. If you have not used MOLASSINE MEAL, you do not know of its good qualities. You have undoubtedly heard of it. Actual experience brings conviction. Buy some TO-DAY and see the result on your HORSES, CATTLE, PIGS, SHEEP and POULTRY.

MOLASSINE MEAL is made in England, of Pure Cane Molasses and the best that Mother Nature can produce in the way of a Vegetable Product which neturalizes the effect that Molasses, in its ordinary state has on the stomach of all Animals.

If your dealer cannot supply you, please write us and we will tell you how to obtain better results by feeding MOLASSINE MEAL.

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SAINT JOHN, New Brunswick.

The Perfect Floor Enamel

"Floorlustre" finishes a floor with a coating of the most durable enamel that won't show scratches.

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One gallon will cover 500 square feet. It is easily applied—will dry dust free in a few hours, and hardens over night. All colors for floors, porches, etc.

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BRANDRAM HENDERSON LIMITED
MONTREAL, HALIFAX, ST. JOHN, TORONTO, WINNIPEG.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in.

seed merchants and farmers and of these 478 were cereals mostly for germination test only. The samples graded under the Seed Control Act were as follows: Red Clover, Ex. No. 1, 1; No. 1, 41; No. 2, 97; No. 3, 95; rejected, 52; total, 286. Alsike No. 1, 14; No. 2, 46; No. 3, 83; rejected, 41; total 184. Timothy, No. 1, 46; No. 2, 77; No. 3, 85; rejected, 87; total, 295. Alfalfa, Ex. No. 1, 2; No. 1, 8; No. 2, 21 No. 3, 10; rejected, 2; total, 43. Less than seven per cent. of these samples were sent in by farmers. Quite a large proportion of the samples from seed merchants represent farmers' lots of uncleaned or poorly cleaned seed, and many of these that grade No. 3 or rejected may be re-cleaned sufficiently to grade higher.—Geo. H. Clark, Seed Commissioner.

Pasture For Hogs.

In regard to pasturing hogs, the extension lecturers of the experiment stations, state that the man who gets the best results from pasture is usually raising good hogs, selecting his pasture crops carefully, insisting on a good stand of grass, furnishing plenty of succulent juicy pasture throughout the summer, and feeding some grain to pigs from birth to market.

Under these conditions the cheapest pork produced is made on pasture. The pasture itself should be convenient to the permanent yards or house, and well prepared. A good small pasture is worth much more than a large one full of weeds. In some sections clover is probably the best pasture grass for hogs. Rye or rye and vetch make excellent spring pasture. Oats and field peas are good. White clover gives good results in many places. Field peas are an excellent crop for finishing off the hogs in late summer.

At no time should hogs have the entire run of a large pasture. One may confine them within movable or hurdle fences, giving them access to a part of the field at a time. Such fences are not expensive. They save much waste of grass, secure a larger growth of feed from the land and the hogs make more rapid gains.

It is important that some grain be fed pigs intended for the market It is usually cheaper to feed a little grain all the time than run the pigs on pasture alone during the summer and finish with grain in the fall. On pasture alone a hog gains very slowly. With but a little grain in addition he will do well. For satisfactory gains a hog should receive 2 pounds of grain daily for every 100 pounds live weight. However, if grain costs $30 per ton it may be more profitable to feed as little as 1 pound per day. Hogs need the best possible pasture. One must make the pig use as much grass as he can with profit, and feed as much grain as the price will permit. The gains made on pasture should cost from 10 to 20 per cent. less than under other conditions.

Carelessness is a prominent characteristic of almost every farmer, and accounts for many failures in this line of work.

Debts are carelessly contracted when there isn't a dollar in sight, and no prospect of any; then when pay day comes we are just as much poorer as the size of these debts.

Another careless and unnecessary trick is that of carrying money around the farm while at work. We are in such a variety of shapes and positions that we are liable to lose everything from our pockets.

MAXWELL'S

HIGH SPEED CHAMPION

Easiest running and most satisfactory washing machine made in Canada. Can be worked with side crank as well as top lever. Red Cypress Tub and the whole top opens up. Wash day is the easiest day of the week when you wash with the Maxwell "High Speed" Champion.

JEWEL FOOD CUTTER

is just what you need for your kitchen. So much easier, quicker and more convenient than cutting up meat, etc., with a knife.

"Jewel" is superior in every way to imported food choppers, and being made in Canada, costs less.

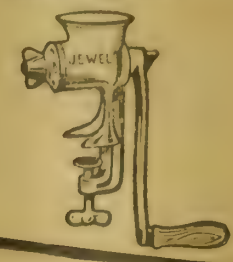
FAVORITE CHURN

makes the most delicious butter you ever tasted. It's [illegible] quality" butter—that real pleasure to eat.

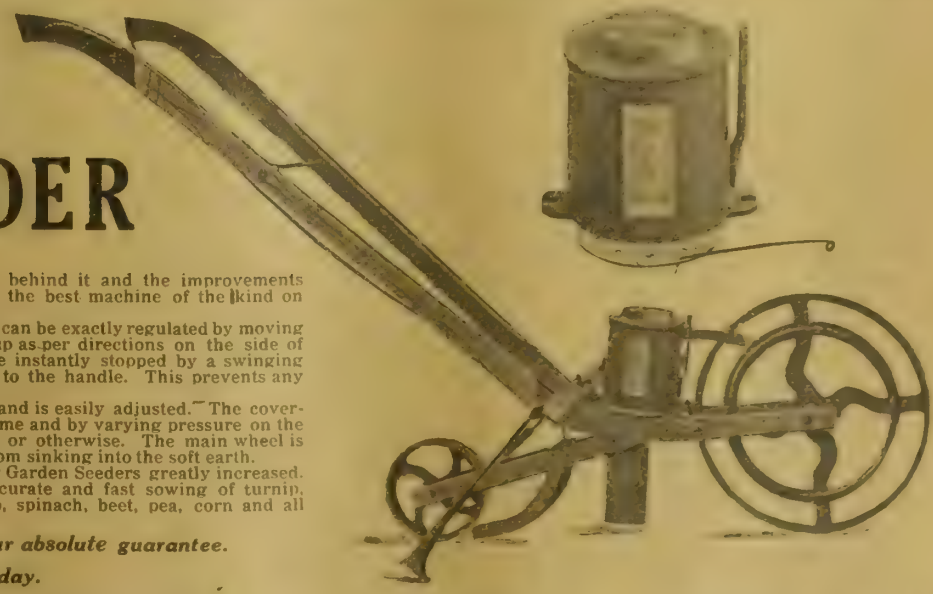
Both hand and foot power and roller bearings enable a child to churn with the "Favorite". All sizes from ½ to 10 gallons.

Write us for Catalogues, if your dealer does not handle these household necessities.

DAVID MAXWELL & SONS
ST. MARYS, Ont.



GARDEN SEEDER



Our Seeder has years of success behind it and the improvements recently added, makes it without doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. The flow of seed can be instantly stopped by a swinging cut-off operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. The covering wheel is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. The main wheel is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our Garden Seeders greatly increased. No better seeder can be built for accurate and fast sowing of turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn and all other kinds of garden seed.

Every machine carries our absolute guarantee.

Send us your orders today.

The Sussex Manufacturing Co. Limited, Sussex, N. B.

The Celebrated Hallock Weeder

Makes fine dust mulch, insuring quick and sure catch of the seed.

The Cultivator which will do work in wet or dry weather. By its use moisture is retained in the ground where needed. Cuts no roots, kills the weeds, cultivates close up to the row, and over the row. In fact, everywhere—where cultivation is needed.

The Best Weeder on the Market.

And last, but not least, does two or three times as much work as any other style of Cultivator in same or even less time.

There is only one rule to follow in the use of our Weeders--use them early and often. Don't give the weeds a chance to grow.

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One Cent a Word.

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POULTRY—All varieties Send for Catalogue. Box 485, Moncton, N. B.

FOR SALE—One Yearling Guernsey Bull, Apply to T. D. BLAIKIE, Great Village, N. S.

FOR SALE—Two Pure Bred Holstein Bull Calves. W. GARFIELD CAMPBELL, Salisbury, N. B.

FOR SALE OR EXCHANGE—Registered Yorkshire Boar 1 year old. also litter five weeks, Five dollars. A. E. L. FRITZE, Lunenburg, N.S.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

EGGS for hatching from Utilily Barred Plymouth Rocks—$1.00 per 15. JOSEPH HORSFALL, Annapolis Royal, N. S.

FOR SALE—Standard Size Strawberry boxes for sale $3.50 per 1000 F. O. B. Hilden Station or Truro. C. H. CLARK, Hilden, N. S

FOR SALE AT A BARGAIN—A Farm of 102 acres. Full particulars given on application to C. W. PHINNEY, Bear River, Annapolis Co., Nova Scotia.

PIGS FOR SALE:—Berkshires, Yorkshires, Chester, Pure bred and Crosses. PETER BRODIE, York, Prince Edward Island.

FOR SALE or exchange for boar, one registered Chester White boar sixteen months old. Apply NORMAN ZWICKER, P. O. box 114, Mahone, N. S.

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WANTED—LADIES TO DO PLAIN AND light sewing at home, whole or spare time; good pay; work sent any distance, charges prepaid; send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

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150 Strawberry plants (assorted) or 24 Raspberry plants (assorted) postpaid for $1.00.

Bees and Bee-keepers' Supplies
PRICE LIST FREE
E. L. COLPITTS, Petitcodiac, N. B.

British Columbia Farm Lands

Live in a mild warm climate. The Fraser Valley of British Columbia, near the big city of Vancouver. Grass keeps green all winter; fine class of farmers. Residents have running water, bathrooms, and telephones in their houses Splendid high schools and churches. Fast electric tram service into Vancouver. Railroad station only a quarter of a mile away; splendid driving roads. Farmers with 5 acres make from $1500 to $3000 a year clear profit on berries, poultry and small fruits. I can sell you a 5 acre farm for from $50 to $200 down, the balance $10 to $20 a month. If you want to know just how they make big money there write me.

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Orpingtons,
In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

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Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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Several Heifer Calves and Yearlings for sale. Call and see them and their mothers. Stables near the station, long distance phone.
I am also offering my Stock Bull for sale at a low figure. He is 4 years old and easily handled. Bred from a record of performance cow.
E. ALLAN SCHOFIELD, Allandale Farm
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We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.
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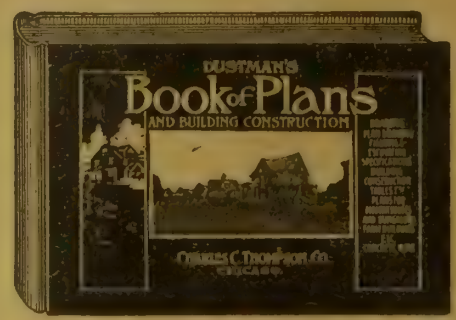

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THE MARITIME FARMER,

ST. JOHN, - N. B.

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Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
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J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

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W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

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Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

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Size	Price doz	Fifty Tags
Cattle	75c	$2.00
Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

F. G. JAMES, Bowmanville, Ont.

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at reduced prices after May 1st. Brown Leghorns, $1.00 per 15 eggs. Single and Rose Comb R. I. Reds, $1.25 per 15 eggs. Guaranteed 80 p.c. fertile.

W. H. HENRY,
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Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

Eggs For Hatching.

Three pens mated up for spring trade. Columbian Wyandottes; S. C. Rhode Island Reds; Barred P. Rocks, Mammoth Pekin Ducks. Write for prices.

Stock for sale after June 1st.

BROOKSIDE POULTRY YARDS,
Westfield Centre, Kings Co., N. B.

SEA VIEW STOCK FARM
Buctouche, N. S

Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 16 months old.
2 Holstein bulls 7 months old.
1 Holstein Heifer 7 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

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A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, including the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

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Offers 10 Young Holstein Cows at rock bottom prices to make room for young stock. Also one Berkshire Boar, ready for service.

Logan Bros. Amherst, N.S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop
Shubenacadie, N. S.

Grey African Geese, Turkeys "The Big Kind"

After May 1st, a few settings $3.00 for six, just the number to sit under a hen. Mammoth Bronze Turkeys. a few settings $3.00 for 11. No blackheads among this flock. No decease. $1.50 setting my best reds, $1.00 setting utility stock. If your order is placed with me you will get eggs from the same birds I breed from myself or your money back. "Try the Red-bird for happiness."
SARAH E. MOSES SMITH, Woodwards Co. N.B.

Reduced Prices for Balance of Season

on Strawberry and Raspberry plants, also half price on Utility Barred Plymouth Rock and Fancy Columbian Wyandotte Eggs for hatching.

Orchard Hill Farm,
Brown's Flats,

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting. all orders booked ahead and shipped in rotation.

EGBERT DEYOUNG,
Box 120 Dartmouth, N. S.

Eggs For Hatching.

More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in comptition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

Craig Bros., Amherst, N S.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

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Why leave money on deposit in the bank at 3 per cent when you can get half as much more by buying municipal bonds with it? We can sell you town bonds of New Glasgow, Dartmouth or any one of a dozen towns in the Maritime Provinces, to yield 4 1-2 p.c. or better. Send for particulars as to how to make your savings earn more.

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GLEN VIEW POULTRY YARDS.

Barred Plymouth Rocks, White Wyandottes.
S. C. Rhode Island Reds, S. C. Brown Leghorns.

Eggs from all Pens $2.00 per 15.

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Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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Riverside Holsteins For Sale

Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

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Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

COBEQUID FARM HOLSTEINS

We offer for quick sale, several bulls fit for service from cows with Record of performance tests of 12,715,75 lbs. of milk testing about 3.7 p.c. at 2 years 2 months, another with 13,283.5 lbs. milk and 512.67 lbs. butter when 2 years old and another with 18,482.75 lbs. milk and 753.3 lbs. butter in 1 year at maturity. These bulls are in good condition, well grown and straight. For particulars write.

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Litters Dating from February 15th and After.

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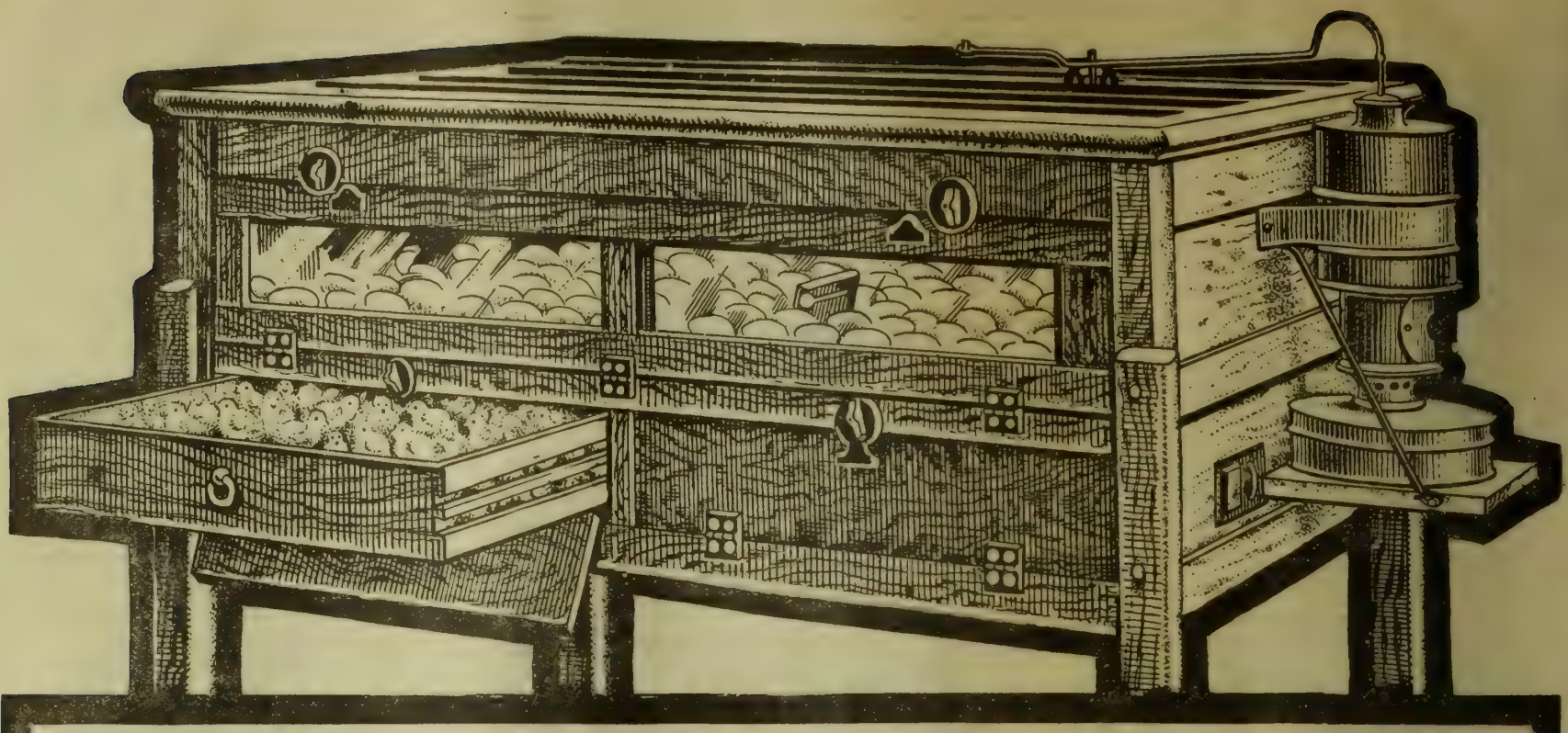
Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age. One Guernsey bull calf.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

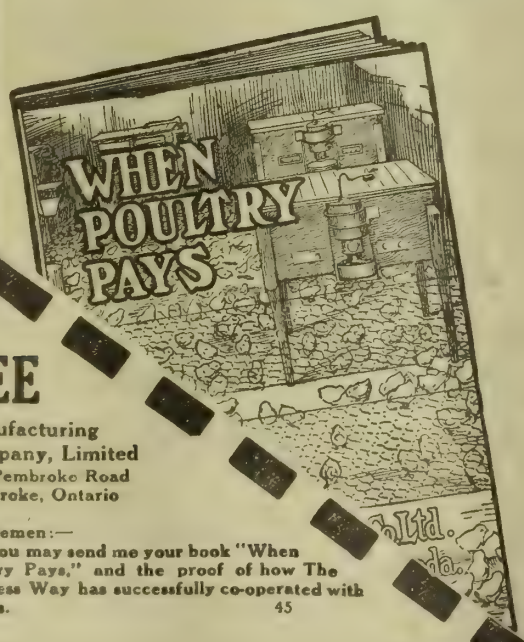


THE PEERLESS INCUBATOR AND THE PEERLESS WAY HAVE DOUBLED THE PROFITS OF 20,846 POULTRYMEN

ANY farmer can raise "poultry-for-profit" on the same plan and under the same conditions as we do it at the Poultry Yards of Canada, Limited, and make just as big a success as we have made of this, the largest and most profitable poultry farm in the Dominion. You can do it. You can put to work for you The Peerless Way and the Peerless Incubator and double or treble your profits right from your first month. Over 20,846 Canadian poultrymen have proven this. By following our system, they are making their poultry pay them greater profits than they ever dreamed were in the business.

THE book, "When Poultry Pays," tells what hundreds of followers of The Peerless Way have accomplished. It tells why the price of eggs doubled in seven years; it tells about a market that exceeds the supply by 200%—a market you can help supply at constantly rising prices; it tells about a plan that is more than merely a system of poultry raising—a plan that raises poultry **at a profit;** it tells about co-operative marketing—how the highest prices are secured in either large or small quantities; and, by no means least, it tells you exactly how to get started in this field of profits that lies right at your door.

Send For This Book— FREE For The Coupon



Remember, we will not send you this book unless you ask for it. "When Poultry Pays," illustrated throughout, has cost a good deal of money to produce and you will have to signify by asking that you are interested. Do not send for it with the idea that it offers any "get-rich-quick" plan, however; but if you have just a little money, a fair amount of horse-sense and a willingness to follow the advice of experts and look after your business, you can double your profits from the start. Indeed, if you will work just a little harder, you can treble them. If you want the book

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Manufacturing
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118 Pembroke Road
Pembroke, Ontario

Gentlemen:—
You may send me your book "When Poultry Pays," and the proof of how The Peerless Way has successfully co-operated with others. 45

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We Will Show You How To Raise At A Profit.

THE Peerless Way, more than merely a system for raising poultry, will show you how to raise at a profit. Our Poultry Advisory Board sees to it that no followers of our methods ever fail. They give advice, counsel and detailed instructions in every step—from starting to marketing. Our 20,846 successful followers can testify to this—and many of them do so in our book.

We Will Show You How To Get Better Prices.

THIS alone is a valuable part of the service included in The Peerless Way. We guarantee to find, for all your poultry products, buyers who will pay you the highest spot-cash prices and who will charge you no commission for the service either. You do not need to be dependent upon the middleman and cold-storage buyer when you understand co-operative marketing. You do not need to give away part of your profits; the last few cents on every deal is your own "velvet"—and goes into your own bank-account.

We Will Show You The Best Way to Start

YOUR start is important; without experience or guidance, you can badly handicap yourself in the beginning. It may take years to overcome a bad start. The Peerless Way will put your first step on the right road to success, will show you the incubator and brooder that meets the climatic conditions of Canada's cold winters, and will furnish you with plans, blue-prints and complete specifications of poultry houses, etc.; that are actually being successfully used today in Pembroke at the Poultry Yards of Canada, Limited.

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THE Peerless Way, combined with the free, personal advice of our Poultry Advisory Board, will make poultry raising profitable for you. If you will take the Peerless Incubator and Brooder and just follow the plain, explicit directions of The Peerless Way, step by step, you cannot go astray. Or if you prefer it, you can come to Pembroke and, on payment of a small tuition fee, take a course of personal instruction at the Poultry Yards of Canada, Limited. But don't think you have to do that to make a success—for you don't.

Consult Our Poultry Advisory Board.

GET a Peerless Incubator and follow the instructions of our Poultry Advisory Board as outlined in The Peerless Way. Or, in special cases, consult them by mail free. You can't fail to increase your profits. If you are interested in greater profits from poultry, send for our book—NOW.

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UNIVERSITY OF ILLINOIS

PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

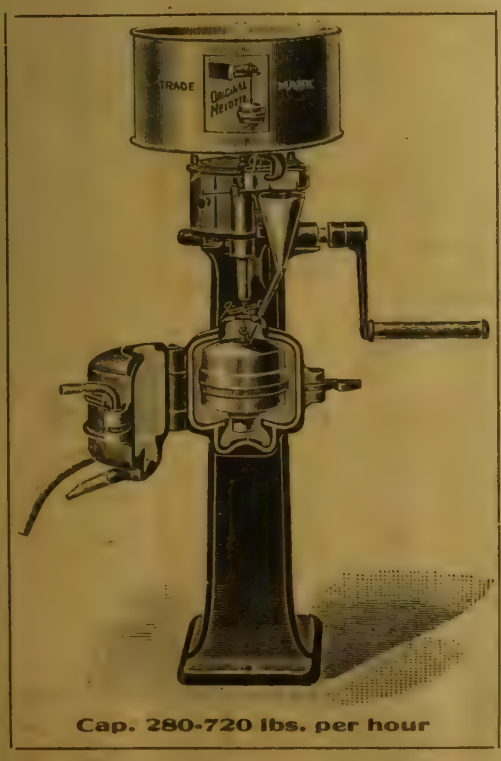
Vol. 17. ST. JOHN, N. B., JUNE 11, 1912 No. 17

25 YEARS' USE

In the Dairies of Half a Million Customers
Demonstrates that

THE MELOTTE

is the MOST EFFICIENT, SERVICEABLE and PROFITABLE
CREAM SEPARATOR ever constructed



Cap. 280-720 lbs. per hour

The "Melotte" pays its original cost within 12 months from date of purchase in EXTRA CREAM alone and there is NO COST for repairs.

The "Melotte" skims more milk with LESS POWER in LESS TIME, and, under all conditions MORE EFFECTIVELY than other Cream Separators.

"MELOTTES" are ALWAYS READY to separate. Ask your neighbor to prove this statement.

If you want a Cream Separator, TRY A MELOTTE, then you'll buy it and be a SATISFIED USER.

It's a Time-Saver, Money-Earner, Satisfaction-Giver, all the year round

MELOTTES are all GUARANTEED to give entire satisfaction, and every machine can be operated before being purchased when in doubt.

Write for New Recommendation Booklet which is All Truth

Address "Sales Manager"

Cap.400-1300 lbs.per hour

R. A. LISTER & COMPANY, LIMITED,
82 Water St., ST. JOHN, N. B., or 62 Stewart St., TORONTO

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

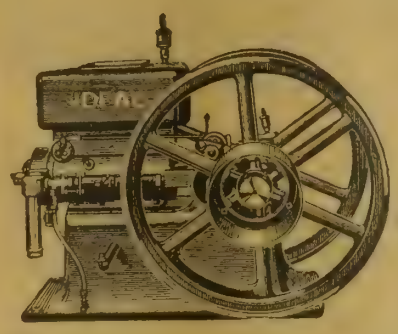
Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
HALIFAX, N. S.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



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We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
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Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

First in 1880 — **The Keeley Cure** — Foremost Ever Since

DRUNKENNESS

Is a Disease---And We Can Cure It

Most men who drink to excess do so because they cannot help it; they are controlled by a craving which is practically irresistable. This is a diseased condition but can be, and is, promptly relieved.

How? By taking the **Keeley Treatment** at a **Keeley Institute,** the only place to get it and the only treatment which cures alcoholic and drug inebriety.

The **"Keeley Cure"** removes the craving for liquor and drugs and leaves the man master of himself. The system is rational, it embodies no suffering or sickness, no absurd or preposterous claims are made; the hypodermic method of treatment is constantly used, which according to all reputable physicians, is safe, painless, prompt and efficient.

The **"Keeley Cure"** does not nauseate a patient and no attempt is made to cure inebriates by creating a disgust for liquor. A treatment depending on nauseants or emetics for a cure can never be anything but a failure because the patient will soon learn that it is not the liquor which nauseates him but that he has been made the victim of a trick; the diseased condition not being relieved the patient naturally goes back to liquor.

The diseased conditions produced by from five to thirty years constant or periodical use of liquor cannot be cured by a few days of nausea and emesis. Such methods are irrational, brutal, and sometimes permanently injurious.

The **"Keeley Cure"** has restored over 400,000 men and women who were addicted to liquor and drugs; it is the pioneer in this work and has many imitators, but no rival or competitors as far as results are concerned.

If you have need to take treatment for the Liquor or Drug addiction, investigate **The Keeley Cure** a treatment that is known the world around, and which is recognised by the public and the medical profession as the only successful treatment for these addictions. Look up some of our former patients, whom you will find in every community. They are healthy, happy and prosperous; many of them will tell you that they would not be living today if it had not been for the **Keeley Treatment.**

We have special accomodation for ladies, where they can be entirely exclusive, and can be treated as privately as in their homes.

Printed matter and particulars by mail in sealed plain envelope.

All letters promptly answered and treated as strictly confidential.

THE

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T. B. MORRISSEY, M. D., Manager.

151 Congress St., Portland, Me. - Munjoy Hill.
The Nearest Institute to the Maritime Provinces.

This Year Own These Haying Helpers

Decide that you'll no longer labor under a handicap at haying time. Secure the services of these **Frost & Wood Haying Helpers—Giant 8 Mower and Tiger Auto Dump Rake.** For twenty years and more these efficient haying implements have saved time, money, labor and horseflesh for thousands of progressive Canadian Farmers. Think of the next score or more haying seasons.

Frost & Wood Giant 8 Mower Tiger Rake

The Frost & Wood Giant 8 Mower is not merely a "fair-weather" machine. It's right there with the power and cutting ability when other mowers are apt to fall down. Put it to work in a heavy or tangled crop and watch how easily it handles the job. You can start it anywhere in the field and the knives will begin cutting the instant the horses move forward. "Flying starts" are not necessary.

The Giant 8 has great driving power because of the simple and compact arrangement of the gears. Smooth-running and light draft are assured by a plentiful supply of large roller bearings. The cutter bar is protected against wear by steel plates. Large bearings—not pins—are used for the connection between cutter bar and main frame.

At every point, in its construction, is put the skill and knowledge gained in over 70 years' experience in building farm machinery to meet Canadian conditions.

The Tiger Automatic Dump Rake is the best sulky rake made. It has given satisfaction for many haying seasons. The teeth are shaped to do the most efficient work. They are made of a special grade of steel, that has proven by test, the best adapted to withstand heavy work and severe usage.

Strongly constructed throughout, is the **Tiger Automatic Dump Rake.** It is a rake that will pay you large dividends of satisfaction at haying time. When you require anything in the way of farm equipment remember our agents can supply your wants. We have catalogs describing and illustrating the different lines; they are cheerfully mailed free for asking. Let us send you one to-day.

Frost & Wood Company, Limited, St. John, N. B. 81

SMITH'S FALLS MONTREAL

Sold In Western Ontario and Western Canada by

Cockshutt Plow Company, Limited, Brantford, Winnipeg

"Branches and distributing warehouses in all the larger centres."

"Ask our local agent, or nearest Office for further particulars."

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

The E. B. EDDY COMPANY, Limited,

HULL, CANADA.

Makers also of Wooden Pails, Tubs, etc.

The Currie Collar

This collar is put up in all grades and styles including heavy draft, express and light driving. The best Patent Leather and Kay collars made to order. You will always find them satisfactory in every particular. Try one of them and be convinced that they are the best collar ever put on the market.

Make enquiries from your dealer for them, if he does not stock them, send to

R. J. CURRIE, 100 Brussels Street, St. John, N. B.

SPECIALIST IN THE MANUFACTURE OF HORSE COLLARS

'Phone Main 1730-11. *Harness Making and Repairing.*

DE LAVAL
CREAM SEPARATORS

Their Great Simplicity

DE LAVAL CREAM SEPARATORS EXCEL ALL OTHER separators not only in thoroughness of separation, sanitary cleanliness, ease of running and durability--but as well in their great simplicity.

THERE IS NOTHING ABOUT THE operation, cleaning, adjustment or repair of a modern De Laval Cream Separator which requires expert knowledge or special tools.

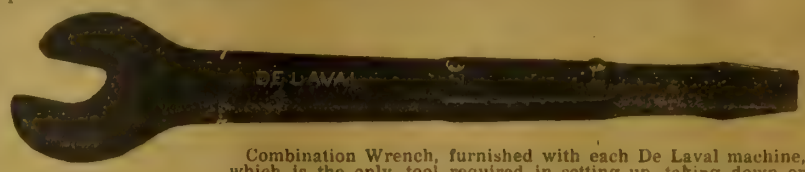
NOR ARE THERE ANY PARTS which require frequent adjustment in order to maintain good running, in order to conform to varying conditions in the every-day use of a cream separator.

THERE IS NO NEED TO FIT and adjust parts to get them together right. They are so carefully and accurately made that they cannot help go together right. All bearings and bushings are easy to replace. There are no complicated springs, keys, ball bearings or other fittings, that only an expert can properly adjust.

IN FACT, SO SIMPLE IS THE CONSTRUCTION OF A DE LAVAL machine that a person who has never touched a separator before can, if need be, take a modern De Laval machine completely apart within a few minutes and then put it together again as quickly. This is something which cannot be done outside a shop with any other separator.

THERE IS NOTHING ABOUT THE MACHINE THAT cannot be taken apart, removed or replaced by any one who can use a wrench or screw driver, In fact, the only tool which isneeded in the use and operation of a De Laval Cream Separator is the combination wrench and screw driver illustrated below.

THE ONLY WAY TO PROPERLY UNDERSTAND and appreciate De Laval superiority to other separators, is to look over, and better still to try, a 1912 De Laval machine. Every De Laval agent is glad to afford prospective buyers the opportunity to see and try a De Laval Separator.



Combination Wrench, furnished with each De Laval machine, which is the only tool required in setting up, taking down or using the De Laval, the most simple cream separator ever built.

Complete gearing of the De Laval Separator as it would appear if removed intact from the frame of the machine. Note the remarkable simplicity of construction.

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DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.

Makes Pigs "Stay Put"

The hog never grunted that could get the better of a Maritime Wire Fence. For this springy, taut, vastly strong fence, made of extra-quality hard-drawn coil-spring STEEL wire, has its verticals and cross wires locked together with the death-grip lock that CAN'T loosen or slip under any strain whatever. Your cattle and swine will stay where you put them if you fence with this BETTER fence. Once properly erected, Maritime Wire Fence stays taut, straight, sagless and sightly. It is good for twice the fence service ordinary fence can give. Yet it costs no more

MARITIME WIRE FENCE

Save Yourself Worry and Money

Bid fence worries good-bye, and save money, too, by getting the right fence in the first place. You won't have to be patching your fences every spring if you fence with Maritime Wire Fence. It STAYS put too. Made and sold on honor. Send for the Fence Book and Price Lists. Do this now.

It would pay you to be our agent. Send for new 1911 offer. 12

New Brunswick Wire Fence Co., Ltd. Moncton, N. B.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. ST. JOHN, NEW BRUNSWICK, JUNE 11, 1912. Number 17.

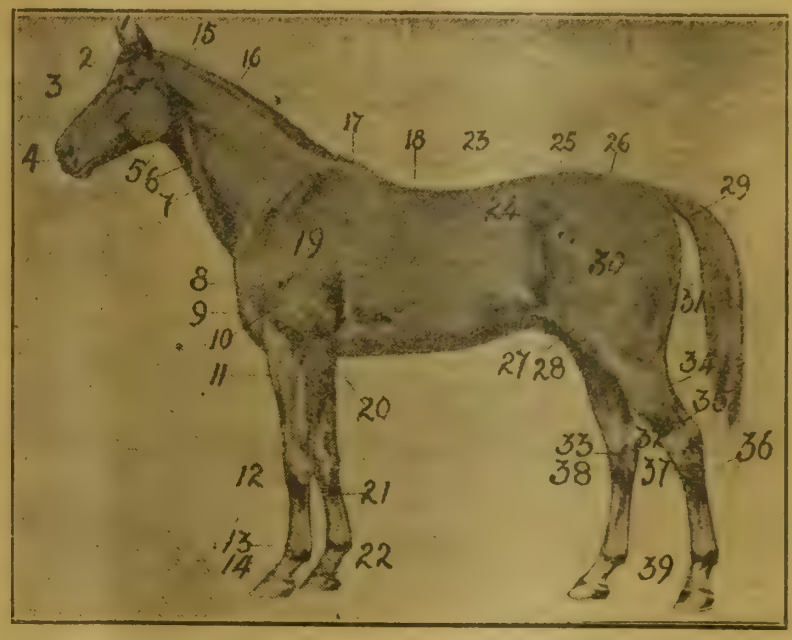
Avoid Objectionable, Detrimental Unsoundnesses.

Hereditary Unsound Mares and Stallions Leave Their Legacy---A Crippled Progeny.

By A. S. Alexander, V. S., Madison, Wisconsin.

THE professional veterinarian when examining a horse for soundness proceeds on the basis of a "negative" test. He looks in turn for one of a number of possible unsoundnesses each at its particular location. Not finding an unsoundness present he accounts the part sound. If all parts are found to be sound, the animal is certified to as "sound." There is no such condition as "serviceably sound." A horse is either "sound," or "unsound." He may be too unsound to work, or able to work despite unsoundness. The seriousness of the particular unsoundness present is to be estimated by the judge and for that intimate knowledge and experience are necessary. ...

For breeding purposes any disease is serious. A disease considered hereditary is most serious. A distortion, deformity or blemish, due to accident, is not serious on the scoré of transmissibility, but depreciates sale value. In work horses the degree to which a disease or unsoundness is temporary or permanent and likely to detract from serviceability for work, must be carefully considered. A horse may be afflicted with strangles ("distemper") and recover perfectly; or the attack may pass off, but leave the animal a "roarer." The attack of strangles would constitute a temporary unsoundness; the 'roaring" a permanent and serious unsoundness in a work animal. In a breeding animal it should constitute an unsoundness unfitting the horse for breeding purposes. A large barb wire cut scar would ordinarily be considered a "blemish" or "eye sore;" but should it have caused permanent lameness it would be a serious unsoundness in a work animal. In a breeding animal, not used for work, the blemish and even the lameness, would be of slight gravity, not being transmissible to progeny.



Key To Chart of Horse.

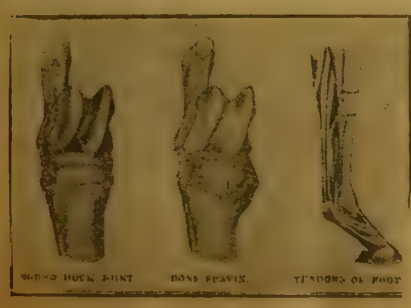
1. Poll. Seat of "poll evil"; 2, Forehead; 3, Face; 4, Muzzle; 5, Throat-latch; 6, Windpipe; 7, Jugular groove; 8, Point of shoulder; 9, Chest; 10, Arm, from shoulder point to elbow; 11, Forearm; 12, Knee; 13, Fetlock; 14, Pastern; 15, Neck; 16, Crest; 17, Withers; 18, Back; 19, Shoulder; 20, Elbow; 21, Seat of splint; 22, Seat of side-bone. Quarter-crack indicated below: 23, Loins; 24, Coupling; 25, Hip; 26, Croup; 27, Flank; 28, Stifle; 29, Hip Joint; 30, Thigh; 31, Quarter; 32, Point of hock; 33, Hock joint; 34, Gaskin or lower thigh; 35, Seat of thoro' pin; 36, Seat of curb; 37, Seat of bog spavin; 38, Bone spavin; 39, Seat of ringbone.

COMMON UNSOUNDNESS TO BE NOTED.

Having learned how to judge the various parts of the horse's exterior, as regards correctness of form, the student should next acquire a fair degree of skill in detecting the more common and serious unsoundnesses. The instructor should describe and show the location of each and, when possible, demonstrate from affected animals. The diseases and unsoundnesses should, as follows, be studied according to each part involved:

HEAD. "Poll evil" is an enlargement of the poll, just back of the ears, containing or discharging pus due to bruise; not hereditary; a serious unsoundness; often difficult to cure; recovered case may leave neck permanently stiff. Look for scars.

EYES. Should be large, bright, mild in appearance, sound, not staring and bulging as in palsy of the sight (amaurosis) each of the same color, lids free from wrinkles, discharge of tears over face is objectionable. Test eyes by gently threatening to strike them with hand. Horse should flinch under this test; pupils of eyes should be eliptical in form, not spherical and should contract when exposed to the light on coming from a dark stable. Cloudiness or opacity denote "moon blindness" (periodic ophthalmia) or cataract. Specks may be due to injuries; unimportant if the sight is not impaired thereby.



EARS. Excessive mobility may indicate impaired vision, viciousness, or nervousness; lack of mobility may indicate deafness, or tetanus (lock jaw). Base of ear sometimes seat of troublesome discharging fistula.

MUZZLE. Nostrils should be free from discharge of chronic catarrh or glanders. Sometimes plugged with sponge to hide "roaring." Lining membrane should be healthy pink in color; free from ulcers, or purple spots or bad smelling discharge. Lips not torn; free from chronic sores from bit at angle of mouth.

TEETH. Examine for diseased, missing or projecting molars; overlapping incisors ("parrot mouth"); "bishopping" (artificial marking of the incisor to alter indications of age) and under-shot jaw.

TONGUE. See that the tongue is intact and healthy. Part of it may be missing, or mutilations present. See that floor of mouth is sound where bit rests.

UNDER JAW. Look for discharging, or plugged fistula of salivary duct or one connecting with a molar tooth root; abscesses and tumors.

NECK. Broken crest in stallions; sores; skin disease; watch for artificially "braided in" mane.

WITHERS. Fistula of the withers, acute, chronic or healed; collar sores.

SHOULDER. Collar boils; fibroid tumors from bruising; "sweeney;" fistula or abscess.

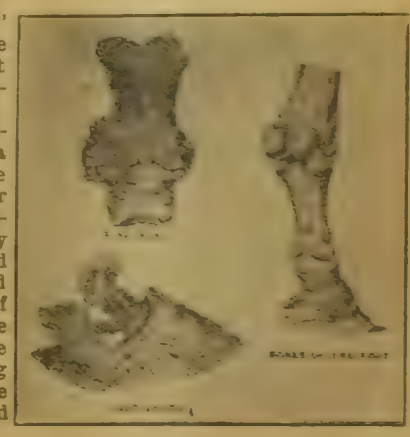
ELBOW "Shoe boil," from bruising of point of elbow.

KNEE. scars from "broken knee," due to falling; puffs; "buck knee" (bent forward); "calf knee" (bent backward); capped knee. When splints are close up to the knee, they are liable to cause lameness and are to be considered dangerous and objectionable.

CANNONS. Splints are abnormal bony growths formed at the sides of the cannon bones where the small splint bones (metacarpals in front, metatarsals in hind leg) overlie the large cannon bones. They are objectionable, may cause lameness when forming, are often an indication of light bone, but ordinarily should not be deemed to constitute hereditary unsoundness. If found on all legs, of large size and associated with other bony growths (exostoses) they may indicate a hereditary tendency to such bony growths (bony diathesis) and the animal should be rejected for breeding purposes. Examine back tendons for thickening or "bowed" condition. In examining horses having hairy legs search for evidences of grease and grease heel, such as old scars, fissures, grape-like growths or discharge having bad odor; also for "scratches."

FETLOCKS. Seat of puffs (wind galls), interfering sores; "knuckling" or "cocked" ankles; grease, grease heel and scratches. Examine on, just above or below for scars of "unnerving" (neurotomy).

PASTERNS. Seat of ringbones, deposits of superflous, granular bone, a serious hereditary unsoundness. These bony growths are found on the upper middle or lower portions of the pastern bones, may partially or wholly encircle the bone, and in aggravated cases, cause lameness and involve and interfere with the proper action of the fetlock joint above, or with the coffin joint at the lower end of the pastern bone. They give a bulging appearance to the part of the bone affected, have the feel of bone and



Good Type of Draft Horse Pasterns.
"Moderately Sloping."

constitute unsoundness. In work horses ringbone involving a fore pastern is much more serious than ringbone on the hind pastern.

CORONETS. (hoof heads). Sidebones are located under the skin of are due to the lateral cartilages at these parts changing to bone. When present they may be detected as prominent, hard, bony masses protruding above the hoof at the sides of the feet towards the heels and bulging the hoof under the part involved. When sidebones are absent the cartilages can be grasped between the fingers and thumb and moved or bent from side to side as if they were formed of stout rubber. Sidebones are common in draft horses and constitute unsoundness. Horses having wide, flat low heeled hoofs are most subject to this unsoundness. Horses affected with sidebones and ringbones should not be used for breeding purposes. "Quittor," a fistulous abscess, is also a common unsoundness of the coronet.

FEET. "Navicular disease" causes hardening and contraction of the hoof and chronic lameness. The affected horse "points" his lame foot forward when standing at rest, starts off lame and "warms out of" the lameness. The tendency to the disease is deemed hereditary. It constitutes a grave unsoundness for all purposes. Other common unsoundnesses to be looked for are "founder," indicated by rings and ridges on the hoof wall, abnormal projection at the toe, convexity at the sole ("dropped sole") and lameness; sand crack (in wall at front of toe); quarter crack (in wall at quarter); corns, in the sole at the angle of bar and heel; and "thrush,"

Sound, "Open" Hoof, Showing Wide Heels, Prominent Frog and Strong "Bars."

a diseased condition of the frog characterized by a bad smelling discharge from its cleft.

HIPS. Examine for fractures of the point or shaft of the hip (ilium) indicated by distortion, on comparing one hip with the other from the rear also examine for similar distortion on haunch at side of tail (from fracture of the tuberosity of the ischium).

TAIL. The black skin of the under side of the tail and nearby parts often is the seat of cancerous, malanotic or "pigment" tumors in aging white or grey horses. The disease is incurable and constitutes unsoundness in both work and breeding horses. Examine end of tail for diseased or unhealed conditions due to docking and see that the tail is not artificial and "joined on."

STIFLE. Should be free from dropsical swellings and the knee cap (patella) should remain firmly in place during motion.

HOCKS. These important joints should be free from "bone spavin," "bog spavin," "thoroughpin" and curb." Each constitutes an unsoundness in both work and breeding animals; tendency to them is considered hereditary. Bone spavin is a bony growth upon the surface or among the small bones, on the inner, lower part of the hock joint, or may involve the true joint higher up. A bony growth appearing upon the outer part of the joint is called a "jarde." In spavin lameness the horse starts out lame and improves or recovers with exercise. Bog, or so-

xA Prominent Sidebone.

called "blood" spavins, are soft, fluctuating distensions of the capsular ligaments (synovial or joint oil sacs) of the hock joints, and give a bulging appearance to the front of the part involved. Curb appears as a bulging, calloused enlargement upon the rear portion of the hind leg, just under the hock joint, involving the tendons and ligaments and sometimes the bone of the part. Crooked or sickle hocks are most prone to curb which follows undue strain when at play or work. Actual unsoundness, implicating the hock joint and objectionable conformation, rendering the joint liable to contract disease or become unsound, should be carefully avoided in the selection of breeding stock and work animals.

OTHER UNSOUNDNESSES.

CHOREA, SHIVERING, OR ST. VITUS' CANCE is considered a hereditary disease and also constitutes unsoundness in work horses. It is commonest in nervous, tall, narrow animals. The disease is most readily detected when moving the horse from one side to the other, or in backing out of the stall. The leg is jerked up once or twice at these times and the tail and muscles quiver momentarily. The symptoms disappear when the horse is exercised. "Stringhalt (akin to chorea) is the term applied to the exaggerated jerking up action of the hind leg seen in some horses. The trouble in some instances is remediable by operation (peroneal tenotomy).

ROARING. (laryngeal hemiplegia) is characteriled by noisy breathing when the horse is exercised. It constitutes unsoundness in both work

xxSplints.
Bad "quarter crack" on right foot.

and breeding horses.

HEAVES. (emphysema of the lungs), is indicated by double bellows like action of the abdominal muscles as the horse breaths; cough also is present. Like roaring it is an unsoundness of the breeding animal and work horse.

VICES. such as cribbing, windsucking and weaving are best discovered when the horse is in the stall although not certainly hereditary are highly objectionable and detrimental unsoundnesses.

The Use of Cement and Steel in Modern Farm Building Construction.

Editor Maritime Farmer.

The farmer, like his city brother, is, at the present time, taking advantage of every modern method, or material to construct his buildings along the latest lines and I feel it is a duty for some one who understands the use of these methods and materials to explain this through the agricultural papers. I know there are many who are more competent than I, to do this, but none seem anxious for the work, so I will do the best I can and ask the readers to overlook the many literary mistakes which will occur.

The most important of all the many materials are concrete and steel and of those two I wish to write at present, taking up the use of concrete first as it forms the foundations and floors, and steel later is a covering for walls and roofs.

Prominent Ringbone on Pastern.

Unsound Hock Joint Showing Large Curb.

Crooked or "Sickle" Hock.

Unsound Hock Joint Showing Bog Spavin, Etc.

Unsound Knees.

Unsound, Crooked Fore Legs.

"Wind-Galls" and Thickened Back Tendons.

Unsound "Cocked Ankles" Causing "Knuckling."

MATERIALS FOR CONCRETE.

Before commencing the actual mixing of the concrete it is necessary to give a short discussion on what concrete is and so impress some important facts on those about to engage in this work.

Cement is a product having a value from its ability to adhere to the various materials used in masonry construction.

If water is added to this powder like substance it takes a plastic form and will remain so for about half-an-hour, when it begins to set or harden.

Now, the cement or concrete loses much of its strength if it is disturbed after this setting process has commenced, and if this has far advanced it will totally destroy the concrete to disturb it.

This brings to mind the important facts that cement concrete must be placed in position within twenty or thirty minutes from the time it is first wet.

Another very important point is the protection of the work from the hot sun for five or six days after it has been placed.

Frost will also prevent green concrete from setting, but if no weight is placed upon the work and the mixture is not allowed to freeze until dumped into the forms, no bad effects will follow as the complete setting will take place as soon as the frost is thawed out.

Cement can be bought in wooden barrels, cloth sacks, and paper sacks.

The first named form of selling it is too bulky for the farmer's use and is difficult to measure for batches.

The cloth sack is about the best way for the farmer to buy cement as he can open the bags carefully and pack them up nicely and return the empty sacks to his dealer when he gets a rebate of 10 cents each for the sacks thus lowering the price to the same as that charged for the wooden barrel, while the advantage of having it in small, and easily handled sacks is quite an item.

The paper sack is also a good way to buy cement if it will not require much handling. Loading and unloading many times is sure to tear a considerable number of the sacks with a consequent loss to the consumer.

The best place for the farmer to buy cement is from his nearest local dealer as the amount he is usually buying is small and could not be shipped by the manufacturer.

When the cement is brought home to the farm it must be stored in a dry building where no moisture can get at it, as even moisture from the air is quickly absorbed by it.

This causes it to become lumpy, and in some cases a solid mass. When in this condition it has lost much of its strength and should not be used even if it can be easily broken up. It is always best to lay the bags of cement on a plank or board floor raised by means of sleepers or blocks, a few inches above the ground to avoid dampness being drawn by the lower row of bags.

The materials to be used in the mixture should be selected with considerable care, particularly the sand which should be coarse, clean and free from loam or clay and weeds.

Stone or gravel which forms the largest part of the aggregation must be clean and free from weeds or grass. Other materials such as cinders, coke and broken bricks are used to replace the gravel or stone but for an ideal mixture nothing equals sand and crushed rock.

The size of the rock or pebbles in large foundations may be as much as 2½ in diameter.

Thin walls and reinforced concrete work will require rock or pebbles 1,¼" in diameter, and finishing coats of very hard concrete takes ¼" of stuff.

The water used in mixing should be clean and free from all acids.

Sometimes the farmer may have a gravel pit containing sand and gravel of about the right proportions for good concrete work. In order to make certain of the proportions being correct, it is best to screen some of the natural mixture and find just what proportion of sand there is to gravel as generally the former is in too great proportions and care should be exercised in the selection of this material. A nother thing to guard against is the uneven running of the mixture throughout the bank.—A.A.G.

Spotswood Daisy Pearl 17696 ADV. R. 790.

The Premier Cow of the Guernsey Breed.

Year's record as a four-year-old 11570.71 lbs. milk; 572.67 lbs. butter fat; made while owned by J. A. Beidler, Willoughby, O. Year's record as a seven-year-old, 18602.80 lbs. milk; 967.38 lbs. butter fat, made at Anna Dean Farm. Barberton, Ohio. Bred by Edward F. Price, Broad Axe, Pa. Owned by O. C. Barber. Cut by Courtesy Guernsey Breeders' Journal.

Who Can Beat This Record ?

Editor Maritime Farmer:—

An Ayrshire heifer by the celebrated bdll 'Peter Pan" had her first calf as a two year old, on the 5th. of Sept. last. She is now three years past, is due to freshen again on the 20th. of August, and is today giving just 25½ lbs. milk in the 24 hours. If any of your readers has an Ayrshire or Holstein that is doing as well under similar conditions I would wish to hear from them.—Prescott Blanchard, Truro, N. S.

Varieties of Farm Crops Compared.

According to tests of the best varieties of farm crops, carried on at the Central and Branch Farms of the Dominion Experimental Farms system, some sorts of each class are much suuerior to others that by some are considered good. As a guide to the crop growers of Canada as to which varieties are most valuable, Bulletin No. 71 of the Central Experimental Farm has been prepared for distribution. This Bulletin gives selected lists of the best varieties for each province or district, the lists being based on the accumulated experience of past years. Among the newer varieties of merit, Marquis wheat, Manchurian barley and Arthur pea are especially mentioned. This bulletin of 74 pages deals not only with varieties of grain crops, but with those of fodder crops and potatoes as well. Copies may be produced by applying to the Publications Branch, Department of Agriculture, Ottawa, Ont.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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JUNE 11, 1912.

DATES OF ISSUE.

June 25
July ..... 9—23

WHY CROP ROTATION IS NECESSARY.

Every well outlined system of farming consists not in growing one particular crop year after year, but in following certain crop rotations that will not allow the same plant to grow on the same soil many years in succession.

The reason for this becomes very apparent when we fully understand the plant food needs of the various crops. From work that has been carried on for a great many years, we know quite fully what most plants need in the way of nutriment, but although much has been written regarding the functions of the nutriment materials within the plant itself, very little is certainly known.

We know without a doubt, that some soils may become depleted of some of their constituents sooner than others. When wheat cropping is followed nitrogen is the first of the really essential elements to disappear; but, on the other hand, their are crops that use less nitrogen and draw more heavily on some mineral ingredients, such as potassium and sulphur. When leguminous crops are grown nitrogen tends to accumulate in the surface soil.

Each crop requires special substances in quantities in a certain state of combination. This being true it necessarily follows that the soil will be more able to meet the demands of any particular crop whenever the intervals at which that crop is grown are longest.

Suppose a soil, that contains abundant mineral matter is sown to wheat several years in succession; this crop will use practically all the available nitrogen of the soil without materially depleting its mineral supply. Wheat growing would not then be profitable. Suppose a bean or some root crop is grown likewise for a number of years; these crops would draw heavier upon a different set of substances that would finally be so much diminished that to grow them profitably would be out of the question. The soil, however, would be in prime condition for growing wheat.

If, on the other hand, these crops are grown alternately, each would draw especially upon its particular set of plant foods, and the result would be increasing crops for a greater length of time.

Two other important considerations should be given to any system of rotation. Crops differ very markedly, not only in the amount of food materialls that are taken from the soil, but also in the capacity which they possess for absorbing their food from different classes of soils. They also differ in the amount of crop residue that is left on the field. Root crops leave the least amount and clover and grasses most. This latter point is important because the crop residue is one source of soil humus.

Consequently, for maintaining the proper physical condition of a soil and to keep all its sets of mineral plant good elements well balanced so as to obtain the largest crops for the greatest length of time, crop rotation is quite necessary.

THE SAN JOSE SCALE.

Only a few short years ago the orchards of the Maritime Provinces were thought to be immune from the invasion of the Brown Tail Moth while orchard and forest trees in the neighboring United States were being devastated. But there came a day when the fruit growers of Nova Scotia were shocked to hear that the dreaded pest had been discovered in the very midst of the best fruit growing district of the province. A hue and cry was raised and, thanks to the timely efforts of Professor Cumming and his efficient staff and the co-operation of the fruit growers, a continuous war has been waged against the Brown Tail so that it has been kept pretty well under control.

The moth has also been discovered in New Brunswick and there too a campaign of warfare against the invading moths has been successfully carried on by the Department for Agriculture.

The keeping of orchards immune from the invasion of the San Jose Scale, the worst foe of the fruit growers is probably one of the greatest problems that confront our fruit growers today. Thorough measures are absolutely necessary, in every section, for if the scale once becomes established neglect means loss of fruit within a season or two and death of trees in a few years. Only vigilance and prompt action will keep any threatened orchard from severe loss. This danger has become so well understood that in many sections of the United States annual spraying for San Jose Scale is as much a feature of orchard work as spraying for Scale or Codling moth. Where this work is done annually and done well, the scale, while not eradicated, is so completely controlled that the trees retain their full vigor and little or no spotted fruit is ever found.

On another page of this issue will be found the startling statement that the scale has been discovered in the Annapolis Valley. There is a ray of hope that the insects may all be dead, but never-the-less every precaution is necessary to carefully guard and watch the infested trees to promptly stamp out the pest, should it be alive, before it gets a foot hold.

THE BETTER FARMING SPECIAL TRAIN.

Under the auspices of the Canadian Pacific Railway, the Intercolonial Railway, the New Brunswick Department of Agriculture and the Dominion Department of Agriculture a better farming train is now touring the Province of New Brunswick on a schedule of dates as was announced in the last and present issues of the Maritime Farmer.

Better farming trains have been a successful method in many of the States of the American Union in bringing modern methods of farm practise to the attention of the masses. The Maritime Farmer sincerely hopes that the present educational campaign in New Brunswick will be as fruitful.

Those who came through and will be with the train in New Brunswick, are professors from Macdonald College, including Professor Barton, who has charge of the live stock exhibits and speaks on animal husbandry; Professrr Blair, horticulture, fruit growing, potato growing and fertilizers; Professor Lochead, injurious insects, drainage, fungous diseases and weeds; Professor Lynde, soil cultivation, drainage, etc.; Professor Jull, poultry raising; and G. C. Cutler, seed selection, crop-growing, rotation, etc.

The Dominion Department of Agriculture is furnishing for this province the services of H. N. Flewelling for the dairy branch of the work, and of S. L. Peters for the fruit branch, with particclar reference to the carrying out of the Fruit Marks Act, regarding packages, packing, branding, etc.

The Provincial Department of Agricnlture is contributing the services of Dairy. Supt. McDougall, Poultry Supt. Jones, and R. P. Gorham of the horticulture branch; and Wm. McIntosh to deal especially with the brown-tail and gypsy moths.

The C. P. R. and I. C. R. provide the cars, motive power and train crews as well as the services of a special official of each road as their contribution to the work.

The schedule as advertised will be carried out, and as all the branch railways and river steamers are giving special excursion rates, and where necessary speeial trains to meetings at junction points the train will be brought within easy reach of the farmers.

Look up the dates on which the farming train is at your station and plan to be present with the rest of your neighbors. Lest your friends should forget the dates refer to them frequently when conversing with your neighbours.

ONE ADDED KERNEL MEANS 20,000,000 BUSHELS.

If one extra potato were added to each plant grown in the United States the actual increase in the annual yield of the crop would amount to 21,000,000 bushels. The figure is given in a report on "Dry-Farm Crops and Their Improvoment," by Prof. F. B. Linfield, of the Montana Agricultural College, and published by the Internarional Congress in its annual handbook.

"If one extra kernel were added to each head of oats, barley wheat or ear of corn," says Prof. Linfield, "we would have of oats, 20,000,000 bushels extra; of barley, 15,000,000 bushels extra; of wheat, 15,000,000 bushels extra, and of corn, 5,200,000 bushels extra. And not for one year alone, but for all time, this slight increase in the yield of the plant would add many millions of bushels to our crops.

"Clean, plump, selected seed, true variety, not mixed, free from weed seed and from disease and with strong germinating power should always be planted by the farmer as a means of increasing his own yield."

NOTES.

Too many farmers forget the third dimensions of their farms. There is a thickness to their farm as well as length and breadth, and the thicker the farmer makes his farm the better the farm, other things being epual. There is another farm underneath the one you are farming and if you use the forth dimension in farming—brains -- you will use this farm, too. It belongs to you and no one else can use it. Get down to it and make it produce. The big crops are grown by using the "farm in the cellar."

Cheaper Money For Farmers.

Editor Maritime farmer:—

Some time ago I noticed an article in the Maritime Farmer on "cheaper money for farmers.' This is a most important question and, while you don't state just what is about to be done in this respect it is pleasing to know that a movement of the sort is on foot.

The want of "capital," of a little needy money, is often a serious matter with many farmers. Having to buy everything on time and pay exhorbitant rates of interest is what keeps so many good men down. It seems a shame that a farmer who is a real earner of wealth should have to pay the banks eight per cent. on short loans while traders of all sorts get all they require for 6 per cent. This is not justified on the ground of greater risks for the banks will not take any risk and always have good security before any money is advanced.

Yet even at the high rate demanded of them, it would be good business for most farmers to borrow money and buy for cash rather than settle for their supplies on long time payments. It is strange but true that most men would rather pay 20 to 30 per cent. to a dealer and buy mill feed by the bag, than, enter into the awe inspiring presence of a bank manager and borrow money to buy for cash in larger quantities.

This want of a little working capital is, often considered the greatest drawback with which the farming community has to contend. In bad seasons, such as the eastern end of this province experienced last summer, a great many farmers are simply driven to do things, that they know are an injury; wrong methods are just as often the result of hard necessity as lack of knowledge.

This is a fact that few pedagogues seem to realize when they offer such advice as we continually see in farm journals,—to do everything with a lavish hand, with many reasons why it will pay in the end. It sounds all right to advise keeping the cows off the grass until it has a good start in the spring as I noticed lately when a prominent dairy authority advised not to be tempted to turn the cows out as soon as the fields looked green and the hills were covered. "If you feel tempted to turn the cows out just don't do it that's all it will not pay and it cannot pay in the end," regardless of the fact that many readers have been buying hay at war prices during half the winter, where then out of money and hay too and often could not get it at any price.

It is all right to advise sowing plenty of clover seed at 30 cents per pound, of buying only the highest and costliest seeds, of breeding to the high-class sire, even if his fee is high, buying only the best bull, cutting out the poor stock of all kinds and substituting something good. It will pay in the end. Yes, we all argue good goods are cheapest in the end; all this will pay in the end, if the over-burdened farmer can hold on until this end shows up.

The above is good advice for the men who can adopt it, they dont need it most; but what of the poor struggler, who finds himself behind, who is forced to buy the necessaries of life on credit and all machinery and other articles on long time payments, who is simply forced to spend his money before he makes it. This is the man who needs some real assistance. If there was a system or arrangement whereby the Department of Agriculture could secure for him some money at 4 or 5 per cent., it would give him a measure of relief and many men would be, as we say, on their feet and become independent.

Buying everything on time is paying a killing rate of interest.

Now, many wonder why it is necessary to have to give so much assistance to the farming industry, as the Government of the different Countries are continually called upon to do, when other industries independently flourish in cities and towns. The reason is this: in the towns,competition and the high rate of taxation and expenditure keep the owners of every business keyed right up to a high pitch, but in the country, especially where land is cheap and taxation light, a farmer can scrape along on very little, as he is not forced to raise any large sums of money,and we always find the most careless farmers on the cheapest land.

There are two ways only whereby farmers can be induced to take up better methods:—Education and Coercion. If by the latter method, he must often have some financial assistance or go out of business. It is said that the McKinley tarriff on barley forced the Quebec farmers to take up dairying and other better methods of farming greatly to their advantage; but often an experience of this kind is the means of putting a man out of business and driving him to the towns.

We hear a continual wail, from the consumer, of the high cost of living, of too many in the town, and too few in the country, and it looks as if somebody has to go back, or those now on the land will need to increase production. The trouble is that there is not nearly enough food stuffs being produced the world over, on the land now being cropped. It costs no more to seed, work or fence the land for a fifty bushel grain crop than it does for a twenty-five bushel crop, or for a 400 bushel turnip crop than it does for a 1000 bushel crop and not very much more to harvest in either case. The land is not fertile enough, and not properly cultivated in most cases, but particularly not fertile enough. Now what can be done about it? Our agricultural teachers have always recommended the keeping of live stock, and buying manure if needed in the form of concentrated feeds. Seldom do we hear the use of commercial fertilizers commended. Just why this is so I never could understand, as it certainly pays to use fertilizer on poor soil rather than plant without manure. Take the case of a farmer this present spring who wants to grow more feed for his stock to feed on the land, and who cannot afford to wait until another year, why not advise him to spread his manure over double whatever land he had intended to dress for roots and add sufficient fertilizer to make up the deficiency?

I saw an account of an experiment that Mr. Fuller of the Truro College farm, conducted in growing turnips with superphosphate, in which he demonstrated that every extra bushel he got by its use cost 2.9 cents. This is surely cheap feed and must have paid handsomely as the superphosphate was fixed in the soil and would benefit the following crops. Keeping a large dairy herd, as we do, and having perhaps more manure than most farmers we always use some commercial fertilizer on any land that we think can profitably use it. We would not think of sowing turnips without it. I believe the Governments of the different Maritime Provinces could do more to increase the production of the farms and the revenues of the country by assisting farmers to secure fertilizers and concentrated feeds at the lowest cost than by any other system.

Prices were never so high, and it is a shame to have the crop averages so low. A great effort should be made to increse the fertility of the land. When a farmer is rightly started in keeping good stock and has plenty of feed he can grow all his manure if he wishes, but to get properly started there is no way in my opinion that gives results so quickly as by the judicious use of fertilizers, and to buy these the majority of farmers require money at a lower rate of interest.—Walter M. Lea.

The Housefly on the Farm.

Editor Maritime Farmer:—

Scouts and fore runners are already on the premises, apparently selecting comfortable quarters for hosts that are to follow.

Innocent fly! What a resentful feeling there has arisen against him!

Late sanitation laws and rules have condemmed him utterly.

Not knowing the ban upon him, the intrusive insect will sail into tbe room with the utmost sang-froid; select the same old spot on your exposed cranium, for exploration, that he performed on last year; crawl around on your hands, inserting his tiny claws in every pore; play bo-peep with you at your mid-day nap, seemingly enjoying your ill temper as you viciously endeavor to swat him.

Notwithstanding his teasing pro clivities you possibly might welcome him, in a measure, as we do the birds, after a long lone winter,but for some bad failing.

The housefly is too imprudent, thoughtless, reckless; has too much "don't care" in his make-up, to be entitled to any respect.

Without considering what vile cesspool he may have just issued from, he will dive into the house, if possible, and land his precious carcass on any delicacy that may be set out on the table.

In the pantry he loves to forage. If he finds anything sticky, you will find him there ,patiently awaiting to be helped out.

"Put on your screens," says Carefulness, "and keep the pests out of the house."

All right my friend, granted they are on, a farmer's business requires going out and in the house frequently, often cumbered with pails, milk tins etc.

Again, children, an aset of the exemplary farm-house, have to be reckoned with. The little tots go slowly out and in, struggling with infantile strength against the tedious, persistent spring door. While the child is struggling with the obstinate door the watchful fly slips through.

Votaries of the sterile life, may have their immaculate flyless rooms: maybe leaders in fashionable society and social life; maybe brilliant lecturers and public favorites, but their questionable doctrine and example are not conducive to ideal farm home-life.

By all means let the farm be brightened by young fresh lives even if they bring occasional cares, inconveniences or troubles.

Another way may be found to lessen the fly nuisance about the farm buildings, at the same time improve sanitary conditions generally. If the flies can be made scarce out of doors, there will be less trying to get in the house.

In the late spring or early summer, when the rush of the planting is over, before hot weather, purify the premises. Clean out thoroughly henhouse, pig pen, cellar, kitchen slop deposits, vault, barn accumulations, anything, everything that the insects breed into.

Haul the refuse to some distance from the house, and make a compact heap of it, near some field where it can be spread later. Manage to mix the refuse as it is hauled somewhat; the result will be, a valuable compound of fertilizer accumulated for future use, from refuse that is usually largely wasted.

Keep a watchful eye around the premises, all through the season until cold weather, clearing out and hauling to the compost pile any filth that is breeding worms. The consequence will be, purer air—healthier surroundings—far less flies.

The insects, not having breeding ground, cannot start up their usual factories. For every mass of filth, writhing with nauseating life, is nothing less than a "factory," turning out a finished product of healthy, active, obnoxious flies, scores of hundreds daily, according to the size or capacity of the cess-pool.

Vaults should be kept continually and utterly dark. With the least light admitted, they become "factories" of the worst kind, furnishing flies for the house at a rapid rate.—R. W. Wetmore, Clifton N. B.

War on the San Jose Scale.

At last the expected has happened, and the long dreaded San Jose scale has made its debut in Nova Scotia. The great demand for young trees has almost swamped the nursery-men with orders, and to take advantage of the moment as it flies, stock is being sent out that a few years ago would have been put on the brush heap. Young trees that are badly infested with scale should never leave the nursery, no matter how much fumigating is given. If two branches came together in the fumigating box directly over a live scale holding it between them, that scale is protected from the gas and is sent out as full of danger as ever. The little insect reproduces itself so fast that it becomes a great grandfather in the course of twenty-four hours.

Much of the stock coming into the Annapolis Valley, this spring from some of the larbest nurseries in Ontario, is peppered all over with scale, most of them are dead as the stock is all fumigated, but when there are so many, the chances are great of some getting through alive.

The inspectors are now at work and every one receiving trees from outside of Nova Scotia should immediately notify Prof. Cumming, at Truro, that an inspector may look over them. It cannot be told if any scale is alive until the growing season commences, and if the infected lots are all located inspection will be much easier later. This pest is probably the greatest that troubles the fruit growing industry, and its establishment in Nova Scotia would be more than a local calamity. It is said to double the cost of apples and would certainly place a check on the rapidly growing value of orchard lands in the Valley. Fifteen years ago the United States produced from sixty to seventy million barrels apples. For the last five years her production has been from twenty to thirty millions. One of the reasons for this decline and pernaps the greatest of them is the ravages of the San Jose Scale.—Manning W. Ells, Secretary N. S. F. G. Assoc

HORTICULTURE.

San Jose Scale.

With the rapid growth of the fruit industry and the occurrence of the San Jose Scale in countries from which we import nursery stock, we are confronted with one of the gravest entomological problems. The Scale is spreading where its presence often is not recognized until it has become serious.

Let us briefly consider what the insect is, its habits and life history;

Historical.

According to the investigations of C. L. Marlatt, Bureau of Entomology, U. S Department of Agriculture, the native home of the insect is China. It was discovered in this country in 1873, when it had become a serious pest in the Santa Clara valley in California. In 1880 Prof. J. H. Comstock, then entomologist of the U. S. Department of Agriculture, described it and gave it the appropriate name of "Pernicious Scale." Its introduction into California was for some years a mystery until it was found that trees imported from China were infested with the pest. In 1901-'02 Prof. C. L. Marlatt made a trip to Japan and China for the purpose of locating its native home. He found it in the country north and west of Pekin.

San José Scale.

San Jose Scale. a, infested twig; b, view of infested bark magnified. (From Howard and Marlatt, Bureau of Entomology, U. S. Dep't. of Agr.)

While it spread over new territory in California it was not until 1893 that it was discovered in the East. It was at Charlottsville, Va., where it had been introduced from nurseries in New Jersey. Subsequent investigations showed that it had been shipped to New Jersey as early as 1886 or 1887 a coosignment of Kelsey plums from the San Jose region of California. All these years from 1886 or 1887 to 1893 these New Jersey nurseries had been selling and shipping to other parts of the counry. Wherever infested plants were received new centers of infestations broke out, and thus the insect spread over the fruit sections of America.

DESCRIPTION OF THE SCALE.

The full grown scale is circular in shape, of an ashy gray color, with a small protuberance, called nipple, at the center. Around the nipple are two or more concentric rings, the general shape being conical except when crowded, when all kinds of shapes may be found.

The male scale is more elongated, smaller, and frequently darker. The nipple is not at the center but near the anterior end of the scale. When young the scale of both sexes is nearly jet black and often very difficult to see with the nacked eye.

LIFE HISTORY

The females never leave their scales; under them they live and die. The male, however, molts in early spring, and leaves the scale as a minute active insect with two wings. It dies after mating. The female gives birth to living young. The newly born scales are very minute, oval in shape, but their bright orange-yellow color makes them conspicuous on the bark. After wandering about for twelve hours to a day they settle down to feed. The insect then inserts its beak into the tissues and sucks the sap. Here it remains during the feeding period. The male becomes full grown in about 25 days, but the females require a little longer time. In from 10 to 18 days the young of the next generation appear. During the season of activity each female may give birth to from 300 to 400 young. The over-wintering females produce about 100 young which become full grown in about 30 days. As from 5 to 6 broods occur in a single season calculation will show that one pair of insects can theoretically give rise to over 3,000,000,000 offspring in a single season.

HOW TO DETECT SCALE.

When a shipment of nursery stock has been received even fumigation should not be depended upon. The orchardist should keep close watch over such shipments when they arrive.

The plants should be carefully gone over with a reading glass, paying special attention to the crotches, and anything on the bark that may suggest an appearance like the description given above should be removed without touching it directly, packed securely in a regulation mailing case and sent to the office of Dominion Entomologist, Ottawa, for identification.

In light infestations the leaves and fruit are but sparsely attacked, but on badly infested trees the insects settle anywhere on the plants where tissues are exposed to them to feed on. They become so crowded as to overlap, creating an ashy gray scurvy incrustation on the bark.

They may occur on both sides of the leaf causing purplish, grayish or reddish discolotations on the young wood of peach. The bark turns red and when cut the coloration may be seen to extend to the wood. Indivi-ual scales cause reddish spots with a diameter several times that of the scale. The winter is passed in all stages of growth from half grown to mature insects. Many of the adult females die and these dead and dried up scales are always in evidence. When a knife handle or some other hard object, or the thumb nail, is rubbed over the surface of a badly infested twig the insects are crushed under the scales and a yellowish fluid appears.

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Suits Everybody

It suits the most exacting French chef. It suits the housewife. It is found in luxurious villas—in camps—in farms—in humble city homes. Everybody uses it; everybody likes it. It is the all-round stove for all the year round. It bakes, broils, roasts and toasts as well as a coal range. It is equipped with a special heating plate, and we sell the New Perfection oven, broiler, toaster, and pancake griddle—each specially designed for use with the

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WICK BLUE FLAME
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Free Cook-Book with every stove. Cook-Book also given to anyone sending 5 cents to cover mailing cost.

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HOW THE SCALE SPREADS.

In the first part of this paper we noticed how the scale was introduced into the United States and how it came to the East and from a few nurseries spread over the country. The fact that it has thus spread should urge upon every ane the extreme importance of using the most scrupulous precautions in handling trees to keep it from being disseminated. We have explained that the young are motile the first day after birth. As the broods are not defined these crawling specimens are in evidence on every infested tree during the entire growing season. They may then be carried by birds, bees and other insects. They may be blown by the wind, and frequently, while spraying an infested orchard, careless operators carry them on their hands and clothing. After they have become stationary they may be carried by the plowman when cultivating the orchard. Correspondents often wrap infested twigs carelessly when transmitting them through the mails for identification.

FOOD PLANTS.

The following is a list of food plants upon which the scale has been found and recorded by Dr. L. O. Howard:

ORCHARD FRUITS.—Pear, Peach, Apple, Plum, Cherry, Rocky Mountain Dwarf Cherry, Persimmon, Quince Flowering Quince.

SMALL FRUITS.—Strawberry.

BRUSH FRUITS.— Raspberry, Gooseberry, Grape, Currant, Flowering Currant, Black Currant.

NUT PLANTS.— Almond, Chestnut, Pecan, Black Walnut, English Walnut, Japan Walnut.

MISCELLANEOUS ORNAMENTAL PLANTS.—FOREST AND SHADE TREES.—Rose, Hawthorn, Spirea, Cotoneaster, Euonymus, English Huckleberry, Linden, Acacia, Elm, Osage Orange, Alder, Sumac, Weeping Willow, Red Dogwood, Juneberry, Laurel, English Willow, Golden Willow, Laurel-Leaved Willow, Milkweed, Catalpa Speciosa, Lombardy Poplar, Carolina Poplar, Golden-leaved Poplar, Silver Maple, Cut Leaved Birch, Mountain Ash, Japanese Quince, Actinidia, Citrus Trifoliata, Snowball, Loquat, Akebia.

REMEDIES.

During the last ten years almost every ingredient that appeared to have any insecticidal value has been experimented with in the hope of finding an effective method for controlling the scale. The most important spray mixtures are lime-sulphur salt, lime-sulphur, whale oil soap, kerosene, crude petroleum, and kerosene or crude oil emulsions. All these preparations are mainly winter sprays, being applied when the tree is dormant and leafless. They vary in price and other points of merit, and each grower must be guided by his own judgment in every case.

A full list of remedies used in Ontario for the San Jose Scale will be published in our next issue.

Notes From The Valley.

The following letter has been received by the Secretary of the Fruit Growers' Association, from the Department of Agriculture, in response to the resolution on the "Barrel Question" as reported in a recent issue of the Maritime Farmer:

Dear Sir:—

In reply to your letter of the 13th inst. I would say that I note your Resolution respecting apple barrels. Of course you understand that no change can be made in the Act until next session of Parliament. As for the marking of the words "Standard apple barrel" on each package I would point out that this is not exactly a standard barrel. The law does not provide for that at present

"BETTER FARMING SPECIAL TRAIN"

Dates and Hours Along the I. C. R. System.

The Farming Demonstration Special Train will start its tour of the Intercolonial Railway in New Brunswick under the auspices of the provincial government on Friday, June 21st, from Fredericton.

The "Better Farming Special" will be composed of seven cars; three baggage cars being fitted with exhibits and specimens of farming products chiefly from the McDonald College Farm near Montreal, supplemented by a number of native exhibits from New Brunswick, including apples and other fruits, as well as grains, etc. There will be two first-class coaches for the lecturing staff and assistants; one sleeping car and one dining car.

The Intercolonial Railway has arranged for the issue of return excursion tickets at single fare from all stations to the nearest point where the demonstration car will stop.

On leaving the Province of New Brunswick at Campbellton, the train will pass under the jurisdiction and control of the provincial government of the Province of Quebec.

The dates and hours over the Intercolonial system and which intending visitors to the cars and lectures should preserve, are published as follows for the convenience of farmers and those interested.

FRIDAY, JUNE 21.—Train leaves Fredericton on the Canada Eastern Division of the Intercolonial and halts for lectures at Durham, Cross Creek, and Boiestown.

SATURDAY, JUNE 22.—At Doaktown from 9 to 11.30 a. m.; at Blackville from 13.00 to 15.00; at Millerton from 16.00 to 18.00; and at Chatham from 19.30 to 22 o'clock.

MONDAY, JUNE 24.—At Sackville from 9 a. m. to 11.30 a. m.; Memramcook 13.30 to 16.00; and at Moncton from 19 o'clock to 22 o'clock.

TUESDAY, JUNE 25.— At Salisbury from 9.30 a. m. to 11.30 a. m.; at Petitcodiac from 13.30 to 16.00; and Sussex from 19.00 to 22.00.

WEDNESDAY, JUNE 26.—At Norton from 9 a. m. to 11.30 a. m.; and Hampton from 13.00 to 15.30.

THURSDAY, JUNE 27.—At Harcourt from 13.00 to 15.30; at Rogersville from 16.30 to 18.30; and at Barnaby River from 19.00 to 22.00.

FRIDAY, JUNE 28.—At Bathurst from 9 a. m. to 11.30 a. m.; at Nash's Creek from 13.00 to 15.00; at Charlo from 16.00 to 18.30.

SATURDAY, JUNE 29.—At Dalhousie Junction from 9.00 to 11.30; and at Campbellton from 13.30 to 16.30.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box P. 309, Windsor, Ont.

It provides only that the barrel shall be not less than a certain capacity. Any larger barrel is perfectly legal. It is not like the case of the apple box in which certain dimensions are specified. We are glad however to have your Resolution and the whole matter will receive consideration at the proper time.

Yours truly
(signed) J. A. Ruddick
Commissioner.

The various phases of the so-called "Barrel Question" have been a fruitfull topic for discussion for the past twenty years. To settle it by law appears to be an impossibility. The problem is in a fair way, however, to work itself out in the light of the experiences of thelast shipping season. In Nova Scotia, the shipping of the Nova Scotia apples in Ontario barrels as they are called, was first advocated by buyers from Ontario operating in the Valley. In 1903 I think it was Messrs. J. C. and Max Smith, who first began to send regular supplies of N. S. apples to the Liverpool markets. Eglish opposition to change is well known and Liverpool apple buyers have all the national characteristics. The N. S. package was a new one on them and looked to prejudiced eyes about the size of a nail keg. So sales were made on a quotation from two to four shillings below the price brought by the same quality of apples packed in the hundred and twelve quart barrel.

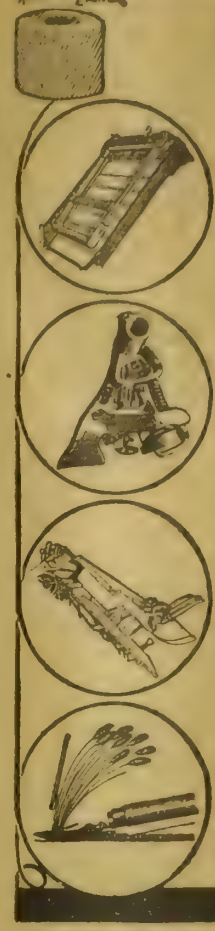
By weighing a number of barrels of apples and taking the average it has been found that eighteen pounds is the usual excess of fruit contained by the large barrel over the small or 96 quarts minimum barrel. This eighteen pounds of fruit is worth twenty-six cents figured out at two dollars a barrel. To date the cost of packing, heading, freight and all charges on the other side have been practically the same for both the large and the small barrel. The difference in cost of the package is about offset by the fact that the contents of eight Nova Scotia barrels can be shipped in seven Ontario barrels. On the face of it, it looks as if the Englishman was willing to pay from fifty cents to a dollar for twenty-six cents worth of fruit, provided he could have them the way he wanted them. As a practical test of the question, in a small way, the Co-operation Fruit Co., at Port Williams, last winter tried a few experiments. Seventy-five barrels of Ben Davis were packed in Ontario barrels and the same number in N.S. barrels, all shipped on same steamer to same man in Liverpool. No. Ones and No. Twos were in the same proportions in each lot. In place of the usual address on the face of the barrel of Port Williams, N. S., Port Williams, Canada, was substituted. This shipment made two shillings more for the large than the small barrel. The next shipment was for the same number of barrels and, sent under the same conditions as before as to equality. This time Nova Scotia was stenciled in place of Canada. This shipment made three shillings more for the Ontario barrel for No. Ones. The freight in every case was the same. The Ontario barrels were imported from Ontario at a cost of forty cents. Later a shipment was made in the flat hooped potato barrel known as the Chlie barrel which holds about the same quantity as the regular Ontario barrel. Perhaps this was the most interesting experiment of all, the "Chilie barrels" of apples realized two shillings more than the regular N. S. apple barrel. This difference was however, in all cases only for No. Ones. The difference on No. Twos was not nearly so great. So the results of the experiments this Company plan next season to make more shipments to Liverpool and Glasgow in the hundred and twelve quart barrel of their No. One grade.

On the other side of the question, we can say in favor of our N. S. apple barrel that it is perfectly suited for our local market and for Newfoundland. Our package is not discriminated against in London as it is in the markets of the north of England. The buyers from Hamburg that operated so extensively in the Valley last season would only offer a premium of twenty cents for the large over the small barrel. It seems as if there was a place for both packages, and that the recommendation made by the delegates to the Ottawa Fruit Conference was the only way out of the difficulty. It is an axiom in business "to give the buyer what he asks for." We have to cater to each market according to the individual requirments of that market. That is good business as well as common sense.

Shippers to Montreal and other Western markets found about the same difference in the two packages there as is found in Liverpool. Experiments along the same line as that of the Port Williams Fruit Company by other Companies next season would help to show what is the best package for each Market.

M. K. E.

Buy a McCormick Binder and Be Satisfied



IT took years to develop the McCormick binder. The final product of these years of development is the Hamilton-made 1912 Canadian McCormick, the satisfactory binder. Daylight is too precious during the short harvesting season for a farmer to run risks. You must have a machine which will do the work free from interruption, free from delay, whether it be by breakage or faulty binding. A binder has to do more delicate work than any other similar machine. It has to perform a highly complicated mechanical operation when cutting grain, elevating it, and tying it into bundles under all sorts of conditions. To do this many separate parts have to be put together and adjusted on every binder so that it can pick up tangled grain, and leave a clean field.

Only the most carefully graded steel, the toughest iron, and the most conscientious workmanship can stand this strain year after year. That is why the McCormick machine is the safest for you to buy. Every chain link is proved and every working part examined, inspected, and tested before the machine is packed for shipment.

Call on the McCormick agent and inspect the McCormick binder. Ask him to show you the complete McCormick line of harvesting and haying machines and binder twine. Get catalogues from him or write to the nearest branch house.

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International Harvester Company of America
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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

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ENTERPRISE MONARCH STEEL RANGE

For every home, large or small, needs just such a range in its kitchen to get the results desired. These results are :—

Good Baking with small Fuel Consumption—
Secured in the MONARCH through perfect damper control.

Good Broiling without smoke and odors
—Secured through the MONARCH Broiling Attachment.

An oven that will retain the heat while the contents are being inserted, tested or removed --- Secured through the ENTERPRISE HEAT ECONOMIZER.

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These are just a few of the good results obtained through using the MONARCH. Call on our nearest agent and examine for yourself this fine example of the stove makers' art. If you cannot call, drop us a line for illustrated circular and particulars.

The ENTERPRISE FOUNDRY CO.,
Manufacturers Sackville, N. B.

DAIRYING.

Practical Ways ot Grading Gream.

There is a growing demand for high grade dairy products and especially for butter. For that reason the question of grading cream at the creameries and paying for it according to quality will continue to be a live issue, because no buttermaker is able to make a first class piece of butter from poor, partially decayed cream, and the cream producers never can be satisfied until they are paid according to quality of their product.

BUTTER PRICES.

It is plainly evident that the markets distinguish between the various grades of butter by fixing a price upon the first grade butter. A little study of the market reports from day to day will convince the most skeptical that the prices on the butter markets follow the demand for the highest grade and variation in price is a reliable index to quantity of first grade butter at hand on the particular day. A glance at any of the large butter market reports will show a difference in price of from 2 cents to 12 cents per pound on the various grades of butter. This fact alone should convince the producers of cream that the consumer demands good quality and is willing to pay for it.

Another fact of great concern to the dairymen is the preference of the consumer for oleomargarine in place of poor grade butter. Low grade butter moves slowly on the markets, consequently the creamery contributing to that supply must wait for returns. This in turn reacts upon the producers and naturally effects the whole community.

FARMER'S END.

The improvement of cream must of necessity begin with the farmer's end of the business because it is a long settled fact that no buttermaker can produce a first grade piece of butter from a raw product of low grade. However it is an equally settled fact that no farmer is going to the trouble to produce first grade cream unless he is assured compensation for his trouble. This is the key to the whole situation and the foundation stones will need to be laid around this very point. Every creamery organization needs to recognize this fact and govern accordingly.

PREMIUM.

Perhaps every creamery will need to vary their methods a trifle to conform to local conditions, without losing sight of the object in view. In many places where cream grading is in vogue, the common plan is to pay 2c. premium per pound of butterfat for the first grade cream. This is an incentive for each patron to bring cream of the first grade, for a 5-gal. can of cream testing 25 per cent. will contain about 10 pounds of butterfat and at 2c. will return a premium of 20c. per 5-gal. can, 32c. per 8-gal. can and 40c. per 10-gal. can

There are several methods in vogue at various creameries which give excellent satisfaction. In places, 3c. premium is paid in summer and 2c. in winter. This plan tends to insure more frequent delivery in summer when conditions are not so favorable to keeping cream. As a rule, a uniform 2c. premium throughout the year works very satislactorily. Frequently 1c. additional premium is given in the winter time on certain days in order to induce all the patrons to deliver on the same days. Such an arrangement makes it possible to get in enough cream so it can be churned immediately and in larger amounts, thus cutting down the operating expenses.

CREAMERY END.

The management has to handle the creamery end of the business. The object of the management is to get the most for the output of the creamery. To do this will necessitate the securing of a good raw product, expert workmanship on the part of the buttermaker and judicious management of the creamery.

GRADE LINE.

The most difficult point in connection with cream grading is to draw the line between first and second grade cream. As is well known, the average patron is not qualified to distinguish between cream that will make a first grade piece of butter and cream that will not. For that reason some arbitrary means need to be agreed upon as a guide. At present, the most satisfactory method is to draw the line between sweet and sour cream, putting all sweet cream of clean flavor into grade first, all sour cream reasonably clean in odor and flavor into grade second and rejecting all cream not fulfilling these requirements. The grade line is one thing that of necessity needs to be adhered to strictly, otherwise the creamery management is bound to lose patronage.

Frequently, it is necessary in grading to convince a patron that his cream is not up to first grade. A good way for the buttermaker to do is to have a small quantity of real good fresh cream and allow the patron to compare his cream with it by tasting. A few such trials will usually convince the most skeptical and result in retaining the patron at the creamery.

CHURNING.

Whether the buttermaker will need to churn the two grades of cream separately, will need to be determined by the circumstances. In many places the cream is mixed and both grades churned together, while in other places the grades are churned separately. The usual experience is that the second grade cream will be replaced by the first grade cream as soon as the patron acquires the knowledge of how to care for his products, because he will want the 2c. premium. But the grade line will need to be drawn sharply and adhered to strictly even if one or two patrons are lost to the creamery.

Every farmer who produces cream needs to insist upon the premium of from 20 cents to 40 cents per can, and the only way to get this is to establish a cream grading system. If every cream producer would figure how much his premium would amount to in a year there is no question but every creamery would be grading cream and paying according to quality this year.

A great many creameries in Minnesota and the Dakotas established the grading system of paying for cream and in every case where it was done in a practical way, the creamery prospered and the patrons were highly pleased. This is a good time of the year to establish the grading plan and every creamery will do well to fall into the line.—N. D. Col. of Agri.—G. L. Martin in Hoard's Dairyman.

Dairy Notes.

Cleanliness is the keynote in good dairying.

Concrete vats in the milk house are reasonably cheap, eternally durable, and highly sanitary.

The cow gets up on her hind feet first, with head down. For this reason the manger should be low and the cow allowed enough freedom in her stall so that she can rise with ease.

Some Features We've Told You Little About

In our previous advertisements the big features of the Standard have been emphasized. You've heard a great deal about the Enclosed Dust-Proof Gearing—The Self-Oiling System—The Centre Balanced Bowl—The Liberal Space Between Disc Edges and Bowl for Holding Accumulation of Impurities—The High Crank Shaft—The Low Supply Can—of the

Standard

cream separator. But there are other features that add greatly to the convenience and satisfaction of Standard owners.

For instance, there's the Wide Open Bowl so easy to get at and wash. No tubes to clog up either. Then there are the Discs which are all washed together on a disc holder in about one minute. They are numbered so they cannot be put together wrong.

Then, too, the Standard Bowl doesn't leak. That's because the bowl shell fits tight without screwing down on top of a rubber ring, causing wear on the rubber and allowing the milk to leak through when the bowl is revolving.

Another good feature is the Interchangeable Clutch which permits the Standard to run down without wear on the working parts. Note:—When you stop the crank, the gears all stop and the bowl runs down of its own accord and without wear. The Interchangeable Clutch also enables you to "Pump" the handles and start the machine quickly and easily.

But there are other features—many of them—told about in our booklets. Write for them. They are free to all progressive dairymen and women.

The RENFREW MACHINERY CO. Limited

Head Office and Factory, Renfrew, Ont. Sales Branches, WINNIPEG, Man. and SUSSEX, N.B.

You are going to buy

a Cream Separator this year. You have your choice of a number of standard makes, including the famous

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Cream Separators

which will do some things others won't do—because Empires have some patented features that have never been successfully imitated, although competitors would gladly copy them if it were not for Empire Patents. Just what these features are, is fully explained in the Empire booklet.

Get a copy---Learn the facts

If they interest you deeply, as we believe such facts will, go to our agent in your locality (we will furnish you his name) and tell him to deliver an Empire to you for Free Trial, without obligation on your part to buy, unless it is proven to you that the Empire fulfills our claims. We are willing to let the Empire demonstrate its efficiency to you. It's your ultimate choice—the machine you'll buy sooner or later. Just hasten that day by writing to us by first mail.

The Empire Cream Separator Company of Canada, Limited

Makers of CONE and DISC Separators 32

WINNIPEG, TORONTO, MONTREAL, SUSSEX.

Agents everywhere in Canada—Look for the Empire Sign.

Cheese Makers !

Just Remember This—

Windsor Cheese Salt will make money for you, by making better cheese for you.

Windsor Cheese Salt improves both the flavor and the keeping quality.

Windsor Cheese Salt enables you to salt the curd just right, because it dissolves slowly and evenly—stays in the curd—and because it is pure and clean and good.

Windsor Cheese Salt is cheap, because, being ALL SALT, it goes further.

Make your cheese bring you better prices by using 75C

WINDSOR CHEESE SALT

BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

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Cattle and Horses

and allows cows to feed in peace, making **More Milk** and **More Money** for you. A clean, harmless liquid preparation, applied with a sprayer. Keeps cows in good condition, and saves five times its cost in extra milk.

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When writing advertisers please mention the Farmer.

Another Theory Wobbles.

It seems that in order to keep up with the procession of advanced dairy thought we must be perpetually throwing aside beliefs no matter how deeply rooted and implicitly relied upon in the past and pinning our faith to new doctrines, or old doctrines under new colors. We must unlearn as well as learn and the frequency with which we are compelled to perform the former feat makes us shudder to think how many false gods we are now granting a place in our temple of truth. This we offer as a tentative obituary notice to the theory of the cause of mottles which we had grown accustomed to accept as pretty conclusively proven but which now seems in imminent danger of being exploded. We had accepted the exhaustive experiments of the New York Experiment Station, made several years ago, as a very plausible demonstration that mottles were primarily the result of an uneven distribution of buttermilk or casein in butter, that the lighter areas owed their blond shade solely to the pres- of a larger percentage of the protein elements of milk. But now comes a report from the Wisconsin Station that mottles have been produced at will in casein-free butter, simply by a failure to thoroughly distribute or render homogeneous, the mixture of butterfat salt and water. The Wisconsin investigators take this as an indication that the occurance of mottles may be wholly independent of the presence of casein and that uniform working of the butter is under all conditions of the utmost importance in seeking to eliminate the trouble.— N. Y. Produce Review.

The Calf's First Milk.

Nature has provided something in the first milk that is very essential in getting the calf's digestive machinery started right, and I think it should be permitted to have it. We usually leave the calf with the cow a couple of days, until it is nicely straightened up, then comes the most important time in the life of the calf, when we take upon ourselves its feed and care; and here is where we want to exercise a lot of kindness and gentleness, for if we are impatient and rough in our treatment with them they wil, distrust us and fear us, and the chances are they will never forget those first lessons and impressions. A cow will never do her best unless she has perfect confidence in us.

It is an old saying that you can catch more flies with molasses than with vinegar; so you can do more by coaxing than driving. When teaching the calf to drink, don't push its head into the pail; wet your fingers in the milk and let it suck, and coax its head into the pail, and usually the second or third time it will drink of its own accord.

ESSENTIALS OF CALF MILK.

These are three essentials at this time: The quantity of milk, the temperature and quality. Calves are injured more by not observing carefully these rules for the first few weeks of their lives than any other way. At this age their little stomachs are not strong, and a little care exercised at this time often means the difference between an unprofitable and a profitable animal.

The amount of feed at this time will depend largely on the calf and somewhat on the nature of the milk. This amount must be determined by the feeder, but this precaution is always advisable—better to begin carefully and work up to what they can handle, rather than to begin with a large amount and get them off their feed and then have to commence all over again.—F. H. Scribner, in Holstein Register.

SHE PAID To Escape These Disks!

We have in our office, this very minute, the letter telling how the plucky woman here mentioned paid her hard-earned money to escape washing these disks.

One Difference Between Tubulars and Others

Letters come to us telling how plucky women pay hard-earned money out of their own purses to escape washing disk-filled cream separators. Here is just one such instance: A lady and her husband decided to have a cream separator. He thought only of the purchase price and refused to pay more than the cost of a cheap, disk-filled machine. Like other women, this lady could not bear the thought of washing 40 or more disks twice a day. She wanted the wonderful

SHARPLES Dairy Tubular Cream Separator

She knew that Dairy Tubular bowls contain only the little piece shown in the right-hand pan and are the only easy-to-wash separator bowls. She also knew that Tubulars have twice the skimming force and skim twice as clean as others—thus paying more every year in extra profits than could be saved through buying any cheap machine. So, to what her husband was willing to pay she added enough hard-earned money from her own slender purse to buy a Sharples Tubular. And now she is one of the happiest, most contented separator users you ever saw.

What greater praise could be given Tubulars than the fact that women so greatly prefer Tubulars that they will pay to escape washing other machines? **Ask for Catalog No. 194**

Sharples 31 Yrs

Do you want a free trial? Do you want to exchange your old separator in part payment for a Tubular? You can do either.

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

Gasoline Engine BARGAINS

We have a number of rebuilt engines of other makes, that we have taken in trade for our Waterloo Boy Gasoline Engines.

These engines are from 1 1-2 to 16 h.p. and have been thoroughly over-hauled in our shop and are in first class running order.

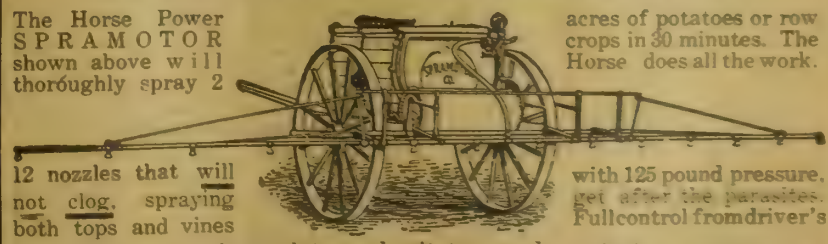
Write for particulars and prices to

Sussex Motor Co. LIMITED

SUSSEX, N. B.

THE PEST PARALYSER

The Horse Power SPRAMOTOR shown above will thoroughly spray 2 acres of potatoes or row crops in 30 minutes. The Horse does all the work.



12 nozzles that will not clog, spraying both tops and vines with 125 pound pressure, get after the parasites. Full control from driver's seat. Has automatic regulator and agitator nozzle protector, pressure relief, 12 gal. air-pressure tank, draining, air and controlling cocks. Equally efficient on row crops or orchards. Made for 1 or 2 horses or hand. Awarded gold medals at National Horticultural Con ress. Write for free treatise on crop diseases. AGENTS WANTED.

W. C. HEARD, 1379 King St., LONDON, CANADA.

LIVE STOCK.

At What Age Should Heifers Be Bred?

Opinions differ very materially on this question. The prevailing practice of late years, especially in dairy cattle is to have them drop their first calf at 24 months, then to have a long period of lactation, sometimes as long as 15 or 18 months before she drops her second calf. This practice is said to be of great aid to long milking periods in the future cow. Whether or not this really is the case, and there are quite a number of good reasons for believing that it is the case, still the fact remains that the added gain in milk production is often overbalanced by the harm which accrues from breeding the heifer at this early age. Again, however, the argument is put forward, that it is much easier to get the animal to breed at an early age, than if deferred later. When breeding is put off til, 30 or 33 months, the cow is generally too fat, and the generative organs sometimes fail to act. It is a well-known fact that more calves are dropped at two years old, than at three, but if care is taken not to have the females in too good condition when served, there is no reason why they should not be just as prolific at this later age.

To go back to the first stage of the question, the argument is also put forward that stockmen who raise high priced cattle must have some return for their money invested, and thus they breed the heifers early to have young stock for sale.

Then this side remains: does the heifer not suffer in growth and development by early breeding. She has the extra tax on her system, of sustaining the foetus. This she has to do at the expense of her own growth, and the result will be a mature cow with diminished size and vigour. Possibly we may not notice the lessened vigour, but it is there nevertheless. Moreover the progeny of the early bred heifer will never attain the strength, size and development of the heifer whose calf comes at 30 or 33 months. This drawback is in our opinion scarcely balanced by the increase in milk production already referred to. These remarks apply more particularly to dairy animals as heifers of beef producing breeds are not bred quite so early.

Conception in young animals can take place at a very early age, and care ought to be exercised not to allow young stock of both sexes to run together, as generation in the male animal is possible at as early an age as six months.

Young animals getting in calf at too early an age are generally ruined for milk on beef production.

When the heifers are to be served, large and heavy bulls ought not to be used on them as permanent injury may follow to the smaller animal. A lighter and less mature bull should be got. Much attention should be paid to the food of pregnant animals, especially if they have been bred young, as the heifer must sustain the young embryo, as well as build up her own frame. Foods rich in ash, for bone and firmness, are needed, such as clover or alfalfa. Too much protein and not enough carbohydrates results in an overgrown calf while yet unborn, and weak in vitality at birth. Too much carbohydrates and too little ash, results in undersized calves.

Grass, roots, etc., are the best foods to give, and they ought to be fed liberally as it is important for the young heifer to be in good flesh at the time of her first calf. When cattle are at pasture, no addition to the grass should be necessayy; in winter the food should consist of good hay or clover and about 10 to 20 lbs. of roots daily with some bran or chop. Mature cows should not be in too high condition at calving time as there is danger of milk fever, this malady, however is common in Canada, and can be easily cured if steps are taken in time. While we recommend that the young heifers should be in good condition, it is well to see that they are not too fat as difficulty in calving may be experienced. Another point of great importance is to see that the animals are not constipated when nearing parturition. There are more good cows lost through carelessness to observe this caution, than through any other cause. Give plenty of good succulent food and a bottle of linseed oil, or a dose of salts shortly before calving time, will put the bowels in good working order.

Generally there is a little trouble with heifers, the first few times they are milked; the udder may possibly be a little inflamed and swollen and some hot fomentations and gentle rubbing will prove greatly beneficial.

Young heifers will generally resent milking operations, and will kick pretty freely. If the animal has been used to being handled, and spoken to gently she will soon get over it, and submit to be milked, as soon as she finds out the soothing effect of the milking

There are many methods of dealing with the kicker; tying her feet with ropes, holding up her forefoot, and others, but of all the methods we have tried or seen tried, there is none which gives such good results as gentleness. Gentleness has cured many a vicious kicker, and there is absolutely no use of any one trying to cure a kicking heifer, who has not perfect command of his own temper. Paying the animal out with the milking stool, the fork handle or the boot, is a poor method of trying to cure a kicker. Fearlessness is essential; it is wonderful how quickly animals recognize that we are afraid of them. Moving quietly about the animal, speaking gently to her, rubbing her udder and when milking, keeping the head firmly wedged in against the animal's hind flank at the same time having some one scratch her gently between the horns, will generally result in her docile submission after the first few attempts. However should she develop into a confirmed kicker, the best way is to fatten her for the butcher; life is too short to be bothered with kicking milkers. We have had considerable experi?nce with kicking milkers and can safely say that nothing succeeds like continual kindness.

After the birth of the calf, the heifer should be put on a fairly low diet till all the dangers consequent on calving, and milk fever are past, after which her ration should be generous.

After the birth of her first calf, the heifer will usually come in heat in from six to twelve weeks. Many stockmen think it unwise to have her served the first time, and wait for the second period. Heifers bred young are allowed to run quite a while before being bred again, in order to facilitate their growth and make up what they have lost. Whether this is a good plan or not opinions differ; suffice it to say that cows bred a reasonable time after calving, are more likely to be in calf and to breed regularly than those that are not served until some considerable time has elapsed.

To sum up the whole question, we would say that it is more advantageous to have animals as mature as possible before breeding them, in order that we may have an offspring produced by animals of maximum vigour on both sides, and thus the standard of our herds will not be lowered by raising stock which are undersized, or in any way immature.

FELL FROM A HAY LOFT

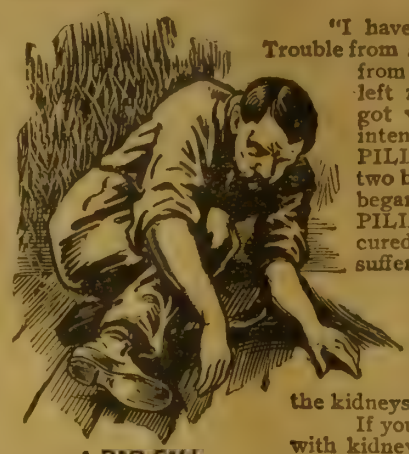
Suffered Tortures With His Kidneys Until He Tried Gin Pills

You might think that Mr. Baker needed a surgeon more than GIN PILLS. But there were no bones broken. His back was strained, which was harder to cure because nothing seemed to do any good. It is the same with a sprained ankle and broken leg. You can set the fracture and it will be well in six weeks —but the sprain may take months to get well.

However, Mr. Baker found the quick way to get relief from the pain—here are his own words.

AULTSVILLE, ONT.

"I have been a great sufferer from Kidney Trouble from an injury to my back caused by falling from a hay loft about six years ago. This left my kidneys weak, so that every cold I got would settle in my kidneys and cause intense suffering. I was advised to try GIN PILLS. I found, to my surprise, after taking two boxes, that the pains were relieved and I began to feel better. I am still taking GIN PILLS and feel sure I will be completely cured. I recommend GIN PILLS to all who suffer from any Kidney Trouble". C. BAKER.

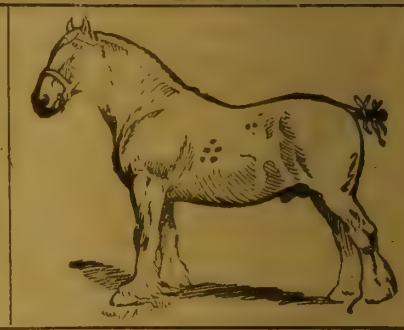


A BAD FALL

You see, the fall had strained the kidneys and they were affected by the slightest chill. GIN PILLS immediately strengthened the kidneys—soothed any irritation and thus enabled the kidneys to overcome the effects of the fall.

If you are having pain in the back—or trouble with kidneys or bladder through accident or overwork—do just as Mr. Baker did—take GIN PILLS. They will help you—cure you—or we will promptly refund your money. Buy six boxes at your dealer's. If, after taking them, you feel that Gin Pills have not helped you, return the empty boxes and get your money. We will take your word for it. 50c. a box, 6 for $2.50. Sample box sent free if you write National Drug and Chemical Co. of Canada, Limited, Dept. M F Toronto.

NATIONAL LAZY LIVER PILLS regulate the bowels and cure Constipation, Biliousness and Indigestion. 25c. a box. 111



WHAT DO YOU THINK OF THIS, MR. FARMER?

The Farmers in Manitoba, where Middlings and Bran are manufactured, use MOLASTINE MEAL. MOLLASINE MEAL, on account of the very high rate of freight from here to Manitoba, costs the Farmer in Manitoba very much more than the Farmer in the Maritime Provinces. On the other hand, Middlings and Bran are very much cheaper for the Farmer in Manitoba.

What beter argument can be produced than this? Read the following letter from a large Stock Owner in Manitoba, which is self explanatory.

"I dont want to put Molassine Meal up too high, but I believe it is a good thing. Last June, July and August, I used a considerable amount of it, especially with my Dairy Herd. The results were self-evident of Molassine Meal not only being a good Milk producer, as far as quality and quantity are concerned, but that it also keeps my Cows in first-class condition. The quality and quantity of the Milk was sufficient to warrant the Judges at the Winnipeg Exhibition awarding me a first and second prize in aged Milk Cows, and a second and third in the two year old cows, also on a Milking test. I feel sure that the feeding of Molassine Meal is materially responsible for the winning of these prizes. So much so that I have one cow that I was trying out to see whether the entering of her for the Milking Test was feasible or not, and was feeding her on Molassine Meal. She was producing 98 pounds of Milk per day. I ran out of Molassine Meal and was not feeding it for a few days and her supply of Milk dropped 9 pounds a day. Immediately, upon starting to feed Molassine Meal again she came up to the original production.

"I think everybody should feed it and I herewith enclose you an order for another supply." H. HANCOX,
Roseau View Stock Farm, Holstein Friesian Cattle. Dominion City, Manitoba.

Your dealer has Molassine Meal, as all up-to-date dealers have. Should he be out, we can supply him immediately. If you have not fed this Feed, we are convinced you will buy at first opportunity. Put it on your list of wants NOW, and get it the next time you are at the store.

L. C. PRIME COMPANY, LIMITED

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SAINT JOHN, New Brunswick.

A Range should be a permanent investment and guaranteed as such. The "Pandora" is fearlessly guaranteed by dealers as well as by the makers, simply because they know that it will give utter satisfaction. Can you wonder that so many people buy
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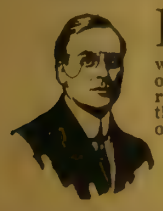
McClary's Pandora Range

Gates WHICH GO TO PIECES, OR SAG, OR ROT, OR BEND, OR BREAK are not worth buying; no matter how low-priced they may be. Buy guaranteed gates---gates



I GUARANTEE every Clay Gate to be free from any defects whatsoever in material or workmanship. I will replace Free any part or the entire gate giving out for such reasons.

H. Ralph Steele,
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made of high carbon steel tubing of large diameter, far stronger than gas pipe, tee or angle iron, namely

Clay Gates

(See Guarantee Above)

Clay gates never fail, and will last a lifetime. A gate for every purpose. Can't burn sag, or blow down. Positively keep back breachy stock; can be raised to let small

stock through; or to lift over snow in winter. Tens of thousands of Clay Gates in use. 20,000 sold last year.

60 Days Free Trial

We will send you one or a dozen Clay Gates for 60 days free trial, without expense or obligation to you. Could any offer be fairer? Prove them before you buy them. An investment in Clay Gates is a permanent one.

Send for illustrated price list---Send today.

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FITS CURED Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits. Simple home treatment. 25 years' success.

Testimonials from all parts of the world. Over 1,000 in one year.

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107 St. James' Chambers, Toronto

Gid or Sturdy in Sheep Caused by Dogs

This is caused by hydatid on the brain, these being the cystic form of the tapeworm of the dog, and look like watery bladders, varying in size between a bean and a hen's egg. Yearlings are more liable to it than older sheep, and although invariably fatal it is fortunately not infectious. The best authorities have now come to the conclusion that Gid cannot exist without the presence of dogs to harbor the fully developed creature which is expelled in the herbage, and then swallowed by the sheep. All dogs are liable to tapeworm, even those carefully fed and well kept, while those carelessly fed are always more or less affected. During the summer months, dogs are able to rid themselves of tapeworms before their own health is seriously affected, and at this season the risk of sheep swallowing those numerous discharged tapeworms is greatest.

The early symptoms of Gid can only be detected by a keen and experienced shepherd, but the disease soon becomes apparent to the casual observer. The affected animal moves round and round in a circle, is very dull, separates from its fellows and generally holds its head high in the air. It is a most distressing ailment to watch, not to mention the excruciating pain endured by the sheep.

There is no cure for fully developed Gid except trephining and the operation cost fully the price of the average sheep. If the animal is slaughtered as soon as the symptoms are observed, the carcass may safely be used for food, but the head should always be burned and not buried. When the disease is far advanced the carcass is unfit for food.

It wil therefore be seen that in addition to worrying sheep, all useless dogs are a constant source of danger in any farming district.—W. T. Ritch. Ritch.

To Polish Horns.

Subscriber, suggests the following method of polishing the horns of cattle for show as one which he used with excellent results. He uses the coarse rasp first and then the fine rasp after which he scrapes the horn with glass and next uses both the coarse and the fine sand paper or emery cloth. After finishing the smothing process with these he uses the leather strap with powdered charcoal, using the flesh side of the strap on the horn at this time. He then reverses the strap and applies it diligently to obtain a perfectly smooth surface and when this is obtained, applies sweet oil with a woolen cloth as the finishing touch. The thorough and diligent application of the leather strap and the woolen cloth he holds as important parts of the work saying that "elbow grease" must be applied without stint.— Wisconsin Agriculturist.

Wool Balls.

The habit of wool eating is responsible for the trouble known as "wool balls" in lambs' stomachs. The trouble is worst in long wool breeds, and is usually ascribed to lack of salt or some other necessity in the ration. Digestive troubles are also responsible for the habit. Ticks may be instrumental in forming the habit. A lamb bites his sides to scratch a tick bite and gets a taste of wool.

The wool should be clipped from the udders of the ewes before lambing so that there will not be any temptation on the lamb's part to get this habit. Close confinement should also be avoided. Where the habit has taken hold of a flock plenty of range should be allowed and the ones having contracted the habit separated from the main flock. Doses of linseed oil may give relief, though the blocking of the small intestines is serious and a frequent cause of death.

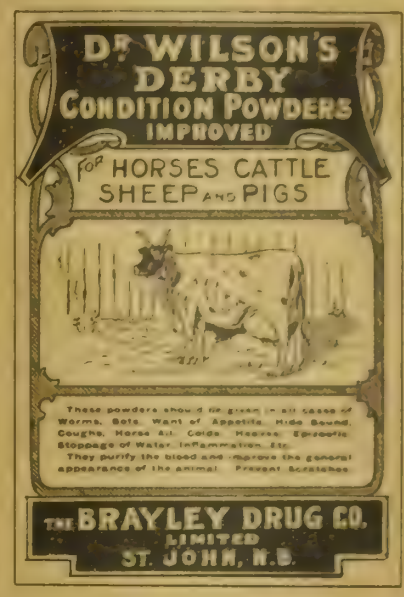
Canada's Leading Stock Men Strongly Recommend the use of

Dr. WILSON'S DERBY CONDITION POWDERS

for Horses, Cattle, Sheep and Pigs

The names of the successful Stock Breeders whose testimonials appear in this advertisement, are household words in the Maritime Provinces. They are some of the leaders who are setting the ideal to which progressive fellow farmers aspire. They are authorities on the care and management of Live stock.

Read what they say about Dr. Wilson's Derby Condition Powders, the best Live stock conditioner on the market as it purifies the blood and improves the general appearance of every animal to which it is administered.



Amherst, N. S., July 10, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen: It affords us great pleasure to let you know of the great success we have attained by the use of your Condition Powders. We have been feeding them for some time back and are satisfied that they are as good as you claim them to be and in our estimation there is no better in these parts.

Wishing you continued success, we are,
Yours truly, LOGAN BROS.
Breeders Holstein Cattle and Clydesdale Horses.

Truro, N. S., Jan. 12, 1910.
The Brayley Drug Co., Ltd.
St. John. N. B.

Gentlemen: It affords us great pleasure to recommend Dr. Wilson's Derby Condition Powders to anyone looking for genuine Powders. We think they are a very good medium for fattening cattle and improving their appearance. We would not be without them as their cost is not to be considered with the vast amount of good they do. Yours truly,
RETSON BROS.

Buctouch, N. B., June. 10. 1909.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen: I believe I have been using Dr. Wilson's Derby Condition Powders since they were first introduced in New Brunswick. I am well satisfied that they have done my cattle a power of good. I have used no other in four years despite many inducements offered. Yours truly,
J. D. IRVING, Seaview Farm.
Breeder Holstein Cattle and Clydesdale Horses.

Truro, N. S., April 19, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Dear Sirr: I will be needing some more of your Condition Powders very soon. When will your agent be in Truro?

I might take this means of congratulating you on your manufacturing such an excellent powder. I have recommended Dr. Wilson's to many of my friends who breed cattle as I feel sure they will be as well satisfied as I am. Yours very truly, C. A. ARCHIBALD.

Silver Falls, St. John Co., N. B., Sept. 10, 1909.
The Brayley Drug Co., Ltd.
St. John, N B.

Dear Sirs: Dr. Wilson's Derby Condition Powders were recommended to us and we decided to give them a trial. We feel sure they have proved their worth to us in many ways. We feed them regularly and we feel safe in proclaiming them the best Condition Powders we have ever used. Yours truly,
JOSELYN & YOUNG.

Burnside Farm, Howick, P. Q.,
March 21, 1910.
The Brayley Drug Co., Ltd.
P. O. Box, 301, St. John, N. B.

Gentlemen:—You will no doubt be pleased to hear what I have to say. I want to say a word in favor of your Dr. Wilson's Condition Powders. They were recommended to me at a Dominion Exhibition in Halifax, N. S., and I decided to try them. I have used many Condition Powders before but never with such remarked success as with yours.

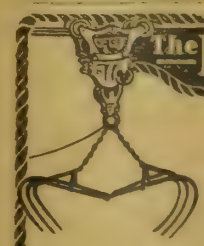
I think I have as nice a stock of Ayrshire cattle as can be found anywhere and can give your Dr. Wilson's Condition Powders a share of the credit.

Ever wishing you success, believe me
Dear Sirs, Yours very truly,
R. R. NESS

Dr. Wilson's Derby Condition Powders may be purchased in every town in the Maritime Provinces and is manufactured by

BRAYLEY DRUG COMPANY, LIMITED, St. John, N. B.

The Easy LOUDEN Way



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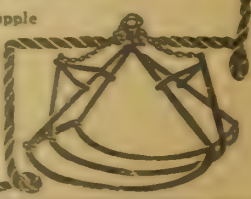
from our Catalogue. Louden's 6-tine **Balance Grapple Fork** handles dry clover, alfalfa and short hay and straw perfectly.

Louden's Junior Hay Carrier and **Grapple Fork** make a great labor-saving team. Send for Catalogue of Louden's Complete Barn Equipments—**Feed and Litter Carriers, Hay Tools, Cow Stalls and Stanchions and Barn Tools.**



Louden Machinery Co.
Dept. 51, Guelph, Ont.

e in The Maritime Farmer for Results.

THE HORSE.

The Shape of Horses Feet.

The two chief points to be taken into consideration in judging whether a horse has good feet are their size and their general shape. Broadly speaking, the principle may be laid down that they should be comparatively big in heavy cart horses and medium-sized in the case of horses belonging to the lighter classes, although even in these it is better to have the hoofs on the big side than on the small. Very small and too large feet are both faults, the former, however, being the most objectionable, particularly so in draught horses. There need never be any difficulty about telling whether a horse's feet are of correct size or not, because if unduly small or abnormally big, they look out of proportion in comparison with the limbs and the general build of the animal. The reason why one looks for comparatively large-sized feet in horses of heavy cart breed is because their feet and massively proportioned body imposes a great weight on the limbs. If the hoofs are small, the strain imposed upon them in having to support the heavy weight of the cart-horse's body is considerably increased, as it is not spread over such a large ground surface. Over-large feet in a horse of light-legged breed are generally the mark of the underbred animal, this feature mostly being derived from a cross with the cart horse, and in the majority of cases such feet lack toughness, and are none too well adapted for standing fast work on hard roads. Unduly big feet occur only infrequently in light horses of pure breeding—that is to say, those without any strain of coarse blood in their veins— whereas the opposite fault, viz., small hoofs, is a good deal more commonly seen in them. Hackneys, in particular, often have unduly small feet, and very generally it may be observed that this failing is associated with lightness of bone below the knee and hock, and with small, narrow fetlock joints. Small and shallow hoofs are also a defect frequently met with in cart horses, although it is satisfactory to note that the breed has been considerably imoroved in this respect of recent years, thanks to the wide use which is nowadays made in most districts of good-class pedigree stallions for mating with the ordinary farm mares. In the fashionable show strains of Shires this fault has been largely bred out since the Stud Book was established.

As regards the general shape of the feet, it is desirable that they should be sufficiently deep, symmetrical, and wide at the hoof-head, while they should have the right degree of slope, being neither too upright nor too much sloped. Upright feet are always too high in the heels, and very often the latter are also contracted in this case, making the foot look very narrow. That is a serious defect. Narrow, upright, contracted feet are often referred to as "donkey's feet," and are usually considered to be specially liable to be attacked by laminitis or founder. What one likes to see is an open and wide heel, with an expansive and prominent frog. But, on the other hand, the heels must not be too low, that comprising a grave objection. Low heels are associated with flat feet of very spreading and shallow shape, and hoofs of this kind are inherently weak and wear badly. They also more often suffer from brittleness of horn than normally shaped feet. Such flat feet usually occur among horses of heavy breed and those with a strong cart-horse cross in them. A good foot should have an arched sole, this being an important indication of strength. In frequent cases where the soles are flat they have become so as the result of disease in the foot, and in extreme instances the sole may have dropped to such an extent as to bulge outwards, so that it is of convex shape. This, needless to say, constitutes unsoundness. While corns are liable to occur in all horses quite irrespective of how their feet are shaped, it is generally found that those having either upright and narrow hoofs with high heels or else flat and low-heeled ones are more than ordinari,y susceptible to suffer from this complaint.

A level wall is usually considered an essential feature in good sound feet, but occasionally there may be a slight bulging at some part of the wall or other without its in any wise impairing the strength and soundness of the hoof. Such slight irregularities are to be met with in the toughest of feet, and therefore no undue importance need be attached to them when they occur, provided always that the hoofs are otherwise of satisfactory shape and size. In horses that have been running at grass for a lengthy period, the horn of the hoof-wall very generally shows more or less noticeable ridges, these being what are known as "grass rings." They are of no consequence having been produced in the natural course of things, and will disappear after a time when the horn has grown down and more and more of the old horn gets pared away at each successive shoeing. Very different from these grass rings are the ridges or rings, growing very closely together, which characterize the feet when a horse is affected with laminitis.—Farm and Home.

Horses That Scour.

This is a question frequently asked: "A fine young horse, a perfect picture of health, eats well and feels well and is full of life. His bowels and kidneys act perfectly when standing in the stable or when doing slow farm work. But when driven to town, a few miles away he will begin to scour after being driven a few miles. How can I prevent this?"

Such a case is different from that of an animal troubled when idle in the barn with looseness of the bowels and is out of condition. When the horse eats dry hay and grain during mastication it is moistened with saliva, and when it enters the stomach it is a half dry mass of chewed hay and grain. Here it is churned in the stomach and further moistened with the gastric juices. Then it passes to hee first part of the intestines, called the duodenum, and sometimes called the second stomach of the horse. In this part of the intestine the bile from the liver and the fluids from the pancreas further moisten the food, until it becomes a thin, sloppy mass, when it is in shape for the small tubes, which the lining membranes of the intestines are covered with—lacteals, so called—to suck up the nutrients of the food and carry them into the blood and by it to all parts of the body to build it up.

When the food is inthe fore part of the small intestines, if water is furnished a thirsty horse, it is rapidly carried through the small intestines (about seventy-five feet) to the large intestines too rapidly. Thus some scientists object to watering a horse as soon as he has eaten his hay and grain; but it really is better to give him water then than after he has been driven several miles before offering him water. Water given as drink does not mingle with the food that is in the stomach to any large

A GREAT SCANDAL

Big Efforts to Hush the Matter Up-- The Truth Out At Last. . . .

From exhaustive enquiries made during the last few months we find there have been a number of patients kept under conditions which to say the least of it, is a great scandal.

We trust our readers will bear with us for a moment. The facts of the matter are these, there have been some thousands of cases where horses have been suffering from distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements, of all kinds, and in some cases no attempt has been made to relieve their sufferings, their owners either being indifferent, or where they have thought at all about their animals, have had recourse to cheap so-called remedies, of which there are unfortunately a few on the market, but which, while so may give a little relief temporarily, cannot from the nature of their ingredients give permanent relief or effect a cure.

It is high time in our opinion that something should be done to bring this state of things to an end, and with this in view we are about to take drastic action, to bring before every owner of horses that wonderful remedy known to all as "Dr. J. Woodbury's Horse Liniment."

This remedy has been used for years throughout the Dominion during which time it has been used in hundreds and hundreds of cases, comprising distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in no case to our knowledge, has "Dr. J. Woodbury's Liniment" failed to first relieve, and then to cure the above mentioned complaints.

Every owner of horses should, if they have not already got a bottle of this Liniment in their stable, immediately procure one. It is the only guaranteed remedy we know of, and it is a cheap form of insurance, and it will be found, that, if used immediately any symptoms of any of the above complaints appear, to give immediate relief, and probably save tremendous expense, probably the life of the horse as well.

Dr. J. Woodbury's Horse Liniment is sold by Stores and Chemists throughout Canada, but should your Store-keeper be out of stock he will procure it for you, and if you should find any trouble in getting a bottle, don't delay for an instant in mailing 25 cents and a bottle will be immediately forwarded you.

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extent, as the opening into the stomach is only a few inches from the opening out of it. Thus most of the water drank by a horse goes right through the seventy-five feet of small intestines to what is called the "blind gut," or caecum, which is a reservoir for water to be used in further mixing with the food when it gets to the large intestines. When all food reaches the large intestines the lacteals (tubes with sucker mouths) begin rapidly at work to suck up the nutrients that have been so digested. The contents of the large intestines are pushed along by muscles which contract and relax around them (peristaltic muscles). It is the action of these muscles that pushes the food that has been eaten through the intestinal canal.

Now to the point: A little nervous excitement will, in some horses, cause these muscles to contract and relax so rapidly that the food when in the soft, watery condition will be expelled, and thus the horse scours until all of the food that is in the large bowels (colon) is evacuated. Thus it is that some horses that are full of life and spirit when started off at a rapid gait will soon begin to scour, and after a time will cease to do so. Horses that are daily used in harness of this class will usually get over it as they become used to the excitement of things they see on the road.

Another method of feeding and watering will in some cases prevent scouring. Water the animal before feeding in the morning and give no water afterward until he has been driven for from one to two hours, and then only a few swallows, and again a few swallows an hour later; and before his noon meal give him his full supply of water. In the afternoon drive practice the same. At night give him all the water he desires before he is fed, and after he has eaten his evening meal give him all the water he desires. Right here is a point in feeding and caring for horses that is generally overlooked. At night all horses that labor should be given a full supply of water after they have eaten their feed of hay and grain.

Medication is of little value in a case of this kind. It is not a disease to be cured as a rule, but the result of a habit of feeding, watering and driving. Horses become nervous in more ways than one. It is not always the things they see that make them nervous, with a scouring. A nervous driver will excite any horse of spirit and be likely to cause him to scour. Putting an overdraw check rein on a naturally low headed horse, or using a bit that does not set easy in his mouth, causing him to be constantly fighting the bit by tossing his head or swinging his nose around to relieve an aching neck will also do this. Of course, there are horses with weak digestion and their food will pass through the intestinal canal undigested. Young horses from three to five years old, while they are shedding and cutting teeth, will frequently have looseness of the bowels from not properly masticating coarse food; or the feeding of a laxative food, like clover or alfalfa hay, will produce looseness of the bowels; but I am speaking of the cases where the horse is not unduly loose in the bowels except when driven on the road and at work or when idle. This can be controlled by practicing the methods advised and not by drugs.—C. D. Smead, V. S., in Tribune Farmer.

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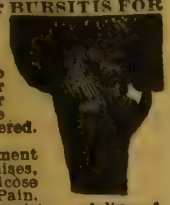
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Fattening Draft Horses.

It is commonly estimated that young draft horses gain in value when fattened, at an average rate of $25 a hundred pounds of gain. Of the common feeds used oats and hay are considerably more expensive than cottonseed meal and silage, in the amounts used to make a suitable ration.

The comparative fattening values of these rations have been reported by Prof. W. A. Cochel, in the Pennsylvania Experiment Station's annual report. Prof. Cochel draws his conclusions from an 84-day experiment with 24 horses, four to eight years old, of Percheron and Belgium breeds and of the type known as "chunks," or "light draft horses." These were divided into three groups, similar in all essentials, and stall-fed, with little exercise upon the following rations:

1. Corn, cottonseed meal, corn silage (a. m.) and mixed hay (p. m.).
2. Corn, cottonseed meal, mixed hay.
3. Corn, oats, mixed hay.

The experiment showed that horses can gradually be accustomed to silage, and eat it safely when it is sound and made from mature silage corn. Some animals do not really accept cottonseed meal, though the number of such animals is relatively small. Silage-fed horses consumed less grain, and were better finished and sleeker than those fed hay as the sole roughage. The use also of cottonseed-meal resulted in higher gain and better finish than where oats was the principal source of protein.

The cost a pound of grain, was, at ruling prices for feed: 1, 13.4 cents average, range 9.45 to 19.83 cents; 2, 13.7 cents average, range 10.38 to 19.05 cents; 3, 17.77 cents average, range 11.53 to 29.63 cents, the wide range being due to marked difference in individuality. The most profitable horse for feeding purposes is one of the quiet temperament and of typical draft qualities—clean short legs, wide cannons, and deep, wide chest and middle.

Windgalls.

These puffy swellings about the fetlocks, thought by the ancients to contain air, but now understood to be bursal enlargements due to the effects of work, concussion, strain, etc. are a terrible eyesore, and a great source of annoyance to horse owners who like to see clean legs, and there is generally a demand for treatment to get rid of them. Such treatment is rarely very successful, and though the swellings may temporally disappear, they become as prominent as ever as soon as the animal is again subjected to the causes which organally produced them. We have often seen horses that have been blistered and turned out for six weeks in the spring of the year come up with their legs as fine as those of a colt, but as soon as they are put into work again the puffy swellings invariably reappear.

The best thing to keep down windgalls is regular bandaging and hand rubbing. There is no class of horse whose legs are subjected to greater strain than those of the thoroughbred in training, and there is no horse whose legs, taken generally, are cleaner, or more free from windgalls. This is largely attributable to the regular careful bandaging and leg massage to which they are subjected. They practically live in bandages. In every case where an attempt to get rid of windgalls is made rest is essential. Rest always allays the irritation of the parts involved, and with the cessation of inflammatory action which produces it the increased secretion of synovia ceases. Friction and pressure, by rousing the action of the blood-vessels and absorbents, assist nature to take up the extra secretion. In getting up for sale horses that show these signs of wear—you rarely see windgalls on the extremities of a "slug"—dealers employ pressure, friction, "sweating" blisters, slight dose of madicine, a laxative diet, and give only gentle exercise; but the purchaser, when he puts the horse to work, generally finds the enlargements reappear, the more quickly because the treatment of the dealers' stable causes the animal to become "soft." Horses showing windgalls derive much benefit from cold water irrigation, followed by brisk hand rubbing, and the application of Newmarket bandages with a firm, even pressure. What is known as the blister charge is useful in the case of hunters showing windgalls at the end of the season.—Pateley Bridge.

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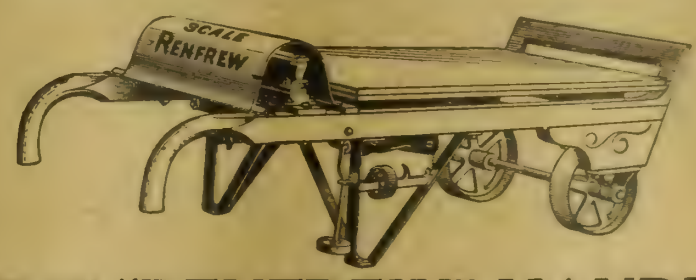

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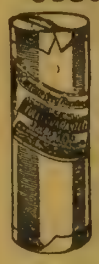

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GOOD TRAIN SERVICE UNDER SUMMER SCHEDULE

I. C. R. Change of Time Table Went Into Effect June 2nd.

The summer time table on the I. C. R. which went into effect on June 2nd., gives practically the same service in and out of St. John as last year. Number 2 express leaves at 7.10 a. m. No. 4 the Boston train for Point du Chene leaves at 11.20 a. m., carrying through sleeper to connect with the Ocean Limited for Montreal. No. 26 which connects at Moncton with thw Ocean Limited for Halifax departs at 12.20. The Sussex Express leaves as usual at 5.15 p. m. No.123. Express the connection with the Maritime Express for Montreal, leaves at 6.35 p. m. No. 10 Express the night train for Halifax departs as usual at 11.30 p. m. The Sururban service is the same as last summer, No. 132 leaving at 9.00 a. m. for Hampton; No. 136 at 12.15; No. 138 at 6.15 p. m., and No. 156 at 11.00 p. m. On Saturdays the noon suburban will be held until 1.15 p. m. to accommodate the suburban residents who have the Sarurday half holiday.

There is no change in the arrivals; No. 9 Express from Halifax arrives at 6.15 a. m. connecting with the morning train for Boston. The Sussex train arrives as usual at 9.00 a. m. No. 133 Express, connecting with the Maritime Express at Moncton arrives at 10.40. No.25 Express, connecting at Moncton with the Ocean Limited from Halifax for Montreal arrives at 5.20 p. m. No. 3 Express the Boston train from Point du Chene carrying the through sleeper from the Oceon Limited from Montreal, arriving here at 6.35 p. m. No. 1 Express from Truro arrives as usual at 9.30 p. m. The Sururban arrivals are: No. 131 at 7.45 a. m., No. 135 at 11. 15, No. 137 at 2.40 p. m., No. 155 at 8.20 p. m.

Each age of our lives has its joys. Old people should be happy, and they will be if Chamberlain's Tablets are taken to strengthen the digestion and keep the bowels regular. These tablets are mild and gentle in their action and especially suited for people of middle age and older. For sale by all dealers

POULTRY.

Some Diseases of poultry.

HEART BAG, DROPSY OF.—A complaint of not very frequent occurence; the symptoms are a staggering gait and the head thrown backwards. Fowls so affected are generally unable to feed, and the best course to adopt is to immediately kill them and thus save them pain and misery.

Jaundice is decidedly common in Canada, especially in the hotter districts, and numbers of poultry undoubtedly die of this complaint. It is, we consider, generally due to the too continuous use of food which contains too much oil, such as mealies; it is also frequently aggravated by birds being kept in close confinement. In appearance the subject is listless and mopish; the face generally has a yellow tinge which occasionally extends to the comb and wattles. A post-mortem examination reveals an abnormally enlarged gall bladder and frequent discoloration of the adjoining organs.

The treatment consists of an entire change of diet from which all foods of a fatty or oily nature should be excluded. One authority advises purging the birds with one-half to one grain doses of aloes, whilst others recommend 10-grain doses each of sulphate of magnesia and bicarbonate of soda daily for four or five days. We have found, however that if poultry are fed with care, and sufficient change of diet is given, together with plenty of green food and a bi-monthly dose of epsom salts, there is not much chance of this complaint making its appearance.

Liver disease is a general term largely used amongst poultry-keepers, and in the majority of cases the trouble with the organ is due to congestion.

The causes are similar to those of jaundice, lack of exercise being in our opinion a common contributory cause, for we have noticed that, in the case of Anconas, Black Leghorns, Campines and such light breeds which are very active in their habits and are continually on the move, liver troubles are seldom met with, whereas troubles amongst the heavier breeds, which are by nature more or less lazy and sluggish, it is of frequent occurance unless such birds can be induced to take plenty of exercise. The symptoms are not very pronounced, but affected birds are usually sluggish, and the droppings are generally tinged more or less with yellow or green. As the disease advances, lameness is often noticeable, and this is usually followed shortly by death. In the treatment the same measure as suggested for jaundice may be adopted; we have also found one-half grain doses of calomel administered daily for two or three days very useful both for liver trouble and jaundice.

Pip can hardly be called a disease, for it is usually due to some other organs or organs being out of order, especially the stomach or respiratory organs. The hard, horny substance which forms on the tongue causes considerable pain and inconvenience, and one cannot be surprised that the fowls fall in condition for the hard, sharp edges of the tongue make the mouth very sore, which prevents the bird from feeding freely.

It is common practice to tear off this scale, which drastic method is quite as painful as the trouble which it is supposed to relieve. The more humane, yet quite as effective method is to administer a dose of epsom salts and gently anoint the tongue with a little glycerine a few times, after which the scale will either come off itself or can be removed without undue suffering on the part of the patient.

Pneumonia is much more frequent occurance in poultry in Canada than is commonly supposed, especially where fowls are provided with no shelter and are exposed to all weathers and sudden changes; we have also seen several instances of this amongst the valuable show birds which have evidently contracted it through exposure on their journey to or from poultry shows. It is also undoubtedly due to certain instances to the inhalation of irritant matter, and we have known several birds dying of this complaint after a particularly strong and continued dust storm, whilst in other instances we have known of several deaths caused by poultry-keepers sprinkling the floors of the fowl-houses in a liberal manner with unslaked lime.

The symptoms consist of rapid breathing, thirst, ruffled plumage, and the birds will either stand with drooping head and wings or squat in a huddled manner.

The disease is so rapid and so frequently fatal that treatment is hardly worth attempting. The bird may be shut up in a warm place, the back above the lungs painted with tincture of iodine or turpentine, and a few drops of spirits of camphor and brandy in milk given at frequent intervals.

The diet must consist of soft food which should be of a nourishing nature; a little chopped liver daily will be of great help.

Scaly Leg is extremly common in Canada, and there are few yards where some indication of this cannot be observed, especially where poultry are confined in bare runs; fowls which have access to grass are not so liable to this complaint for the moisture seems to check it. It is due to the presence of a small insect which penetrates underneath the scales of the legs, causing the unsightly roughness. If taken in time this is easily cured, for in its early stages there is not much difficulty in destroying the parasite.

The simplest remedy is to scrub the legs of the fowl with soft soap and water, dry well, then rub them over with a rag which has been soaked in paraffin oil. It is necessary to repeat the treatment at regular intervals, about twice weekly is sufficient, until a cure has been effected.

WHITE COMB.—The cases of this usually met with are generally due to a parasite, though the term is occasionally applied to a bird which has lost the healthy color of its comb

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and face, either through improper treatment or feeding, or through close confinement in dark quarters, in such cases the remedy is obvious, change the conditions and treat the patient as in the case of anaemia.

When, however, the trouble is due to parasitic causes, no time must be lost, for it spreads very rapidly and only yields to drastic treatment.

The first indiration of this disease is usually observed by the appearance of a small patch of white on the comb of the bird. If this is examined closely it will be seen that it consists of a number of white spots about the size of a pin's head. If neglected, it spreads rapidly all over the comb, face, wattles, and frequently on to the neck, and if a bird affected with this disease is not immediately isolated it will spread contagion through the entire pen.

We have succeeded in curing this disease by regular applications of cyllin, which should be applied after the comb has been washed well and dried.

Another effective cure is to rub the comb with paraffin oil and then apply carbolic ointment.

Worms are a frequent source of trouble to poultry-keepers in Canada. The birds become weak and listless, walk with an appearance of stiffness, and lose condition generally. The best measures to adopt are to remove them into a small run, carefully clean up and burn all excrements every few hours, whilst a dose of 10 grains of ground areca nut given in milk while the bird is fasting will generally effect a clearance. A second dose may be given two days later, but in the interval care must be taken to see that all droppings are cleared up

Ground which has been carrying fowls with worms should be well limed and not again used for poultry for several months.

When it is noticed that a bird is out of sorts, do not leave it to recover of its own accord or die, but pick it up and keep it under observation until the trouble has been determined or a recovery affected.

If fresh poultry are bought, do not immediately place them with the other birds unless the yards from which they have been procured are above suspicion; if they have been purchased on the market do not place them in the runs with the other stock under any circumstances, but keep them isolated and under observation for at least two weeks.

Do not buy food for poultry because it is cheap, cheap samples of poor quality are generally the most expensive in the long run. A little good food is infinitely better than a lot of bad.

Do not neglect the fowl houses; a thorough spraying with a strong disinfectant once every month or so, especially during the spring and summer months, will save a great deal of trouble and probably many lives.

See that no decaying vegetable matter is left in the runs.

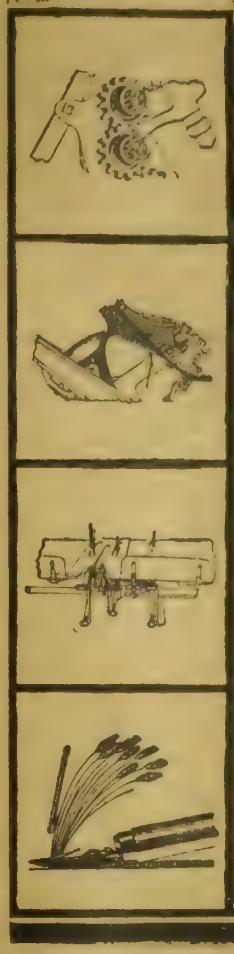
Do not allow the drinking water to be exposed to the sun; fowls enjoy a cool drink as much as do human beings, and sun-heated water and dirty drinking vessels are always a source of danger.

Do not overcrowd poultry either in houses or in runs; remember that small flocks give better results in proportion than if large numbers are kept together; overcrowding is another way of spelling trouble.

Use every endeavor to keep poultry on the move, give plenty of scratching material, such as stable manure, dry leaves, chaff, etc., and bury the grain in this; plenty of exercise tends to keep us all in good condition.

Remember that poultry require green food, also that grit must always be before them. A good dust bath must also be always available, or lice will become a source of constant irritation to the birds, which cannot be expected to thrive under such conditions.

Look at regular intervals for foul ticks in the cracks and crevices of the fowl-house, especially during the spring and summer months.



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Putting Away Your Next Winter Eggs.

When eggs are most plentiful and cheapest, either to sell or to buy, is the time to put them away to use when they are scarce and dear.

I have put them in the water glass solution just after Easter, and found them fresh and good the following Easter—the white being quite firm and whipping well. The waterglass is a liquid much resembling honey in appearance It can be bought in tins at drug or grocery stores, or if you are near a soap factory you will get it cheaper there. Use one part waterglass to seven or eight parts water. Have the mixture in a crock, and put the fresh eggs into it as you get them. Keep a plate on top to hold the eggs under the liquid.

Eggs are now so dear in winter that it is economy on the part of the housewife to put by ten or twenty dozens when eggs are plentiful.

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I have found the cure.

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Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

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THE FARM HOME.

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Dreaming of Home.

It comes to me often in silence,
When the firelight splutters low—
When the black uncertain shadows
Seem wraiths of long ago;
Always with a throb of heartache
That thrills each pulsive vein,
Comes the old unquiet longing
For the peace of home again.

I'm sick of the roar of the cities,
And of the faces cold and strange;
I know where there's warmth and welcome,
And my yearning fancies range,
Back to the dear old homestead,
With an aching sense of pain;
But there'll be joy in the coming,
When I go home again.

When I go home again! There's music
That may never die away,
And it seems the hands of angels
On a mystic harp at play
Have touched with yearning sadness
On a beautiful broken strain,
To which my fond heart wording—
When I go home again.

Outside of my darkened window
Is the great world's crash and din,
And slowly the autumn shadows
Come drifting, drifting in.
Sobbing, the night wind murmurs
To the splash of the autumn rain;
But I dream of the glorious greeting
When I go home again.

Love's Barrier.

(Concluded.)

CHAPTER xxv

THE UPWARD WAY

An English lady in a quiet brown travelling suit, and carrying a small valise, got off the boat at Chareaton at sunset on an autumn evening. The air was mellow, yet cool; and the fading leaves were swirling gently in the pensive wind. A few work-men returning from their occupation further up the river were the only other passengers, and they regarded her curiously as she stepped off at the little landing stage. One brown-faced, elderly man in a blue smock made pause a moment, and asked whether he could carry her valise. Helen thanked him in excellent French, and indicated her destination, the Convent of the Sacre Coeur. Instantly a look of sadness overspread the face of the work-man, and he shook his head.

"Ah, madame, it is impossible! It is no more!"

"No more!" cried Helen, her tone shrill with apprehension. "Do you mean that it is knocked down? Why, that is its bell ringing now for vespers. I remember it well."

"The bell may ring, madame, though always to us now it sounds like an knell," he made answer. "The cruel fate has overtaken the Sacre Coeur, the fate that threatens all France. The sisters have been turned out, and some say they have gone to England. Mon Dieu! that He should permit such things to happen and send no fire from Heaven! They who do not believe say He sleeps and laughs with scorn. But for the poor it is a serious thing. Here in Charenton they were our only friends."

Helen looked inexpressibly shocked, and at the same time perplexed. She had made so certain of this refuge that she had made no plans beyond it. And now it was the late evening, and Paris some distance away.

"Madame was for the Sacre Coeur, then?" said the old man inquiringly, with sympathy written on his face.

"Yes; I was educated there, and I thought to see them all again. I know not what to do now. Perhaps I ought to take the boat back again, but it has just gone."

"Only for fifteen minutes, madame; there will be another one. But what will you? There is no hotel good enough perhaps in Chatenton. We are only simple people, and the great do not visit us."

Helen smiled once more at the quaint and humble speech, inseperable from types of his class, but stood still undecided.

"Madame is undecided; but there is one of her own people still in the white house on the hill. The old English clergyman who used to live at Marny. You remember him, perhaps? He was greatly beloved."

"Why, yes, of course; I attended his church. Can it be possible that he is alive still? Why, he was an old man then; he must be very, very old now?"

"He is hale yet, and full of service for the poor. His heart ached with us when the sisters were driven forth, and in some measure he takes their place. He fills his days with good deeds for the poor; and though he is not of our faith, what matters it? What are we but children of the bon Dieu, every one of us, whatever name 'l ourselves by."

Helen looked no longer undecided. "The white house on the hill! I will go there. Is it far?"

Jaques set down the valise, and pointed with his brown and withered forefinger up the slope to a white house with green shutters set in a pleasant orchard on the ascending slope.

"I can walk that distance if you can help me with my bag. I will give you two francs."

Jaques's answer was to shoulder the valise and turn his face manfully towards the house on the hill.

"But first take me round by the Sacre Coeur. I know thw way. It will not add more than five hundred yards to our walk."

Jaques cheerfully acquiesced, and they truged by the river bank a few yards until the whole edifice of the convent, with its high protecting wall, its iron gates with the branching chestnut flanking its pillars, came into view. Arrived before the gates, the old man set down the valise and took off his cap. Helen stepped forward and looked through the bars up the long, straight line of the chestnut avenue, which terminated in the open space before the cloisters. A deep and melancholy silence brooded over the deserted place; the grass was grown between the round cobbles and the flags of the courtyard; the windows were darkened; the doors, that had ever been open wide to succour the poor and needy, were bolted and barred. The whole place murmured of death and decay. Helen's eyes filled with tears. She had yearned for the peace of the place, for its old memories, its aloofness from the sin and sorrow of the world. And lo! it seemed to her overcharged heart that the last prop was taken away, and she was left desolate and stranded in a wintry world.

Jaques loved her for those tears; and when she wiped them away, and began to walk again, he trotted contentedly by her side, telling of the evil times just before the sisters were swept out, and of how their ministry was missed in the place.

"Look you, madame; there is no sense nor justice in it. It is true that some were bad, very bad, and that the scandals called for loud redress; but here it was different. Le bon Dieu Himself could not have done more for His children than our little sisters."

Helen sighed as she aquiesced. She had followed with interest the cleansing of the religious houses of France, but had never dreamed that the only example she knew would be called to suffer the common fate. Charenton had always seemed immune, remote from the world.

They did not talk further as they walked; and in a short time they had climbed the gentle ascent and arrived at the white and green gate of the parsonage house.

"Monsieur is at home, I know," observed Jaques cheerfully. "But perhaps madame would like me to wait till she makes certain."

"Yes, wait, in case I wish to go back to the boat."

Jaques stood still in the narrow path, keeping guard on the valise, while Helen walked up without shrinking to the door. Her knock was answered by a middle-aged servant wearing a blue linen frock and a white mob cap, who, in answer to her inquiry for Mr. Bethell, bade her enter, and at once showed her into a little salon, where the old pastor was reading the evening paper. Helen remembered his tall, spare figure, his thin, fine, intellectual face, and found him little changed, except that increasing age had created a more spirituelle look. His smile was benign as he rose to greet her.

"You do not remember me, Mr. Bethell," she said a little eagerly. "I was a pupil about twelve years ago at the Convent of the Sacre Coeur. I came here to-night thinking to pay them a surprise visit, and remain quiet for a little. I find nothing. A workman who carried my valise told me you were still here, and I thought I should like to see you."

"Surely," said the old man, with his ready and beneficient smile, "you are very welcome; and if you can stay with us for a little my daughter, no less than I will be pleased. We do not often have a visitor from the outside world." He searched her face as he shook hands with her, but failed to recall her by name.

"There is something familiar, but there were so many in the years we were at Marny."

"Yes, yes; I quite understand. My name was Revell—Helen Revell. I came from India; perhaps that will help you."

"Your father was a soldier—a distinguished soldier, I think, Am I right?"

"Quite right," said Helen hastily. "And if you are so kind as to permit it, I should very much like to remain all night, to hear further about the convent, and all that has happened in Charenton since I went away. I never had happier days than those I spent with the sisters at Sacre Coeur."

"They are sadly missed here, Hiss Revell, or perhaps I ought to say madame now?"

"I am married," answered Helen simply. "My name is Secretan."

"And where have you left the man with the valise?"

"He waits outside. May I ask him to bring it in? But you spoke of your daughter. Will it not be better to ask her first whether it is convenient to have an unexpected visitor invading your house at this hour?"

"Lucy has gone to Paris and will not return before nine. I shall be having my evening meal presently, and you will share it, which will be uncommonly pleasant for me. It is sure to be convenient. Lucy makes no trouble of anything. Let me send Babette for the bag."

"I must see the man myself to pay him and to thank him; he has been so kind coming out of his way with me," said Helen gratefully, and left the house to relieve Jaques, feeling a wonderful sense of relief and peace. Within half an hour she had made herself at home in the parsonage house, and the feeling of blank disappoinement she had experienced before the closed gates of the convent had passed away.

When Lucy Bethell, a handsome, middle-aged women, with a kind face returned, she was both surprised and pleased to find a guest in the house. She took it all as a matter of course, bade Mrs. Secretan welcome, and Helen fell asleep that night with the comforted feeling of one who, wandering in the wilderness, suddenly had come uoon a home.

She did not leave Charenton next day, nor the day after that; a week found her still an inmate of that peaceful home, endearing herself to the inmates, and giving them so much new interest in life that they would not listen to her talk of going. They easily surmised that she had some trouble at her heart. Beyond informing them regarding her husband's occupation and the situation of her home, she spoke very little, at least directly about herself. But during the long talks they had, both indoors and out, Mr. Bethell and his daughter arrived at the same conclusion—that their guest was wrestling with some problem, seeking the solution of the difficulty that had

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brought such a pathetic look into her eyes.

It was no part of their creed (who had comforted so many) to seek to probe into the inner sanctuary of her heart; but the day came when she spoke out of her own accord. It was on one of the golden afternoons when they wandered in the apple orchard, where the fruit was ripening red and gold in the sun, that Helen unburdened her heart to the old man, who, though living out of the world, had never lost the understanding heart. He listeed with the greatest attention, never interrupting her once, while she tried to set before him in simple, clear language the story of her life, more especially the story of the past two years.

"I have arrived at a point where I need someone wise and good to tell me what to do," she said in conclusion. "Will you be that one? Perhaps God guided me to you. Certainly I felt that I must come to Charenton, though it was to the Mother Superior of the Sacre Coeur I expected to tell my story."

The old man hesitated a moment, looking with great compassion and kindliness into her beautiful face. He laid his hand gently on her arm, and drew her to a little arbour that had been set up in a sheltered corner of the orchard, and made a charming retreat alike for the summer sun and the autumn wind.

"Sit down here, my daughter, and let us look this thing squarely in the face," he said; and Helen, conscious of nothing but profound relief, waited without tremor haste for the verdict. It did not in the least surprise her when it came after a few moments, in accents quite clear and firm.

"The way of duty is clear, my daughter. You will have to go back. You will have to take up your life where you left it. There is no other way."

"But I am misjudged, mistrusted, kept on the outside," said Helen with difficulty. You can never have lived in such an atmosphere, and you do not know what a soul destroying thing it is."

"I think I can understand. But it is just here where you must show yourself a strong and a true women. You must rise above suspicion, distrust, coldness, and by love conquer them all."

"But there is no love to help me," said Helen in the same difficult voice, for it was a hard thing for her to lay bare her soul, and only dire need could have made it possible. "A heart constantly thrown back upon itself becomes slowly, but quite surely, hardened. I can live away from my home in peace, but I can not live in it under the conditions that exist as I have tried to describe them to you."

"It seems to me," said the old man slowly, "that the whole situation is based on a false conception of your duties to one another. As you have confided in me, we will confine ourselves, in the first iustance, in that particular duty. Shall I tell you how it appears to me?"

"Yes, surely. It is what I wish to hear."

"Then, undoubtedly, you have failed in not laying bare your whole heart to your husband. He was entitled to it. A priest is only a man, and his failings are very human. You might, I think, have trusted to his judgement, his Christian tolerance. You did not give them a fair chance."

"He did not give me a chance," she retorted quickly. "He condemmed me unheard on the evidence of an anonymous letter. Could anything be more degrading to a women?"

"He suffered, too, my dear. I do not seek to defend him, only I see in him the conduct of a man who was distraught, and who did not know where to turn. Can you not give him the benefit of the doubt, and grasp the fact that his very hardness arose out of the depth of his love for you, his fear to loose you?"

"It seems to me," observed Helen in a low, tired voice, "that there is something in the marriage bond which makes things harder than they are elsewhere. Even when there is love, it is always a jealous love."

"Then it is of the earth, earthy, and has never been purged by the divine fire," returned the old man without a moments hesitation. "I have seen and known much of the sorrow of life, but I have never known love—the true love, which has very little of self in it—to fail. It conquers all."

"Mine will never reach such a height, then," said Helen hopelessly, "because I want personal happiness for myself."

"Tell me, why did you make this marriage, which you have admitted was not, on your side, wholly disinterested at the beginning?"

"I thought I had made that clear—I married to escape an intorable situation."

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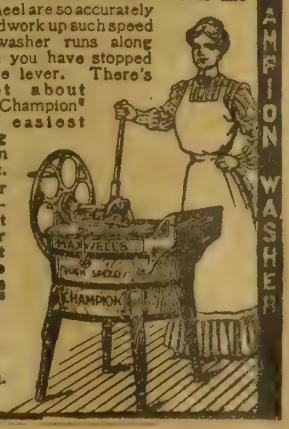

DAVID MAXWELL & SONS, St. Mary, Ont.

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"And now you would leave it to escape another intorable situation," he said, with a gentle irony which slightly deepened her colour.

"Then your sympathy is not with me?" she said a little hurredly, as one who has been wounded by a word.

"My sympathy is entirely with you. But I would be just, my dear, and prevent, if I could, this shipwreck which is threatening your life."

"It is not only threatening it; it has overtaken it," she said quickly. "I shall never go back."

The old man streched out his thin hand, and laid it with a firm insistence on hers.

"Never" is a long word, my child, and should not be spoken in haste. As you say, the desire for personal happiness is insistent, and while it is not in itself a wrong desire, it should not be the first. The whole lesson of life, as I understand it, is this—that we are put here, not so much to obtain happiness for ourselves, as to create it for others. Your heart, no less than your conscience, will tell you how far short you have fallen of this ideal."

"I did my best," she answered simply and humbly. "And I thought some of the people loved me."

The humility and pathos with which these words were spoken touched the old man inexpressibly.

"It is because you have this power to win others that your responsibility is the greater. You can influence many, and you must be above reproach yourself. More is required from those to whom the gifts have been given."

More sacrifices, do you mean? Then I am to cease caring about my own happiness?"

"You grasp my meaning, though you take out of it more than I wish. My daughter, you will learn, as you grow older, that in the pathway of duty, even while the skies are grey and weeping, the only true happiness is to be found. All else is confusion; God has so ordained it."

"So my duty is to go back?" she said dully, for it was born in upon her that there was no escape.

"Undoubtedly. What you did was a noble thing; you saved a sweet and pure young life from degradation without counting the cost to yourself. That will not be forgotten, nor yet go unrewarded.

But the action was incomplete. You must make full confession to your husband, and then abide by his decision."

"He is a hard man, and though I go back I might have to leave my home again, and in more painful circumstances. When must I go?"

"There is no haste," he answered affectionately. "It is a great joy to Lucy and to me to have you here. Stay and rest. Your husband is away; and even if he were not, it will be good for him to feel your absence a little keenly. Stay and rest until God shows you the way."

With this suggestion Helen was happier having relieved her mind, and made her whole position clear to her kind entertainers. A few more days slipped away in quiet Charenton, and Helen felt herself gaining in bodily strength as well as in peace of mind. On the fourth day she wrote to Jane, and likewise to Cynthia at Colchester. And still she waited, with a curious certainty that a day would dawn when she should be left in no doubt as to the way in which she should walk.

She was lying down one afternoon in the little guest chamber, which looked out upon the laden orchard, not asleep, but going back, as she so often did, on every detail of the past, when Babette knocked lightly at the door.

"If you are not asleep, madame, will you come to the salon to Mademoiselle Lucy? She has need of you."

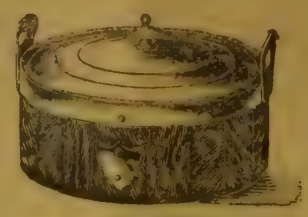
Helen sprang up ready and willing.

"In a minute, Babette. Tell mademoiselle I shall be down immediately."

She plunged her face into the cool water, hastily brushed her hair, and slipped down the polished stairs. The house was very still. She imagined she heard the sound of voices proceeding from the salon; but when she opened the door there did not seem to be anyone there. The long win-

B. 7538

B. 7558



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dow of the room opened upon a small terrace, and as she stepped towards it someone came from the outside—a tall figure, in a very English overcoat, his face turned eagerly towards the door. The next moment she felt herself wrapped warm and close in his arms, and heard his voice, broken by the deepest feeling that can stir a man's heart, murmuring words of endearment and imploring her forgiveness.

"My wife, my own darling, my Helen, can you ever forgive me? I have been hard, unjust, cruel; but I did not know I made the place so bitter for you that you could not bear it. My poor wife, forgive me and come home."

She suffered herself to rest quietly for a moment, conscious of nothing but an overwhelming sweetness and joy. She had no questions to ask; it was enough that by some strange means the curtain of shadows had been rolled back, and the sun was out upon her life once more. It could not be her letter to Jane or to Cynthia, because they could not yet have received them. After all, what mattered the means so the end was here? For her heart told her this was love, the love which can so illumine the pathway of life that it becomes a heavenly place.

"When I got home and found that you had left me I was a man distracted. Yes, it was a week earlier than I expected. My conscience would not let me rest. I came to myself. Why did you leave Midcar? I want to know the worst, to see myself with your eyes."

"I had to get some light on my life. I needed peace, and I did not know where to turn. But if you had stayed away the full time you would have found me at home before you; I was going back to-morrow."

"I am in time to take you then. Thank God!"

"But, Claude, I have been wrong too. You will hear my story first?"

"I will hear from you only one thing, Helen, and that is that you forgive and love me still. I know enough. I went to Geoffrey Hayes in my misery, and he told me everything. He said you would absolve him from silence because of the issue at stake. You are enshrined in that good man's heart as a saint might be. It is only I who have been blind."

Her hand on his lips sought to silence him.

"Tell me how you knew I was here she asked at last.

"I wired to Cynthia, and she answered bidding me try Charenton. But before I started I received Mr. Bethell's letter, and here I am."

"So he wrote!" said Helen with a little smile, and at that moment the door was softly opened, and the kind old face with its halo of white hair peered in. They made haste to draw him into the room to thank him for what he had done and to assure him that all was well.

So they were called back to earth which promised them some of that happiness which gives a foretaste of heaven.

* * * *

Some years have passed away since these poignant weeks in the experience of Claude Secretan and his wife. They have left Midcar, and are to be found in a large and important parish in a great city. Secretan has made his mark, and those who know predict a bishopric for him, while he is yet in his prime. He is ably assisted in his many labors by his wife, and their home life is happier than most. Bound together by their common love for the Lord Jesus, their lives are concentrated in the best and widest sense. They have never been forgotten in the moorland parish where their married life began, and, with their children, pay frequent visits to Jane, the beloved Lady Brede of Mardocks, and sometimes to Audrey, now the happy wife of John Ridd. Nor is Colchester quite forgotten. They have drawn Cynthia into the orb of their gracious influence, and she has learned from her stepdaughter that it is impossible to be supremly happy without much that the world counts as riches.

One other place Secretan and his wife often revisit, and always quite alone—the white house with the green shutters on the hill behind Charenton where the apple orchards look down upon the flowing Seine. For that old house witnessed the reunion which was their real marriage, and with which the actual journey of life began.

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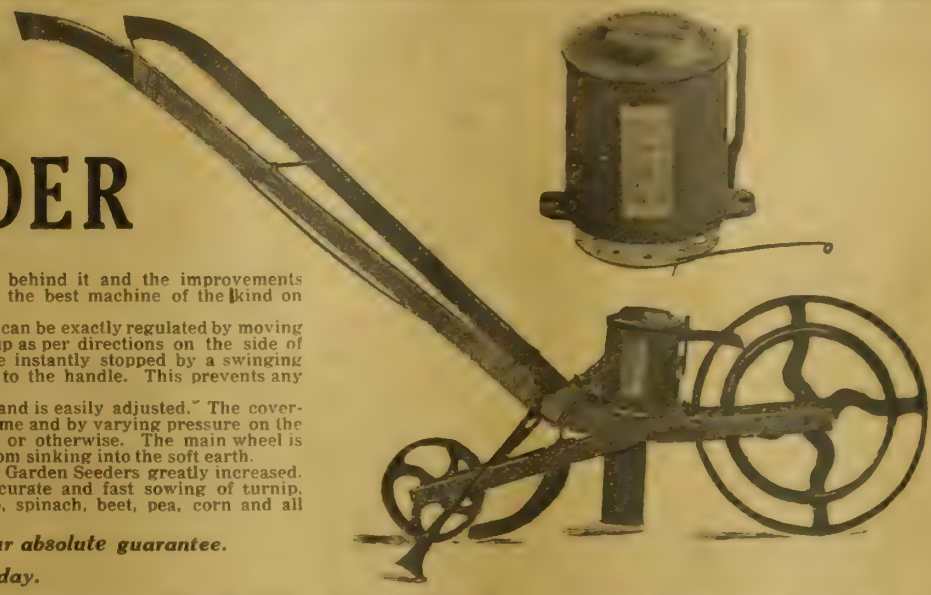

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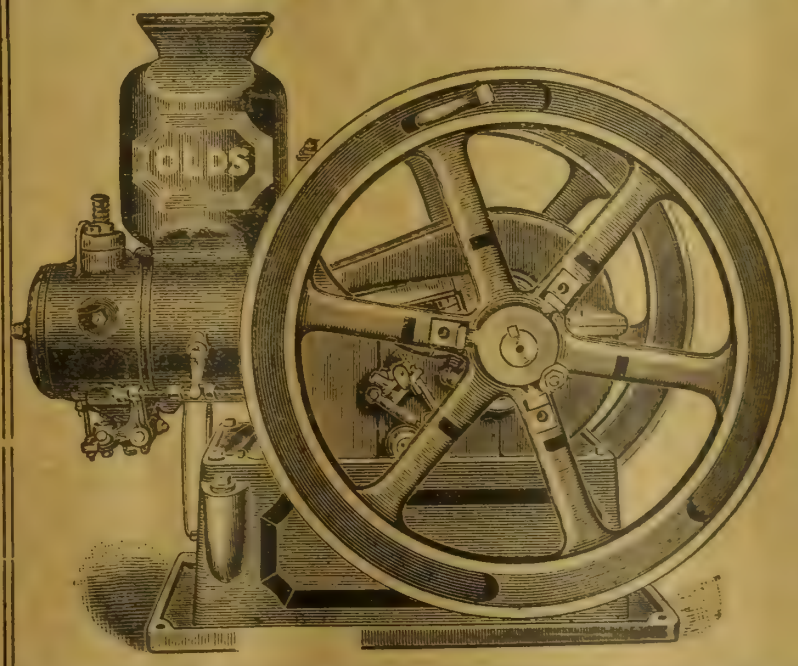

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FLORICULTURE.

A number of Maritime Farmer subscribers wish to know how to make Geraniums bloom. One has has tube roses that grow well but do not bloom.

Turn geranium out of the pot and examine the ball of roots. If it is in good condition the probable cause of failure to bloom results either from too large a pot, too much root room and over watering or else keeping the plant in a shady situation, any one of these conditions being more favorable for production of foliage than bloom. For production of bloom keep your plants moderately pot-bound watering only when needed which is whenever the top soil shows slightly dry, then water well. Give them all the sun you can, and, if strongly pot-bound, occasionally a dose of weak manure water. Treated in this manner Geraniums should give an abundance of bloom.

The reason why your tube roses do not bloom is that the centre of the bulb cobtaining the germ of the flower stalk has rotted. This is a not uncommon occurence if the crop of tube rose bulbs was not properly cured, when taken from the ground and dried out, a large percentage of the bulbs will lose the flower germ. Such bulbs will throw up foliage and make offshoots or young bulbs but will never bloom. The young bulbs, if planted in a rich soil for two years will become blooming bulbs but such cheap bulbs do not pay to take that trouble. Throw your old bulbs away and try new ones.

A few readers have sent away for roses of different varieties and I have received inquiries from readers of the St. John Globe as well as from readers of the Maritime Farmer asking if hardy roses can be procured in the Maritime Provinces and, if so, whether they would not be better than imported stock.

It has always been a subject of wonder to me why so many people will send so far for roses which, in most cases, are grown in a very warm climate, and nearly always budded stock, when good healthy plants, grown on their own roots, in Maritime soil can be obtained from our own florists. Many of the readers who have had experience with imported stock will hear me out in this.

I. H. writes:—What shall I do with my hardy roses and some of my shrubs that have long black stalks.

All hardy roses and shrubs should be pruned as soon as they are sufficiently leaved out. This season has been so backward that it was hard to decide very early as to which branches were alive and which wece dead. Destroy all sprouts off the roots and stems below the bud of all budded roses as they are worthless and, if they are allowed to grow they lower the vitality of the crown.

R. O. C., St. John, writes.—Last fall I planted tulips. The bed is about twelve feet long and the bulbs are blooming nicely at each end but the sides are failures. On examination I find that part of the bulbs are rotten. How would you account for this condition and how can I guard against it for next season.

Your bulbs were probably destroyed by poor drainage at the low parts of the bed. Tulips receive well drained soil and if planted in low, wet spots they nearly always fail. Next fall raise the bed to overcome this difficulty.

H. A., writes:—Tell me what to plant in my garden at my country home?

Some hardy plants of the old fashion sorts that are so pretty, bloom so freely and require so little care and come up year after year, each season better than the last would be all right for your country garden. The Larkspur ranging in colors from white through shades of blue to deep maroon should be planted in clumps so that they can be staked; their foliage is pretty after the bloom has gone. Lupines, Gallardias, For-get-me-nots, Sweet Rockets all blooming in succession produce a pleasure denied to the growers of annuals alone, pleasing as they are. In a bed next to a house wall or fence that has sunshine a part of the day, plant Hollyhocks next to the wall then a row of Larkspur and then a row of Gallardias in front leaving room for a border of Primroses, Forget-me-nots and Daisies. A few annuals may be planted between the groups so that one can have bloom from spring till fall.

The Production of Mutton as Influenced by the Application ot Manures to Pasture.

Following is a report of experiments carried on during fourteen years simultaneously in several districts in Gteat Britain with a view of ascertaining the results of manuring permanent pastures.

The trial fields were pastured with sheep the results being obtained in terms of live weight increase. Following is a summary of the conclusions reached:—

1. Cake of various sorts was fed to sheep on pasture on 11 centres, and in no instance was the outlay on the cake recovered in the increased mutton produced by the sheep in the season when the cake was consumed.

2. In the latter part of the grazing season sheep getting liberal allowances of cake did not increase in weight to a greater extent than those getting no cake, but which were grazing pasture that had been improved by liberal dressings of basic slag.

3. The residual values of cake were occasionally higher than is usually eseimated, but, in comparison with basic slag, cake-residues had a poor ameliorative effect on the pasture.

4. Even when both direct and indirect effects of cake are taken into account, the original outlay was not recovered at two of the three main stations. This result was confirmed at such of the minor stations as were concerned with this problem.

5. It would appear to be bad practice to feed cake on pasture containing much clover, as the nitrogen in the cake residues has a tendency to repress the clovers by stimulating the non-leguminous plants.

6. Common burned lime, used alone at the rate of four tons per acre, has proved very ineffective; but smaller dressings of ground lime, when added to a phosphatic dressing, have sometimes been justified.

7. Basic slag applied as a single dressing at the rate of half a ton per acre, has generally proved a most effective agent in improving the feeding value of pasture, and its effects are not nearly exhausted at the end of nine years.

8. It has proved much more profitable to apply a heavy dose of basic slag as a single dressing, than to divide it into two equal portions and apply these with a three years interval.

9. A repeated dressing of basic slag has, however, had a marked effect in some cases, and the productiveness of slag pastures that are showing signs of exhaustion can be rapidly improved in this way. This action of a repeated dressing appears to be more rapid in many cases than the action of the first dose.

10. Basic slag put on in the middle of June had much more effect than the same quantity applied in winter.

11. Where a direct comparison has been made between the effects of equal quantities of phosphoric acid derived from basic slag and superphosphate respectively, the former manure has always produced the greater amount of live-weight increase; When the

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I should be the means of pointing out to you or other men the straight and sure, if narrow road to new manhood, new powers, new capacities for a better and more glorious physical and vital development, then in doing this I have rendered a great and lasting service to my fellow beings, and one which is infinite in its power for good

This self-same VITALITY, this builder of manhood and manly vigor, may easily be regained, and I will tell you how.

Have you ever stopped to consider that it is this VITAL FORCE which makes rugged men the real men that they are? It is this same MAN FORCE which is behind every great achievement in the world to-day, which gives the flower of our army and navy the courage to meet and face death unflinchingly, which gives the rough and rugged man of the plains that compelling power to rescue at all odds a loved one from some great peril, as our illustration here portrays, and it is this self-same, identical VITAL VIGOR which I must impart to you, reader, if you are not the man you should be.

Therefore, if I give you new vitality, I make you young again, and keep you feeling young the balance of your days. By increasing your vital supply, I soon have you answering "Simply feeling fine" to your friends' morning greetings, while they in their turn will secretly marvel at the wonderous change for the better which has come over you. A thoroughly vital, manly man is the greatest inspiration in the world; his power and fascination are felt by all women and all men alike who are near him. Nothing but death can conquer the giant of strength and manly vigor. On the other hand, how different with the half-man, the neurasthenic degenerate, who is burning up his vitality in dissipation and excesses! Is there any sight more pitiable, more repellent to one's sense of decency, then the weakling who deliberately kills his manhood and self-respect by acts of willful debauchery? Such a man has neither my sympathy nor can he proft by what of wisdom I can impart. But any man who is willing to make a fair, square fight for the return of his lost vitality and lost manhood, who will promise faithfully and honestly to discontinue any debasing practices or excesses he may be indulging, who will help me thus by helping himself to such, no matter how despondent he may be, no matter how weak and debilitated, no matter what years of folly have passed, to such a man I can offer all the encouragement in the world. Just lead a decent man's life, my friend, and then increase your VITALITY. All else will come.

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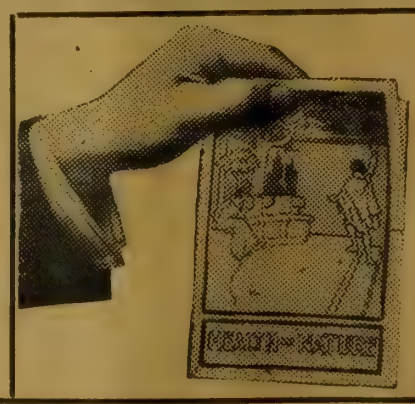

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cost of manure is taken into account the profits from the use of basic slag have always been much greater than thase from superphosphate.

12. Potash added to a phosphatic dressing generally resulted in the production of more live-weight increase, but this increase was not a profitable one.

13. The addition of moderate dressings of sulphate of ammonia or nitrate of soda to land already treated with phosphate has increased the yield of herbage, but has, as a rule, reduced the yield of mutton. The use of nitrogenous manures on pasture would, therefore, appear to be bad practice.

14. Dissolved bones compare badly with basic slag and superphosphate, This is doubtless due to two reasons: (a) the slower action of part of their phosphate, and (b) the presence of nitrogen. But the nitrogen of dissolved bones, being less active than that of sulphate of ammonia, the general effect on the sheep of the dissolved bones has been better than that of a mixture of superphosphate and sulphate of ammonia. The use, however, of dissolved bones on pasture would seldom appear to be justified, and especially so as their phosphoric acid costs more than the same substance in basic slag.

Small Versus Large Seed Potatoes.

In 1908 a trial was made in the use of small and large seed. It was found for that year that when large tubers were planted (using about 35 bushels of seed per acre), the value per acre of the crop, less the cost of seed, was about twice as large as was the value of the crop when small tubers were used for seed were very large, many about 5 bushels per acre.

The same experiment was repeated in 1910. The Vermont Gold Coin was used in this trial. The large tubers used for s?ed were very large, many of the smaller ones being large enough for cooking. A third plot was planted as a check plot, using cut pieces for seed. The following table gives some of the results:

COMPARATIVE VALUE OF LARGE AND SMALL POTATOES FOR SEED

Size	Seed per acre. bu.	Yield per acre, bu.	P.C. value less.	market cost.
Small.....	13 0	88.9	92.3	$ 80.32
Large.....	76.5	162.3	92.4	130.30
Cut.....	9.4	115.7	96.0	109.36

The tubers were valued at thirty cents per bushel at planting time, and at one dollar per bushel at digging time. The spring price was the very highest obtainable, while in the fall potatoes were being retailed at $1.50 per bushel. For conditions of 1910 the very large amount of seed used is seen to be justified. No allowance is made for the increased cost of planting or for the increased cost of digging and marketing, but, making a generous allowance for these items, the heavy seeding would still show excellent profits.

It is well known that the increased showing of potato seed will increase the yield, but it is often a question to what extent the heavy seeding can be carried at a profit. In the spring of 1910 potatoes were a drug on the market. Many farmers could not sell what they had on hand. With such a condition it is always to sow an abundance of seed. The seed costs but a little, the heavy seeding will produce an increased yield, and as a general rule potatoes are a good price in years following low prices.

From the table it is seen that the check plot with cut seed produced a greater yield per acre than the small seed, although the amount of seed used in the check plot was the smallest of the three plots. The heavy seeding had the greatest number of stalks per hill, but we did not find an appreciable larger percentage of small potatoes on this plot. Particular attention was paid to this, and a study was made of the number of stalks North Dakota Agricultural College, and the number of small and large in 3rd annual report of Dickinson tubers for each hill.—C. R. Waldron, sub-station.

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FOR SALE

A very fine Gurnsey male fit for service. Solid fawn, well set up in the pink of condition. An animal of great promise, no better bargain in the Maritime Provinces. We consider he is so entirely satisfactory in every way if purchaser is not pleased he can be returned at our expense. Price within the means of anyone who wishes to purchase a good registered sire. All necessary information on application.

Sarah E. Moses Smith
Woodward's Cove Grand Manan.

THIS IS YOUR LAST CHANCE THIS SEASON to get registered Yorkshire pigs 6 to 8 weeks old for Five dollars. Boyd A. WETMORE, Bloomfield Station, N. B.

WANTED—A first class BUTTER MAKER, one who can make a choice article and who thoroughly understands testing, etc. Address with references and stating the wages wanted to SEC. FARMERS DAIRY & PRODUCE CO., P. O. Box 331, St. John, N. B.

MARKETS.

St. John.

DRESSED MEATS—Beef (carcass), 12c. to 13c.; Beef (retail), 10c. to 24c.; Mutton, 10c. to 12c.; Veal, 8c. to 10½c.; Pork, 11c. to 11½c.

POULTRY AND POULTRY PRODUCE—Eggs, 19c. to 22c.; Fowl, 20c. lb.; Ducks, $1.25 to $1.50; Turkeys, 20c. to 22c.

MISCELLANEOUS—Hay, $15.00 to $18.00 ton; Straw, $8.00 ton; wool, 14c. to 21c.; Beef Hides, 11½c.; Calf Skins, 18c.; Sheep Skins, 15c.; Lamb Skins, 15c.

VEGETABLES—Carrots, $2.75 to $3.00; Potatoes, $2.25 to 2.75; Turnips, 80c. to $1.00; Beets, $1.60 to $1.80.

Halifax.

GRAIN—Oats, 60c. to 61c. per bush. Barley, $1.75 to $1.80 per 100 lbs.

FEEDSTUFFS—Bran, $27.50 to $28.50 ton; Shorts, $29.00 to $29.50 ton; Middlings, $29.50 to 30.00 ton; Oil-Cake, $2.35 to $2.40 per 100 lbs.; Corn Meal, $1.90 to 1.92½ per bag.

GRASS SEEDS—Timothy, $1.90 to $1.92½ per bag; Com. Red Clover, 23c. to 25c. lb.; Alsike, 21c. to 23cf lb.

LIVE STOCK—Milch Cows, $40.00 to $50.00.

DRESSED MEATS—Beef (carcass), 9c. to 13c. lb.; Beef (retail), 16c. to 24c. lb.; Veal, 7c. to 10c. lb.; Pork (retail), 15c. to 17c. lb.

HORSES—Drafters, $250.00 to $325.00; Roadsters, $225.00 to $300.00.

DAIRY PRODUCTS—Creamery Butter, 29c. to 30c. lb.; Dairy Butter, 26c. to 27c. lb.; Cheese, 15c. to 16c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 20c. to 21c. doz.; Fowl 16c. to 18c. lb.; Chickens, $1.30 to $1.50 prf; Ducks, 18c. to 19c. lb.

MISCELLAEEOUS—Hay, $15.00 to $17.00 ton; Straw, $9.00 to $10.00 ton.

VEGETABLES—Potatoes, $2.75 to $2.80 per bbl.; Turnips, $1.40 to $1.50 bbl.

Charlottetown.

GRAIN—Wheat, $1.25 to $1.60 per bushel; Oats, White, 55c. to 62.; Black, 60c. to 65c.

FEEDSTUFFS—Bran, $1.45 to $1.55 Shorts, $1.55 to 1.65; Middlings, $1.60 to $1.70; Oil-Cake, $2.40 to $2.60; Cottonseed Meal, $1.90 to $2.00; Corn Meal, $1.20 to 92.25.

GRASS SEEDS—Timothy, 16c. to 18c. per lb.; Com.Red Clover, 24c. to 28c.; Mam. Red Clover, 26c. to 30c.; Alsike, 23c. to 26c.

LIVE STOCK—Butcher's Cattle, 6c. to 6½c.; Stockers, $18.00 to $35.00, live weight; Milch Cows, $25.00 to $50.00; Sheep, 3½c. to 4½c., live weight; Lambs, $3.25 to $4.00 each.

DRESSED MEATS—Beef, (carcass) 8c. to 12c.; Beef, (retail) 8c. to 16c.; Mutton, (retail) 10 to 14c.; Veal, (carcass) 4½c. to 6c.; Pork 10½c.

HORSES—Drafters, $150.00 to $225.00; Roadsters, $150.00 to $225.00; Carriage, $150.00 to $225.00

DAIRY PRODUCTS—Creamery Butter, Solids 28c. Prints 29c.; Dairy Butter, 23c. to 25c.

POULTRY AND DAIRY PRODUCTS—Eggs, 19c.; Fowl, $1.00 to $1.60 per pair.

FRUIT—Apples, about $100 per bushel.

MISCELLANEOUS—Hay, $12.50 to $13.50; Straw, $6.00 to $7.00; Wool, 25c.; Beef Hides, 10c.; Calf Skins, 12c. to 16c.; Sheep Skins, 80c. to $1.00; Lamb Skins, 15c. to 25c.

VEGETABLES—Potatoes, 50c. to 55c.

Since last report trade has been steady in all lines and prices low with few exceptions about as before. Potatoes have been offered fairly freely and shippers are not wanting to buy many more than orders call for, as the labor and loss incurred, should they be held on bond for any length of time, in sprouting has to be considered. The demand has been very fair but not as brisk during the past days as could be wished for with the result that prices are easier today. 55c. is the outside figure being paid by shoppers to farmers and lower prices may rule next week unless demand improves. There is quite a lot of hay offering but transportation is not available consequently it is moving very slowly. Oats are scarce and prices are above what shippers can afford to pay. Eggs are steady at 19c., supply being one thing short of last season. Dressed pork is about out of the market, the prices paid for the last offered was 10½c. for selects, including weight of organs. Butter is offering more freely and lower prices are expected. New cheese will soon be on the market, most of the factories being at work now.The weather conditions are just what is required for the growing crops and every thing looks good, the show for grass being the best for many years.

It is now well known that not more than one case of rheumatism in ten requires any internal treatment whatever. All that is needed is a free application of Chamberlain's Liniment and massaging the parts at each application. Try it and see how quickly it will relieve the pain and soreness. Sold by all dealers.

International Poultry Food

Prevents Cholera and Saves the Little Chicks

A little chick is just like a little baby—its health depends on its food. Improper feeding opens the way for disease. Chicken Cholera, Roup, Apoplexy, can be prevented and cured by feeding INTERNATIONAL POULTRY FOOD.

My chickens had Cholera until some of their combs were turning black. After using a few feeds of "International Poultry Food," I never lost another fowl, and Cholera has left my premises.—J. F. BARNETT.

Give all your chickens a daily feed of "International." It keeps them well—fattens up the broilers—makes hens lay all the year round—keeps the cocks vigorous—and insures raising the little chicks. If you want to make money out of your fowls, feed "International Poultry Food."

25c., 50c. and $1.00 a box. At dealers everywhere. Write for free copy of our $3,000.00 Stock Book, the greatest book ever written for farmers.

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Limited
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TO LEARN THE BARBER TRADE

Short hours, easy occupation, good salaries.

We make you a first class Barber in Eight Weeks.

Tools supplied free. Write for catalogue—it costs you nothing.

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41 Craig Street, East - - Montreal.
734 Main Street - - St. John, N.B.

Dates to be Remembered

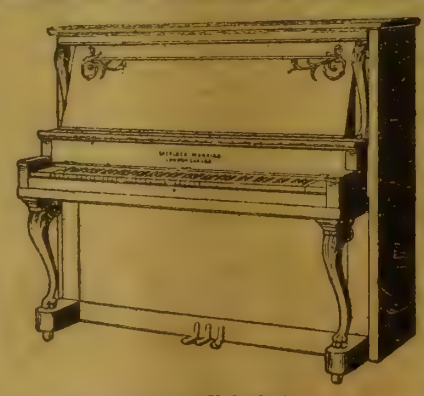
St. John Exhibition, September 2—7, 1912.

Halifax Exhibition, September 11—19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th, 1912.

For the June Bride---



Louis XV Style 80

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A Sherlock-Manning 20th Century Piano

"Canada's Biggest Piano Value"

June is here—beautiful, balmy June—the month of Brides and Roses. So let this remind you of that Bridal Gift you have to select.

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PURE MANILLA

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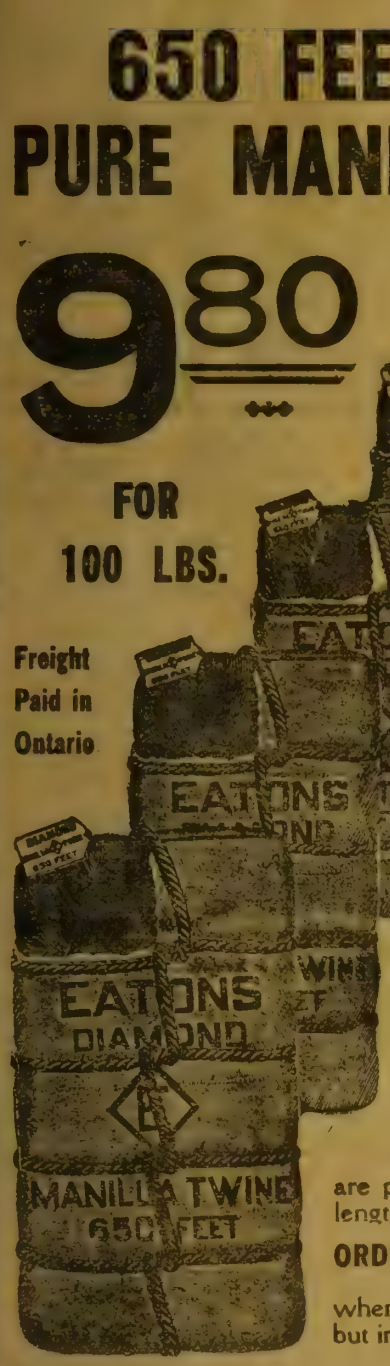

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GUARANTEED BINDER TWINE

TELL your neighbors about our wonderfully low prices for Binder Twine this season. We will esteem the courtesy greatly if you will tell your friends who use binder twine, and tell them we will be glad to supply them with binder twine at the prices quoted in our Spring and Summer Catalogue.

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It is as good binder twine as is made, strong as any made, smooth and even as any made. We say this regardless of make, brand or price. Our 550 feet Diamond Brand Binder Twine is prepared with special care from the choicest manilla hemp and first quality long fibre sisal. Our Diamond 650 feet is made from pure manilla. Both are perfectly free from lumps, snarls, thin or uneven spots, and will measure full length to the pound. It is unusually strong, therefore every inch of it can be used.

ORDER EARLY Send in your order promptly—to-day if possible. If you do not want us to ship the twine at once, say so in your order. State when you will want it, and we will ship it so it will reach you on the day specified; but in all events we would suggest that you order before July 1st.

550 FEET
MANILLA AND SISAL

7.80

FOR 100 LBS.

Freight Paid in Ontario

SEE THE FARM IMPLEMENTS
IN OUR SPRING & SUMMER CATALOGUE

THE HAYING SEASON will soon be at hand, so be prepared for it. Our Mowers, Rakes, Tedders and Loaders are unexcelled in quality and our prices represent a big saving to you if you take advantage of them. If you have not received our Spring and Summer Catalogue write for a copy to-day. It is mailed FREE upon request. Note the big values we are offering on pages 206 to 211.

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TORONTO CANADA

50 Lbs. IS THE SMALLEST TWINE SHIPMENT WE MAKE

IMPORTANT WARNING!

THE ONLY GENUINE AND ORIGINAL EXTRACT OF WILD STRAWBERRY IS

"Dr. Fowler's"

This grand remedy has been on the market for sixty-five years, and is, without a doubt, the best medicine known for the cure of

DIARRHŒA, DYSENTERY, COLIC, CRAMPS, PAIN in the STOMACH, CHOLERA MORBUS, CHOLERA INFANTUM, and ALL SUMMER COMPLAINTS.

If an unscrupulous druggist tries to talk you into taking any other preparation when you ask for "Dr. Fowler's" refuse to take it, and insist on getting what you ask for. Price 35 cents per bottle. See that the name, The T. Milburn Co., Limited, is on the wrapper, as we are the manufacturers and sole proprietors.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Ripening Cream.

How long should cream stand after skimming before it is churned? Is it a good policy to mix fresh cream with cream that has been standing two or three days before churning?

The answer to these questions depends necessarily upon the conditions under which one must work. To make the best butter with the smallest possible loss of butterfat in the buttermilk cream should be ripened before churning. If one day's skimming gives enough cream to make a churning the problem is easy. All that is necessary is to maintain the cream at a temperature which will bring about the proper degree of ripeness within a reasonable time usually by noon or afternoon of the day following during the summer season. If however, a skimming of several days is required to furnish enough cream to make a churning, then the cream first skimmed should be kept at as low a temperature as possible and ripening retarded until a sufficient amount for a churning has been collected. For example, suppose churning is done twice a week, on Wednesdays and Saturdays, Sunday's cream under these conditions, should be kept at as low a temperature as it is possible to keep it. When the cream is skimmed Monday this should be cooled down and then it can be mixed with the Sunday cream, stirring thoroughly but quietly. Keep down the temperature and repeat with Tuesday's cream. Then Tuesday afternoon raise the temperature sufficiently to bring about ripening some time Wednesday to complete the churning and working before dark. Just what this temperature should be depends altogether on conditions of temperature, etc. The essential thing is to hold down the temperature until the time to start the ripening process.

While the cream is being held it should be occasionally stirred gently with a paddle so that the richer part of the cream will not rise to the surface and form a leathery mass. During the ripening process it should be stirred in the same way every two or three hours. Never agitate cream with a dipper. Stir it gently and thus avoid the thick clots which make white specks in the butter. It is not a good plan to mix fresh cream with ripened just prior to churning for the reason that considerable of the butterfat will be lost in the buttermilk. Many are losing large quantities of the butter fat in the buttermilk without realizing it.—Wallace's Farmer.

To Develop a Persistant Milker.

Our endeavors to develop our dairy heifers into persistent milkers start when the heifer has its first calf, writes William Turner to Farm and Dairy, Peterboro, Ont. We take great care in milking the heifers using them as quietly as possible so as not to get them in the habit of kicking. Many a heifer is spoiled during its first year from lack of such care. If the heifer shows signs of drying too soon, we still continue to milk her even if the quality of milk does not pay for the time spent. We know, however, that we will be doubly repaid during the next period of lactation, for then she will keep up the flow until the proper time to stop.

A cow that has got into the habit of slackening in her milk flow too soon after calving can be made into a good milker by persistent care. We bought a cow four years ago that in her first season of milking was almost dry in six months. We still milked her, however, and she is now a grand milker.

BH "ENGLISH" PAINT

SAID THE MAN WHO BUILDS.—"Yes sir, I am going to use Brandram-Henderson, Limited, "English" Paint. You don't suppose I would put so much good money in a new house and then paint with cheap paint. That would be absolutely wasteful, wouldn't it? I am building and painting for permanence—and B-H 'English' Paint is the only paint I shall use. None but the best for mine. It wouldn't be fair to the house." 87

BRANDRAM-HENDERSON LIMITED

Montreal Halifax St. John Toronto Winnipeg

Big Ben

Don't set your mind—set Big Ben

Don't bother *your* head about getting up. Leave it to Big Ben.

You ought to go to sleep at night with a *clear brain*—untroubled and free from getting up worries. You men, if you are up to date farmers, work with your brains as well as with your hands. Such a little thing as "deciding to get up at a certain time in the morning" and *keeping* it on *your mind* often spoils a needed night's rest and makes a bad "next day." Try Big Ben on your dresser for one week. He makes getting up so *easy* that the whole day is better.

Big Ben is not the usual alarm. He's a timekeeper; a good, all-purpose clock for *every day* and *all day* use and for years of service.

He stands seven inches tall. He wears a coat of triple-nickel plated steel. He rings with one long loud ring for 5 minutes *straight*, or for 10 minutes at *intervals* of 20 seconds unless you shut him off.

His big, bold figures and hands are *easy to read* in the dim morning light, his large strong keys are *easy to wind*. His price, $3.00, is *easy to pay* because his advantages are so *easy to see*. See them at your dealer.

5,000 Canadian dealers have already adopted him. If you cannot find him at your dealer's, a money order sent to *Westclox, La Salle, Illinois*, will bring him to you duty charges prepaid.

$3.00

At Canadian Dealers.

Barb-Wire Wounds.

If every barb-wire cut was considered dangerous instead of being neglected until the animal is blemished for life, fewer bad results would be the outcome of this frequent accident.

In horses the breast and upper part of the forelimbs is the usual location for a serious wire cut. Sometimes the large muscles in the region of the shoulder to the knee are almost cut in two. The wounds become infected, the pus runs down between the layers of muscle and leaves as a sequel, a stifled-kneed animal with large scars. If the injuries are on the inside of the thighs, the same condition may result in the region of the stifle or hock.

An 'open joint" is more frequently the sequel of neglect than of actual injury. Chances of recovery in this condition are very poor.

PROMPT TREATMENT IMPORTANT.

Ptompt treatment of wire cuts is of greatest importance. If a competent veterinarian can be secured, oftentimes the price of a valuable animal can be saved for the cost of a visit.

If home treatment is the only kind available, the bleeding, if severe, should be stopped with astringent powder, as alum, or with a hot iron. The torn tissues should be rearranged as near like normal as possible, and treated as an open wound. Greasy liniments and ointments should be used with care, paying more attention to keeping the wounds clean. Tar is good in summer to keep away flies. For an antiseptic, a three per cent. solution of creolin is non-irritating and cleansing, but it is best to use very little water on any sore.

The course of healing is varied, due to movements of the part which tears the reuniting tissues. Sometimes the animal bites the itching wound, increasing the infection. Every injury must be treated differently, and each complication met with common sense and patience.—Dr. E. T. Baker, Veterinarian, Idaho Experiment Station.

Change of Pasture.

The novelty of a change, even if it should not be very marked, is obviously appreciated by animals of all kinds. This is shown by the behavior of cattle or sheep when turned into a fresh field, even although the new pasture may be separated from that they have vacated by only a wire fence. The surroundings may be pretty much the same as before, but the pasture is fresh, and, whether plentiful or not, the herbage is eaten with an avidity that implies invigorated appetite. On the ground of health also it is a good plan to rest pastures occasionally, as if constantly grazed they are liable to become tainted and stale. A large area is as subject to this defect as a small, for the number of stock a pasture carries is usually proportionate to its extent, and consequently there is not that immunity from souring in the case of large enclosures that is imagined. Some of the most experienced stockowners proceed on the principle that it is better to make a pasture carry twice its normal complement of animals for three weeks or a month and be given a rest of corresponding duration than to be grazed constantly with its alloted number. The practice is the outcome of careful note-taking of the habits of and progress made by both cattle and sheep.—Field.

BEAVER FLOUR

WHEN IT COMES RIGHT DOWN TO QUALITY BLENDED FLOUR MAKES THE BEST BREAD IN THE WORLD

"BEAVER" FLOUR is made of choicest Ontario Fall Wheat, with enough Manitoba wheat to add "strength" to the dough. This special blend gives the flavor, food value, baking qualities, strength and quantity, as no other one flour can.

When it comes right down to quality and quantity, "Beaver" Flour makes better bread and pastry—and more bread and pastry — than any western wheat flour.

You have only to use "Beaver" Flour once to prove all this to your complete satisfaction.

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DEALERS — write us for price on Feed, Coarse Grains and Cereals.

THE T. H. TAYLOR CO., Limited, - - - - CHATHAM, Ont.

The Celebrated Hallock Weeder

Makes fine dust mulch, insuring quick and sure catch of the seed.

The Cultivator which will do work in wet or dry weather. By its use moisture is retained in the ground where needed. Cuts no roots, kills the weeds, cultivates close up to the row, and over the row. In fact,

The Best Weeder on the Market.

everywhere—where cultivation is needed.

And last, but not least, does two or three times as much work as any other style of Cultivator in same or even less time.

There is only one rule to follow in the use of our Weeders--use them early and often. Don't give the weeds a chance to grow.

WHOLESALE AND RETAIL BY

ILLSLEY & HARVEY COMPANY, Limited

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One Cent a Word.

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POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

FOR SALE—One Yearling Guernsey Bull, Apply to T. D. BLAIKIE, Great Village, N. S.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

FOR SALE AT A BARGAIN—A Farm of 102 acres. Full particulars given on application to C. W. PHINNEY, Bear River, Annapolis Co., Nova Scotia.

YORKSHIRE PIGS FOR SALE.—Six litters due last of March, four more in April. Orders booked now. BOYD A. WETMORE, Bloomfield Station, N. B.

GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

FARM FOR SALE—At Waterford, 190 acres well cultivated with good house and barn. Lighted with acetylene gas, water and sewerage in house. Apply to MRS. J. A. MOORE, Waterford, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th, kindly notify The MARITIME FARMER office, St. John, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.
Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

AYRSHIRE CATTLE

Production and Test Our Aim

Several Heifer Calves and Yearlings for sale. Call and see them and their mothers. Stables near the station, long distance phone.
I am also offering my Stock Bull for sale at a low figure. He is 4 years old and easily handled. Bred from a record of performance cow.
E. ALLAN SCHOFIELD, Allandale Farm
Hampton, N. B.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.
LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

HAY WANTED!

W. J. PHELPS
Chamber of Commerce, Boston, Mass.
Reference: BEACON TRUST CO.

Sore Shoulders.

Old Subscriber: I have a valuable mare that has had sore shoulders for the past two years. A lump came on the point of the shoulder and on working her it broke out as a sore. I have tried almost every remedy that I have ever heard tell off but without success. When I don't work her the sore heals up pretty well but as soon as I work her a day or two it is as bad as ever. Please advise a remedy.

Sore shoulders and collar galls are very common on the farm and can best be prevented by having collars that fit. A very good method is on returning a horse to the stable to lift up the collar for a moment or two and then replace it, leaving there for fifteen or twenty minutes, the reason for so doing is that the parts under the collar are quite hot and if the collar is removed at once the parts become chilled and a conjested swelling results unless a brisk rubbing is given the parts; the use of a strong solution of alum and water or salt and water to the shoulders after the removal of the harness will serve to toughen the parts. Sores should be treated as ordinary wounds but as in the case in question they are slow to heal. Chronic sores of the shoulder often take on a hard, toughened appearance being termed—sitfasts—such a condition will need the surgeon's attention.

A collar that is a little too large or a little too small may cause sore shoulders. Another frequent cause for sores on the point of the shoulder is in having the draft too low.

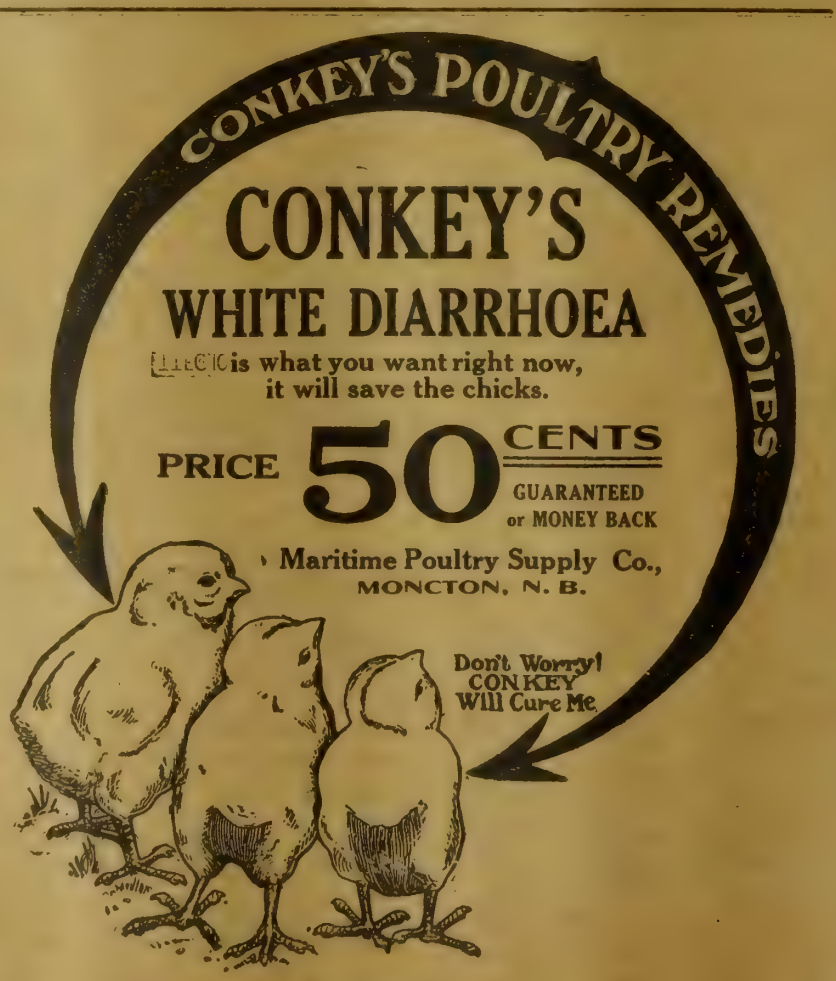
Sitfasts are the result of pressure by ill-fitting collars or by irritating masses of dust, sweat and hairs under the collar. The "sitfast" is a piece of dead tissue which would be thrown off but that it has formed firm connections with the fibrous skin beneath, or even deeper with the fibrous layers of the muscles, or with the bones, and is thus bound in its place as a persistent source of irritation. The horn-like slough may thus involve the superficial part of the skin only, or the whole thickness of the skin or even the structures beneath. The first object is to remove the dead irritant by dissecting it off with a sharp knife, after which the sore may be treated with simple wet cloths or a weak carbolic acid lotion, like a common wound. If the outline of the dead tissue is too indefinite, a linseed meal poultice will make its outline more evident to the operator. During and after treatment the horse must be kept at rest or the haress must be so adjusted that no pressure can come near the affected parts.

If the sore in question is not a "sitfast" but an ordinary wound poultice it to draw out the inflamation after which keep it as clean as possible by the use of some antiseptic and see that the collar fits properly and that the draft is not too low.

Making Official Records.

One indication of the progress that is being made in the dairy world is the great number of official records that are being announced from week to week. All of the breed associations are following this work enthusiastically. The Holstein- Friesians used to issue an announcement of about 100 cows once in two or three weeks. This season they have had to double that capacity in order to take care of the records that are being made. TheGuernsey Association says that the advanced register has grown so rapidly that today 726 cows are in the yearly test, which is the largest number and represents more breeders than have ever before been entered. The same thing is true in the other breeds, all of which is merely a promise of what is going to be accomplished in the future. Watch the official advanced registry work grow. It is the index of merit that is being demanded by the small breeder, the dairyman who wants to purchase only one or two calves, and by the extensive breeder alike.—Kimball's Dairy Farmer.

There is no real need of anyone being troubled with constipation. Chamberlain's Tablets will cause an agreeable movement of the bowels without any unpleasant effect. Give them a trial. For sale by all dealers.



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We are Headquarters in the Maritime Provinces for the most modern appliances for Bee-keepers.

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E. L. COLPITTS, Petitcodiac, N. B.

Lawndale Stock Farm

offers for sale the following pure bred Shorthorn Stock.
Our herd bull "Prince Mistletoe," color roan, aged 3 years good size and in good condition, bredby N. S. Agricultural College. Also three of his sons, viz:—1 roan bull, 14 mos. old, out of a good milking cow and 2 bull calves, 5 mos. old; color roan. Prices very reasonable, write or call.

J. M, LOVETT, M. D., Prop.
Yarmouth, N. S.

FOR SALE

One pure bred Aberdeen Angus heifer guaranteed in calf. Also an Angus Bull, 1 year old in August. They are of different breeding from prize winning stock at Ontario Shows. Also dual purpose Shorthorns.

Laurie M. Anderson, Sackville, N.B.

Pure Bred Ayrshire Stock For Sale

Heifers 1, 2, 3, and 4 mos. old. 4 Bulls, 2 mos. old. Also a choice lot of Pure Bred Berkshire Pigs, six weeks old. Prices on application to

The S. H. White Co., Ltd.,
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For Sale
Annapolis Valley Fruit Farm

228 acres; the most wonderful bargain in the Valley; good 8-room house; 60-ft. barn, room for 70 tons of hay; cellar under all; 40 acres rich loam machine-worked fields; young orchard 200 trees; wood and timber will make a man independent; pasture for 25 head, spring-watered and wire-fenced; near neighbors and advantages; the sacrifice price for quick sale is only $1900, part cash; act quickly or you will lose this; for all details and traveling instructions to see this and another with 15 acres in orchard, write The MARITIME FARMER, St. John, N. B.

A DAILY SERVICE BY OCEAN LIMITED EXPRESS

Commencing with the summer change of time on June 2nd, the Intercolonial Railway will put the famous through Ocean Limited Express on the route between Montreal and Halifax as a daily train leaving Montreal at 7.30 p.m. and departing from Halifax at 8.00 a.m. The "Ocean" will go on the route this season with renewed and refurnished equipment of luxurious sleeping cars, and easy riding first class coaches, and colonist cars. In point of equipment the "Ocean" is quite the equal of any of the best through trains on the continent, especially in regard to the excellence of the dining and sleeping car arrangements. Traversing a route of wonderful scenic beauty the "Ocean" enjoys a popularity with the travelling public that is annually increasing the traffic between East and West. Via the "Ocean" is the shortest, best and most comfortable route between Montreal and points along the lower St. Lawrence, New Brunswick, Nova Scotia and Prince Edward Island. The train arriving at Montreal at 7.35 a.m. enables westbound travellers to make the most convenient connections by the through train leaving Bonaventure Station daily for Ottawa, Toronto, Buffalo, Detriot, Chicago and other points.

Prize List.

Prize Lists of the Nova Scotia Provincial Exhibition are now being distributed and any persons who have not received copy may obtain same by applying to M. McF. Hall, Manager and Secretary, Halifax, N. S.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

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Walter E. Eaton, Upper Canard, Kings Co., N. S.

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Frank S. Black, Amherst, N. S.

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W. C. McLeod & Sons, Loch Lomond West, N.S.

POULTRY.

Barred Plymouth Rocks, White and Buff Wyandottes, S. C. Rhode Island Reds, S. C. Brown Leghorns, Walter McMonagle & Sons, Sussex, N. B.
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at reduced prices after May 1st. Brown Leghorns, $1.00 per 15 eggs. Single and Rose Comb R. I. Reds, $1.25 per 15 eggs. Guaranteed 80 p.c. fertile.

W. H. HENRY,
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Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

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Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 16 months old.
2 Holstein bulls 7 months old.
1 Holstein Heifer 7 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

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In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

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on Strawberry and Raspberry plants, also half price on Utility Barred Plymouth Rock and Fancy Columbian Wyandotte Eggs for hatching.

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Brown's Flats,

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
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YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

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Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

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Barred Plymouth Rocks, White Wyandottes.
S. C. Rhode Island Reds, S. C. Brown Leghorns.

Eggs from all Pens $2.00 per 15.

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In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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Either sex, all ages, out of heavy producing show cows, also high grades, well grown and in good fit; sired by some of the best bulls in Canada. **LEA & CLARK, Victoria, P. E. I**

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Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

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We offer for quick sale, several bulls fit for service from cows with Record of performance tests of 12,715,75 lbs. of milk testing about 3.7 p.c. at 2 years 2 months, another with 13,283.5 lbs. milk and 512.67 lbs. butter when 2 years old and another with 18,482.75 lbs. milk and 753.3 lbs. butter in 1 year at maturity. These bulls are in good condition, well grown and straight. For particulars write.

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Litters Dating from February 15th and After.

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"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man

See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good $100,000 of produce in your barn in 100 years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous strains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods.

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not."

326

"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."

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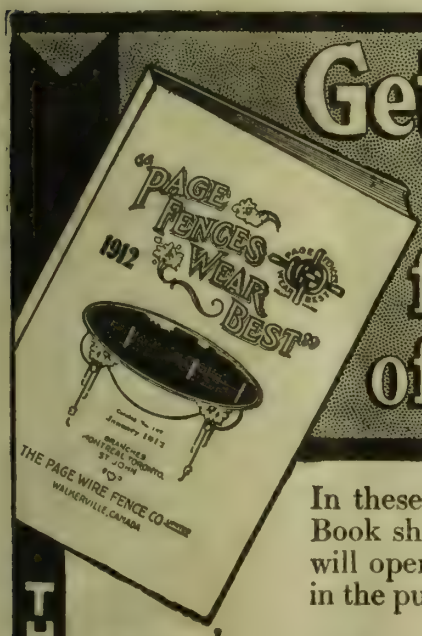

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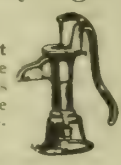

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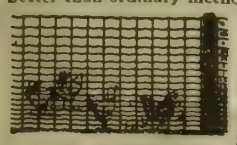

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Graduated mesh. Will turn poultry or large stock.

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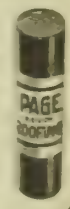

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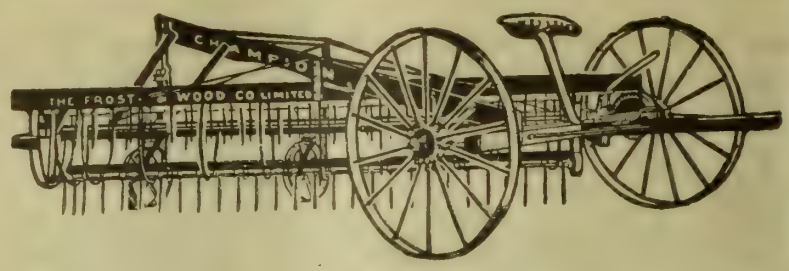

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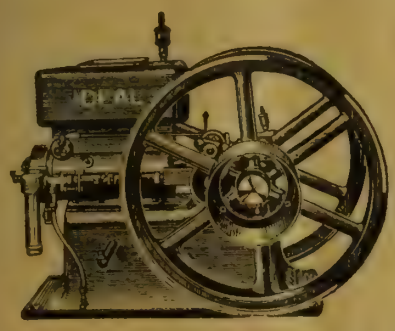

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We have cured Senators, Congressmen, lawyers, clergymen, business men—merchants, laborers, men of all occupations, and of no occupation, to the number of over 400,000. Among them are 20,000 physicians.

The treatment removes all craving or desire for liquor or drugs, restores the nervous system to a normal condition, clears the brain and makes a man out of a nervous wreck.

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Being ornamental, easy to keep clean, simple to operate, accurate and economical, this range will endear itself to the housekeeper as the "one horse chay" did to the family of the Deacon. Like the chaise too, the "Monarch" is a "Wonder and nothing less."

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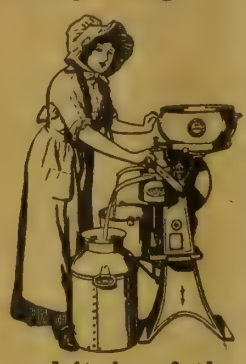

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Moreover the **best** is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste **twice a day every day in the year** for many years.

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. ST. JOHN, NEW BRUNSWICK, JUNE 25, 1912. Number 18.

Remedies for the San Jose Scale.

Their Timely Application will Safe-Guard Orchards Against the Fruit Growers' Worst Enemy.

OWING to the rapid extension of the scale-infested areas in Ontario and the threatened visitation to the Maritime Provinces orchards, it is essential that the fruit growers should be thoroughly acquainted with the latest methods both for summer and winter treatment of this dread pest. Considerable experimental work has been done by the Department of Agriculture in conjunction with the growers during the past few years, and the results of these experiments, together with the mature opinion of those who have for several years been fighting the scale most successfully in the United States and Canada, are here given.

WINTER TREATMENT

The standard remedy in use in Canada is the steam or fire-cooked lime-sulphur mixture. That is the cheapest and most effective of the washes now applied, and as it is of such great fungicidal value this largely compensates for its caustic action on men and appliances where it is being used. Taking all points into consideration, and assuming that the wash is properly prepared and thoroughly applied, this mixture takes first place as a commercial remedy for the San Jose Scale, and until something as good or better is discovered, the Department of Agriculture feel bound to recommend its more general use.

LIME-SULPHUR MIXTURE

The usual formula is as follows:

Lime	20 pounds.
Flowers of Sulphur	15-20 pounds.
Water	40-50 gallons.

To prepare this mixture, have 12 to 14 gallons of boiling water in the barrel before adding the lime. The lime should be the best stone lime procurable. The flowers of sulphur should preferably be mixed into a paste with hot water and added immediately after the lime has been thrown in. The mixture should then be boiled till the characteristic green or amber color is obtained. This varies with the kind of lime used, and may take from three-quarters to one and a-half hours. Many authotities still advocate boiling for two hours or more, but good results have been obtained with less boiling so that one is safe in reducing the time. provided the proper color is obtained. Keep a hoe in the barrel and stir occasionally from the bottom to prevent the mixture from burning. Dilute with water to fill up the barrel, strain thoroughly into the pump and spray while warm. In this condition it passes more readily through the pump and nozzles. It is essential in all the lime mixtures to have a good strainer. The best is the galvanized or wood pail strainer with a cone of brass netting (30 to 50 meshes to the inch) fastened with its base in the bottom of the pail. Make the cone large and pointed, reaching to the sides of the pail at the bottom, and about two-thirds of the height, Five or six stiff wire supports distributed evenly around the bottom of the pail and soldered together at the tops will form a good frame for the netting. A small opening is cut in the bottom, and a cylindrical tube of any desired length soldered around it. This serves as a funnel in directing the flow of the liquid into the tank or barrel. By pouring the mixture slowly on to the point of the cone, the netting is kept clear by the force of the liquid, and the screen does not clog as quickly as when the strainer pail is filled to the brim and allowed to gradually empty.

Some growers complain of the difficulty in keeping the pump in good working order with this mixture. However, little trouble will be experienced if the nozzles are rsmoved every night and placed in coal oil, and a couple of pails of water run through the pump and hose while the lime mixture is still soft. A little attention at the time, and a thorough cleaniug at the end of the spraying season, will go a long way toward keeping this now essential part of the farm machinery in condition.

SELF-BOILED LIME-SULPHUR MIXTURE

The proportions given for this mixture vary about as much as for the steam or fire-cooked mixture.

Lime	25-35 pouads.
Flowers of sulphur	15-18 pounds.
Water	40-50 gallons.

In making up this mixture, have 12 to 14 gallons of boiling water in the barrel. Add the full quantity of lime and throw the sulphur paste on top. Cover quickly with a piece of old carpet or sacking, and put a heavy block of wood on top, as the steam and heat generated is so strong that it would otherwise blow the mixture out of the barrel. Keep the hoe stirring slowly from the bottom. Allow to boil for 40 minutes, then fill two-thirds full of boiling water and let stand for ten or fifteen minutes longer. Watch for the green color as with the previous mixture. When ready, strain into the spray barrel and make up to full quantity with hot water.

Some growers put in but a part of the lime at the start, and add the remainder as soon as the first violent boiling is over, The addition of six pounds of caustic soda to prolong the boiling has been recommended, and the experiments in the Niagara district with this mixture in the proportions given below were followed with fairly good results:

Lime	30 pounds.
Flowers of sulphur	15 pounds,
Caustic soda	4-6 pounds.
Water	40-50 grllons.

The addition to the cost, however, has militated against the free use of caustic soda. Considerable quantities of the self-boiled mixture have been used the past few seasons; but many growers consider that as the water has to be heated for the preparation of this mixture they may as well boil the whole mixture and thus be sure of obtaining a more efficient remedy for the Scale. Neither the self-boiled nor caustic soda mixture are recommended where the facilities are at hand to properly prepare the standard fire or steam cooked mixture. However, to the owner of a few trees these mixtures will be of great value.

CRUDE OIL

Crude oil has been used very largely in Niagara township from the first, but the lime-sulphur mixture has almost entirely replaced it. Tender trees such as the peach and Japan plum were not able to resist the burning of the oil and many trees were destroyed. In the Chatham district, on the other hand, its use up to 1906 was quite extended. This was largely due to the presence of the oil wells in the immediate vicinity, and to the fact that it was used almost entirely on apple and pear trees, which are more resistant. The spraying of large apple trees with the oil is an easier task than with the iime-sulphur mixtures. The growers in the west, however, are not satisfied with the oil treatment, and are looking for a better mixture. In the use of crude oil, it is essential that the oil be applied as lightly as possible and with this end in view, the nozzle should throw a very fine spray. An oil of as high specific gravity as possible should be procured. The heavy, rough

bark of the trunk and main limbs seem to soak up large quantities of the crude oil, and special care should be exercised in spraying these portions as lightly as possible, consistent with thoroughness.

WHALE OIL SOAP.

Whale oil soap .... 2½ gallons.
Water .... 1 gallon.

This remedy also, while once largely used, has been replaced in Ontario with the lime-sulphur mixtures, However, for the small orchard, it is still a standard remedy, and will do good work if used strong enough. Mr. Geo. E. Fisher recommends 2½ pounds to the gallon applied very thoroughly before the buds open and after frosts are over. The soap is thoroughly dissolved in a kettle over a fire, poured into the pump, and applied while still hot. While easily prepared, this insecticide is much more expensive than the lime-sulphur mixtures, and has given less favorable results.

SUMMER SPRAYS.

In Ontario, practically no spraying is done during the summer for the San Jose scale. The danger of injury to the foliage and the difficulty of reaching all parts of the trunk and branches owing to the heavy foliage, have been the main reasons for such conditions. Further, owing to the fact that this scale is many brooded, and that the summer washes destroy pr acticallyonly the running larvae, it becomes necessary to apply the mixture every four or five days for perhaps five applications before the female scales become exhausted. However, where a determined effort is being made to stamp out the scale, these mixtures may be used as adjuncts to the winter washes.

KEROSENE EMULSION.

Hard soap .... ½ pound.
Boiling water (soft) ... ½ gallon.
Coal-oil .... 1 gallon.

This mixture is prepared as follows:—

Dissolve the soap in the water, add the coal-oil and stir well from five to ten minutes. A good way to mix the soap and oil is to violently pump the mixture into itself. When properly prepared, it will adhere to glass without oiliness. In using for the scale dilute with six parts water for hardy trees and with seven parts for peaches and Japan plums. Use a coarse spray so as to break through the foliage and reach the twigs and branches. Spray in bright, dry, airy weather. Apply every four or five days for several applications.

CRUDE OIL EMULSION.

Water .... ½ gallon.
Hard soap .... 2½ gallons.
Oil .... 1 gallon.

Prepare in a similar manner to the Kerosene Emulsion, but apply diluted, 1 to 10 parts water, and spray with a finer nozzle than the preceding mixture.

WHZLE OIL SOAP.

This may be used as a summer wash at the rate of ½ pound to the gallon of water. Prepare in a similar way to the summer wash.

PROPRIETARY MIXTURES

In the search for better remedies for the San Jose scale, a number of oil mixtures have been placed on the market in the United States and Canada and extensively advertised as sure cures for the scale. Among these may be mentioned Kil-O-Scale, Scalecide, and Target Brand Scale Destroyer. Extensive experiments have been carried on with these mixtures with very varing results. The consensus of opinion seems to be that at the strength recommended by the manufacturers, these mixtures will not give uniformly good results, and that if used at strengths sufficient to hold the scale in check, the cost of the resultant mixture would be so great as to preclude its use in commercial orchards. For the small home orchard, or for use on ornamental or fruit trees and bushes in city or town lots, these mixtures, on account of ease in preparation and freedom from caustic action so disagreeable with the lime-sulphur mixtures, will likely find a fairly large market. Until further improvement in the mixtures themselves, or a decided reduction in the price has been Growers'Association, January 3, 1907, made, their use in the larger field of operation is not recommended.

TREATMENT FOR SCALE IN THE UNITED STATES.

Below will be found a nuber of extracts from the latest bulletins and addresses on the San Jose Scale:—

Mr. L. L. Morrell, Kinderhook, N. Y., before the New York state Fruit Growers' Association, January3, 1907, said in part:

"It is a fight first, last and all the time. I have had the scale for sixteen years, have used all the different remedies of the past up to lime and sulphur, which I am using now. I use 15 pounds sulphur, 20 pounds lime in 50 gallons of water, the sulphur being put in after the lime has slaked; I boil it by steam until it is a dark amber color, at least one-half hour, and then apply while hot. I can put on 800 to 1,000 gallons per day with two men besides myself. It requires your absolute attention; you must touch every scale if you want to kill it. Spray with the wind, the top of the trees first, and the under side of the branches last. I have less scale to-day than eight years ago, and would not be afraid to set more trees if I wanted them. Success is a matter of thoroughness all the way through."

Mr. T. Grenier, La Salle, N. Y., reporting to the New York Tribune-Farmer the meeting of the Western New York Horticultural Society, held at Rochester, January 24, 25, 26, 1907, states in part as follows:

"The San Jose Scale, of course, came in again for the lion's share of attention, discussion, and especially denunciation. There can hardly be any doubt that a large proportion of the eight hundred who had come to the Rochester meeting had been brought to the point of attending such ameeting merely because they were scared into it by the scale. The outlook for orchardists whose orchards are invaded by the scale, and who fail to wage an incessant warfare against the pest, is, according to Willard Hopkins, about as follows: First year, scare; second year, barrel stock; third year, evaporator; fourth year, cider mill; fifth year, wood pile or saw mill. Mr. Hopkins also told of his complete success in controlling (not exterminating) the scale by thorough spraying. He has used both lime sulphur washes and crude petroleum. He said that one cannot put on enough lime-sulphur to do injury to the tree, but the stuff is terribly corrosive to the skin. He uses heavy blankets or oilcloth, covering the horses entirely over. George T. Powell indorses Mr. Hopkin's predictions, and says that 90 per cent. of the orchards on Long Island are infested by scale, and 75 per cent. have become perfectly useless. By spraying with scalecide, one to twenty, but very thoroughly, he has brought the scale under control. He has saved (by the former strength) a Prunus Pissardi, Pyrus Japonica, etc

The time for applying scalecide is in autumn alter the foliage is off, and again in February or March, it being advisable to make two applications to do the best and most thorough work."

Professor P. J. Parrott, before the Ontario Fruit Growers' Association, November 7, 1906, spoke as follows; "The San Jose Scale is rapidly spreading into our leading fruit-growing sections of New York. In those communities where it is well established, annual spraying for the scale is practised by the more progressive fruit growers The orchardists experienced in this work are fighting the scale efficiently and profitably upon peaches, plums, pears, and apples of moderate size. The spraying mixture which gives the most satisfactory results on scale is the boiled lime-sulphur wash. This is used by the larger number of our fruit g- -ers, although some are using the proprietary miscible oils or mineral oils, either clear or emulsified."

"Sulphur washes are cheap, safe and reliable sprays for the treatment of peaches, plums, pears, and apple trees of moderate size, and is specially recommended for the treatment of peaches for joint control of scale and leaf curl. Applications must be thorough. Good nozzles and a pump with high pressure to produce a fine spray are essential. Cost of spraying per tree is valuable, depending on management, weather conditions, labor, kind and cost of feul and spraying supplies, and degree of thoroughness in spraying. In spraying trees from five to eight years of age, the cost of treatment will vary from 5c. to 13c. per tree in commercial orchards. Apples from thirty to fifty years of age will cost from 20c. to 50c. per tree to obtain reliable results on scale."

"Treatment of old apple orchards has not been usually successful and is largely due to lack of thoroughness in spraying. The best results on scale for these large apples are obtained by careful pruning of trees and by spraying with sulphur washes and crude petroleum on alternate years. By this system of treatment, orchardists that were fearful of losing their orchards have this year marketed comparatively clean crops. Average cost of sulphur wash per tree, 36c., crude petroleum, 59c. Crude petroleum is a most efficient spray on scale, but may injure trees. It is believed that for results of work, applications of sulphur wash or crude oil emulsion, twenty-five per cent. oil, would prove equally effective on scale without risks of appreciable injury to trees. Commercial insecticides, in all but two of experimental orchards, were much less effective than the sulphur wash."

C. L. Marlatt, of the United States Department of Agriculture, in Bulletin No. 62, issued December 5, 1906, states as follows: "The control of the San Jose Scale by parasitic and predacious enemies is increasing all the time, but there seems to be no likelihood that either such natural enemies as are now in this country or those which may hereafter be imported will ever do more than merely lessen the abundance of the scale. In other words, from past experience, and from large acquaintance with other similar scale pests, it is extremely improbable that even under the most favorable circumstances will such natural enemies reduce this scale as much as would one thorough treatment with the lime-sulphur wash or other standard remedy."

..."The methods of control which have been especially followed in the Eastern States are (1) the lime sulphur wash, (2) the soap treatment. (3) treatment with pyre kerosene, (4) treatment with crude petroleum, (5) treatment with mechanical mixtures of either of the last two oils with water, and (6) petroleum emulsion with soap. All of these methods have proved themselves successful against the San Jose Scale when properly carried out. As compared with the lime-sulphur wash, the others mentioned are more expensive, and the two oils, unless carefully applied, are likely to injure the treated plants, and are now seldom used. One's choice of method must therefore be governed by availability, special needs and experience."

"A vast amount of experience of the most practical kind gained since 1894, contributed to by all the eastern experiment stations and by the big commercial fruit growers of the Middle and Eastern States, has fully demonstrated the practical merit of this wash and its superiority to others in point of safety to trees and in cheapness. The wash is furthermore a valuable fungicide, and is notably useful against the peach leaf curl, sprayed trees being practically immune from this disease, so that the cost of treatment is often more than made good by the fungicidal benefit alone. Its disadvantages are the difficulty of preparation and the heavy wear which it entails upon the apparatus— objections, however, which do not offset its notable advantages, particularly for orchard work or where the number of trees to be treated is sufficient to warrant the trouble of its preparation. It is, in fact, the standard spray now used in commercial orchards for the San Jose Scale."

The following summary is taken from Bulletin 21, October, 1906, of the Georgia State Board of Entomology, by R. I. Smith, State Entomologist:

SUMMARY.

Boiled lime-sulphur wash is recommended as a remedy for the San Jose Scale.

Salt in the wash does not appear to be necessary or desirable.

Soluble oil sprays should be used cautiously. Do not depend entirely on these preparations without first giving them thorough test on a small number of trees.

Badly infested orchards should be sprayed twice; once in fall and again the following spring.

Orchards which cannot be sprayed twice should begiven one thorough spring spraying.

Large orchards will have to be partly sprayed in fall or winter, and the worst infested portions of the orchard in spring. Or better yet, spray the worst infested portions both fall and spring.

Convenient, serviceable boiling arrangement must be provided for boiling lime-sulphur wash.

Steam boiling outfits are most desirable when considerable quantities of lime-sulphur must be made.

Iron kettles may be used for boiling small quantities of lime-sulphur wash. When such kettles are used set them in a brick arch.

Spray pumps capable ofgiving sufficient power to throw a strong spray should always be used. Whenever more than a few trees are to be sprayed, it does not pay to attempt to use small, cheap spray pumps.

Thoroughness in spraying is necessary in order to secure satisfactory results. This rule applies no matter what mixture or solution is employed for spraying the trees.

The lime used in preparing lime-sulphur wash should be a calcium lime instead of a magnesia lime. The latter is not desirable.

Sulphur may be purchased in different forms, but the grades most highly recommended are "flour" or "flowers" of sulphur.

Self-boiled lime-sulphur washes may sometimes be used with success, but they are not recommended for general use on account of the extra expense involved.

The addition of tar, potash lye, copperas, bluestone, or any other substance to the regular lime-sulphur wash, does not appear to be necessary or desirable on account of making the mixture more costly.

Experiments conducted by individuals often result in valuable discoveries. Fruit grult growers are urged to make experiments with any remedy for the San Jose Scale, but to do so on a conservative basis.

The San Jose Scale may be kept in control if all who have infested orchards will apply tde remedies recommended. It is better to spray orchards from one end to the other when

only a few trees are actually found infested, and thereby prevent injury, rather than to delay the spraying until the orchards become badly infested by the scale.

Editor's Note—Commercial Lime Sulphur is manufactured in Nova Scotia by the Niagara Spray Co., Kentville, N. S.

Banner Sale of Live Stock at Ormstown, Quebec.

This beautiful village is situated on either side of the winding Chateaugay river which flows through one of the finest farming sections in all Canada. Settled largely by Scotch people in the early days, their decendents like their forebears are good stockmen. Two years ago the leading stockbreeders, among them Dr. D. McEachran and Robt. Ness, considered the advisibility of holding an annual Spring Show and Sale, and in 1910 and 1911 held a sale of horses with a measure of success. This so encouraged the breeders that a sale of Holstein and Ayrshire cattle and horses was arranged for on a large scale. This took place in the new Stadium on June 14th., 1912. Altogether 16 Holstein cows, 85 Ayrshires of all ages and 7 Clydesdales mares besides a number of teams and single horses went under the hammer, so well weilded by Auctioneer, A. Philps of Huntingdon, Que. whose reputation as a live stock auctioneer has become widely known. For dispatch and securing bids he has few equals.

This sale was held in connection with the annual Spring Show thus the animals were in fine form. The horses and Holsteins were sold in the morning, the Ayrshires in the afternoon.

The Clydesdale fillies offered were a choice lot, all personally selected in Scotland by Robert Ness, who selects only the best. They realized fair prices and within the reach of the average farmer.

The Holsteins offered were all animals of high class breeding and individuality and should have realized higher prices. The number offered was rather small to attract many buyers. It is possible the Holstein breeders did not bestir themselves to induce purchasers to come as the Ayrshire breeders did.

The Ayrshire offering made a fine display, and buyers were present from many sections of the United States and Canada. When Mr. Fieldin of the Brantford Farms, Groton, Conn. and P. Ryan of Brewester, N. Y. both want the same Ayrshires, bidding goes lively. Mr. Ryan is an admirer of the Old Hall family and secured several prizes of that breeding.

Things got exciting when $1000. was offered for Old Hall Beauty 6th which Ryan secured at $1100. There was still greater excitment when the two year old heifers, Shewalton Mains Beauty 3rd. and Redhills Nameless Charm were knocked off at $1100. also, Feildin secured Srockerton Primrose 3rd at $1000. Mrs. Erhardt of Berlin, Vt. secured a prize in Threave Snowdrift and John Sherwin of Cleveland, Ohio, got a lot of choice heifers at reasonable figures. Canadian buyers were not outdone by the breeders from across the line and several choice animals went to breeders in the district. Ness, Gordon and McArthur know a snap when they see it and coveted animals before the sale were secured by them, as well as others, among whom was Prof. Barton of Macdonald College who got several young females from heavy producing stock. The average on the whole was good, 85 animals realizing $27785. an average of $327. each. This is not quite so high an average as the average at the Hunter sale last year when 117 animals realized $40.-215 an average of $343.50 each. At the Hunter sale cows averaged $409. at Ormstown $360. Two year old heifers, $371. at Hunter's at Ormstown $380. Yearling realized $345. each at Ormstown as against $243 at Hunter's.

On the whole the Ayrshire breeders have reason to feel satisfied with the results of their efforts. Auctioneer Philps knocked the Ayrshires off in about two hours.

To Neil Sangster, President of the Association, J. P. Cavers, Chairman of the Sales Committee, R. R. Ness and Gilbert McMillan, who got up the Sales Catalogue, looked after the advertising and wrote up the subject of the sale, must be given the credit of making the sale the successthat it was. This sale will be an annual occurance and as the district becomes better known as a breeding ground for high class stock so will it attract high class buyers.

Demonstration Farms in the Maritime Provinces.

Messrs. F. C. Nunnick and John Fixter of the Agricultural section of the Conservative Commission are in the Maritime Provinces organizing demonstration farms and endeavoring to interest farmers in better agriculture. They are meeting with marked success and have already succeeded in forming several agricultural associations.

The work began in New Brunswick on May 16, when a meeting was held at Hartland, Carleton County. It was a great success much interest being shown in the movement. Although only one farm is chosen in each county for demonstration purposes many farmers expressed their willingness to co-operate in the better farming movement. The name chosen by the farmers for their organization was the Carleton Agri, cultural improvement Association. The officers elected were: President, Dr. McIntosh (grandson of the originator of the famous McIntosh Red apple); 1st vice, N. Shaw; 2nd vice, C. Ridout; secretary-treasurer, E. C. Morgan. The farm chosen belongs to Shaw Brothers.

In the parish of Norton, King's County, N. B., a farmer's club was organized, to be known as the Parish of Norton better Farming Association. Motto, "Each for all, all for each." Pres., J. Raymond; 1st vice, W. Whitmore; 2nd vice, James Allaby; secretary-treasurer, Roy Raymond. Farm selected owned by John Raymond. At Corn Hill, King's County, the Corn Hill Better Farming Association was formed. Pres., Naaman Hughson; 1st vice, J. H. Branscomb; 2nd vice, John Keith; secretary-treasurer, F. H. Rous. Farm selected, John Keith's.

At Clarence Centre, Annapolis County, N. S., the Annapolis County Better Farming Association was formed. Pres., E. Marshall; 1st vice, C. H. Jackson; 2nd vice, S. B. Marshall; secretary-treasurer, F. W. Ward. Farm selected, V. B. Leonard's. In Antigonish County, N. S., the Antigonish Better Farming Association was formed. Pres., Rev. Dr. McPherson; 1st vice, George Taylor; 2nd vice, James Thompson; secretary-treasurer, Alex. McDonald. Farm selected, Taylor Bros. At River John, Pictou County, N. S., a Better Farming Association was formed. Motto, "Progress." Pres., Colin Langwell; 1st vice C. A. Hamilton; 2nd vice, D. K. McLean; secretary-treasurer, G. McLeod. Farm selected H. M. Tatterie's.

Spraying Mixtures.

Quite a number who have used Lime-Sulphur and Arsenate of Lead for spraying their fruit trees, and have found it much better than the poisoned Bordeaux, have written the Department to know if it is equally effective for spraying potatoes.

Potatoes are sprayed for two reasons, viz; to protect them from the Blight and to kill the Potato Beetles more commonly called potato bugs. The Bordeaux mixture and the Lime Sulphur wash are the two fungicides commonly used for the former and Paris Green and Arsenate of Lead the two insecticides for the latter.

The results of all experiments that the writer has been able to find, shows conclusively that the Bordeaux Mixture is better for potatoes than the Lime Sulphur wash and it is at the same time cheaper for spraying of fruit trees however the Lime Sulphur wash is much to be preferred.

There is not the same unanimity of opinion reagrding the poison to be used with the Bordeaux. W. T. Macoun in Bulletin No. 49, on the Potato and its Culture says: Arsenate of Lead adheres better to the foliage than Paris Green and its use is recommended on this account, but as it does not appear to kill as rapidly as Paris Green, a mixture of 8 ounces Paris Green and 1½ lbs. Arsenate of Lead to 40 gallons of water is suggested. In the Report of the Experimental Farms for 1911, pages 131 he reiterates the same statements only is a little more favorable to Arsenate of Lead if only one is used. He says however, 3 lbs. are necessary. On page 132 he gives in detail the experiments from which his conclusions are drawn.

On page 6 of Bulletin No. 82, Part 1, of the Bureau of Entomology of the U. S. Department of Agriculture a summary of experiments is given which shows that Arsenate of Lead and Bordeaux mixture when applied at the rate of 6 lbs. to 50 gallons was much better than any other poison applied at any rates.

The spray calendar of the Oklahoma Experimental Station gives Arsenate of Lead as the poison for the Bordeaux mixture for Potatoes.

The United States Department of Agriculture in circular No. 87 on the Colorada Potato Beetle, page 14 says: "Arsenate of Lead serves the same purpose as Paris Green and for use against the Colorada Potato Beetle is still more valuable.

From all of the above it would seem that Arsenate of Lead is quite as good as Paris Green to use with the Bordeaux mixture for killing Potato Bugs and Macoun's suggestion seems to be a good one, to use some of both. The Paris Green kills more quickly but the Arsenate of Lead sticks on much better.

3 lbs. Arsenate of Lead or 1¼ lbs. Paris Green should be used to 40 gallons of water. Potato vines are not injured even if much more Arsenate of Lead is used to 40 gallons. Arsenateof Lead can be purchased now at $10.00 per hundred lbs. so that it is almost as cheap as Paris Green.

Theodore Ross.
Secretary of Agriculture, P. E. I.

Simple Way to Test Acid Soil.

Those who use lime have found litmus paper useful in determining whether the soil is acid or sour, and, therefore, in need of lime. But there is often some uncertainty as to the result, because when used in the usual manner of placing the paper in a sample of soil and pressing the soil particles against it, the paper would often be so much stained by the soil that it would be difficult to tell whether it had turned red or not.

At a recent farmer's institute Mr. Blair of the New Jersey experiment station showed a better method. A piece of blue litmus paper was placed in the bottom of a glass, then covered with white filter paper. The soil to be tested was placed above this and a small quantity of pure water poured over it. The soil used in this case was known to be acid or sour, and the water carried a portion of the acid through the filter paper and turned the litmus paper red, as could easily be se?n through the bottom of the glass vessel. The filter paper kept the soil from coming in direct contact with the litmus paper, and there was no staining. Soil not sour, and, therefore, not in need of lime, treated the same way does not turn the blue paper from its original color. Both filter paper and litmus paper can be secured for a few cents at drug stores.

Cut Worms and Army Worms.

Two species of caterpillar, the cut worm and the army worm, have been considered by the officials of the Experimental Farms to be of sufficient interest to the crop growers in Canada to warrant a preparation of a bulletin on them for public distribution. These two common enemies of crops are credited with causing every year damage amounting to a large sum of money, reaching in some seasons hundreds of thousands of dollars. They are both night feeders and are most destructive early in the season when vegetation is tender and, therefore, easily eaten off. Clean cultivation and the encouragement of birds are recommended as factors in the control of cut worms. The distribution of poisoned bran and fresh clover is also advised where practical whenever the worms are detected. To check the progress of army-worms on march furrows with holes dug at intervals are said to be effective. This illustrated bulletin of 29 pages No. 3 of the Division of Entomology and No. 70 of the Experimental Farms, was prepared at the request of the Dominion Entomologist by his Chief Assistant, Mr. Arthur Gibson. It is published by direction of the Hon. Martin Burrell, Minister of Agriculture. Copies may be obtained by applying to the Publications Branch, Department of Agriculture, Ottawa.

Bloody Milk.

I have a three-year-old heifer that has had her second calf that gives bloody milk from one quarter and do not know of any way she could have hurt it. It does not seem sore or swollen. Can you giv? me the cause and remedy.

Rupture of small blood vessels from bruising or rough milking or undue congestion causes bloody milk in heifers or it may follow an attack of garget. Remove possible causes. Bathe the quarter with cold water 3 times a day. If she is not in calf give one dram of dried sulphate of iron and two of salt in feed every night until milk is normal.

Lousy Hogs.

Some hogs which I recently purchased are lousy. What can I do to kill the lice? The hogs are in good condition.

Answer—(1) In the winter hogs can be sprayed on bright days with any of the coal tar dips used according to directions; this will kill the lice only and must be repeated in a week to get the nits which have hatched. Crude oil-soaked gunny-sacks nailed on posts for the hogs to rub against is a good preventive. In summer hogs may be dipped in on? of the commercial dips.

At the great Ormstown Stock Sale McIntyre Bros. Sussex, N. B. bought the imported Ayrshire cow Monkland Snowdrop 4th. Messrs McIntyre recently sustained the loss of their famous show and producing cow White Lady, champion at many Maritime Province shows during the past few years. White Lady died on May 1st. and Monkland Snowdrop has been purchased at a fancy figure to fill the gap in their aged show class. May she prove so successful in winning the red ribbons as her predecessor.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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JUNE 25, 1912.

DATES OF ISSUE.

July ..... 9—23
August 13-27

Look at a proposition to see how you can use it—not how you can get along without it.

If you are doing business in the Maritime Provinces you cannot afford to do without an advertisement in the Maritime Farmer.

The most successfnl business man is the one who asks to be shown "why" he should do a thing and then does it-

A FARMER'S CREED FOR THE DAY.

For this day I will do my best to do everything just right; to be good and kind to every living thing I have anything to do with; to be thankful that I live in such a good world; to make that world a little bit better; to think some new thought; to read a page or two from some good book; to look up from my work long enough to see what my neighbor is doing and tell him I am glad he is doing so well; to strike some blow for the right; to get a little nearer to the heart of my wife and children; and to ask God to help me make to-morrow a better day, a much better day, than this has been.

GROW YOUR OWN SEEDS.

Despite the countless warnings that have been sent out by the Federal and Local Departments of Agriculture throngh the press and by speakers on the public platform, re the danger of incurring loss through the sowing of seeds that have not been given a thorough germination test, a great many farmers who sowed western grown oats this spring are now face to face with the stern reality. The oats have failed to germinate. This trouble is accounted for by the fact that a great deal of western oats were froz- last fall to such an extent that the growth germs were killed.

On another page of this issue Prof. M. Cummings gives some timely advise as to the best methods to pursue. He strongly urges farmers to grow their own seeds. Now is the time to plan the garnering of your best plots when the harvest time comes. Why not do a little work in the line of seed selection this year. It will not take much of your time. The time it does take will be well spent and you will be amply rewarded.

ADVERTISING PURE BRED BULLS.

All breeders should realize that the big market for surplus bulls is among the dairy farmers. These farmers offer a much larger field for selling bulls than breeders. Moreover the purchase of a pure bred bull is a stepping stone to the breeding of pure bred cattle. Here is what Malcolm H. Gardner says:

To make money from the sales of stock, a market must be found for the breeders' surplus and that market must be found largely among outsiders. Confine any class of breeders to sales among themselves, and the business as a business will be strangled in short order. Hence the need of advertising-- the need of letting the outsider know that you can benefit him and yourself at the same time.

THE STANDING CROP COMPETITION.

The secretaries of the various agricultural associations in the Matirime Provinces that are conducting crop competitions have sent out their circulars to their various members. A certain date is set for closing the entries. The various secretaries must notify their Department for agriculture at as early a date as possible after the entries close so that arrangements can be made to have competent judges visit the various fields before the crops are harvested. Owing to excessive rains a great many would-be-contestants did not get their grain and roots seeded as early as they would wish and may be a litlle dubious about making their entries. The trifling entry fees will not make nor break your fortunes, and by the time the judging season comes around crops that are not very promising at present may outclass your highest expectations. Give yonr association a fair show by making your entries early. It will help to carry out the competition in a business like way. Do your part the officers of your association will de theirs'.

PROF. ARCHIBALD GOES TO OTTAWA.

Our Maritime Province farmers will regret to hear that Prof. E. S. Archibald of the Nova Scotia Agricultural College has severed his connection with that institution. They will however, be glad to know that his services will not be all together lost to the Maritime Provinces. In his new position at the Central Experimental Farm, Ottawa, he will be able to do a lot of good work for the Maritime Provinces. During the few short years that Prof. Archibald has been engaged in Agricultural work at the Truro College he has displayed so much enthusiasm in his work that he has gained the confidence of the farming population not only of Nova Scotia but of Prince Edward Island and New Brunswick as well. We are sorry to see him go away for he was the right man in the right place, We are confident that each and every one of our readers join with us in wishing Prof. Archibald every success in his new position and trust he will find it convenient to frequently visit the Maritime Provinces where he will always be accorded a hearty welcome.

THE FARMER MORE IMPORTANT THAN THE FARM.

Of the two main factors in agriculture, the farmer is more important than the farm. Some men will succeed almost anywhere and under most adverse circumstances, Aggressive, persistent, close-calculating and energetic they could accumulate fortunes where other men would starve. On farms of stubborn sterile, hilly clay, they produce crops and incomes which rival results on black mellow prairie farms. Where conditions are propitious, such men set the pace for the nation in agricultural production and prosperity.

HANDS ACROSS THE SEA.

A group of distinguished British capitalists and merchants, under the leadership of Mr Leonard Palmer who toured Canada last year as special representative of the London Financial News, are now in Canada, They have completed their tour of inspection of the various centres of industrial activity in the Maritime Provinces. They have only touched the fringe of our great Canada but what they saw in the Provinces by the Sea,—magnificent situations, execllent harbors and a contented, busy class of people very favorably impressed the visitors. They realized that all that was necessary to make tne Maritime Provinces the best country under the sun was more capital and more people. A hearty welcome was accorded the delegates at every point that they visited. The favorable impressions gained of the vast industrial possibilities of the Maritime Provinces will eventually result in the extention of more British capital to our industries and in bringing our advantages to the attention of a good class of citizens, who, hearing of our possibilities may decide to cast their lot with us.

A party of school teachers from Scotland will visit Canada during July to inquire into Canadian Systems of education. They, too, will be heartily welcomed and on their return to their various schools they cannot help doing a lot of good advertising for Canada.

HOW ABOUT POTATO SPRAYING.

How about your potato fields? Are you going to Spray in order to ward off The Blight and Potato Bugs or are you going to let them run rampart and take a great share of the profit out of your year,s hard work? A couple of thorough sprayings with some good fungicide and insecticide will keep the vines in a healthy, thrifty condition untill they become frosted. The result will be a prolonged period of growth for the tubers and a consequently increased yield. An increased yield means a greater return for your labors—a more profitable season's work. The leaves of the plant constitute the plant's stomach Impair an animal's stomach and the animal soon becomes stunted and unthrifty. If you allow blight and bugs to impair the leaves of the potato vines the tubers will become stunted. The expense incurred in spraying your potato vines is very insignificant in comparison with the extra amount you will realize from harvesting a healthy bountiful crop. Because you have never sprayed before is no reason why you should not spray this year. Ask your neighbors who may have sprayed their potatoes in previous years for their experiences. We will abide by their decision.

CHASTENING GREVIOUS YET JOYOUS.

At Geneva, New York, the authorities classified all dairies as "poor", where conditions were filthy; "medium", which meant dirty, merely; "good", which is Genevese for fairly clean; and "excellent", where they were really clean and actually sanitary. This classification was made public, and milk was bought and sold at prices graded according to it. At the beginning more than a third of the dairies were "poor", more than half only "medium", and only one in twenty was „good". There does'nt seem to have been any "excellent". At the end of a year of this publicity, more than half had so far cleaned up as to be "good" and the "medium„ had fallen to 38·2 per cent. By the end of a second year, eight out of every ten were "good", and about one in ten "excellent". At the end of the first quarter of the fourth year, one dairy in every eight was "excelleut",-- that is capable of producing absolutely sanitary milk. The "poor" and „medium" had all been wiped out, and all which were not "excellent" were „good". We don't like to be shown up, do we? But is'nt it good for us?

Experimental Farms Appointments.

The increasing volume of work connected with live stock, field husbandry and forage crop production on the Dominion Experimental Farms has renderered necessary the division of the duties heretofore undertaken by the Dominion Agriculturist. The increase in the work devolving upon the officer holding that position is due partly to the ever-growing number of Experimental Farms, with the consequent heavier task of supervising much of the experimental work on each, and also to the number of lines of investigation now being taken up, which, in many cases, are new and, in others, are being studied in a more scientific way and in greater detail than before. Among these may be mentioned problems in connection with the keeping of live stock and dairying, the study of the effect of rotations, both as to the value of the crops harvested and the result of each rotation on the fertility of the soil. Cultural methods are also being tested in a most systematic manner on all the Experimental Farms, with the same ends in view, to ascertain the value of each in terms of crop produced, taking into account, at the same time, the effect on fertility. Beside the above lines, a special effort is to be made to improve

Prof. E. S. Archibald.

The Newly Appointed Dominion Animal Husbandman.

the quality and yield of our grasses, clovers, alfalfas, roots and other forage crops. A new feature of the work will be the endeavor to collate the mass of data so gathered on the various farms and from it draw some conclusions which, it is hoped, will prove of great value to the Canadian farmer.

It will be easily seen that, to carry out the work here briefly mentioned, involves a vast amount of most careful experimenting and recording of results obtained, a work bejond the powers of any one officer to carry on successfully. The Dominion Department of Agriculture is to be congratulated on having obtained the services of the gentlemen whose careers are herein noted, to fill the positions thus rendered necessary.

Three appointments have been made, a Dominion Agrostologist, a Dominion Animal Husbandman and an Assistant Dominion Field Husbandman.

In addition to assuming some of the duties formerly discharged by the Dominion Agriculturist, the Dominion Agrostologist, Dr. O. M. Malte, takes up some of the work previously supervised by the Dominion Cerealist Dr. G. E. Saunders, and by the Dominion Botanist, Mr. T. H. Gussow. He will devote his time more especially to the breeding and improvement of Canadian forage crops of all kinds, paying special attention to grasses, clovers and alfalfas.

Dr. Malte was born on March 8th. 1880 in Southern Sweden, where his father was a merchant. After attending prepararory and high school for about eleven years, he matriculated when 19 years of age at the University of Lund in Southern Sweden, graduating as Bachelor of Science and later taking the degrees of licentiate of Science (corresponding to Master of Arts) and Doctor of Philosophy. During the greater part of the time spent at the University, he was Assistant at the Botanical Gardens connected therewith. During the summer vacations he was for three consecutive years Assistant at the Experimental Station at Svalof, being engaged in breeding forage plants. As a permanent appointment at that Station was at the time impossible for financial reasons he became a teacher of natural science, including botany, zoology, chemistry, physics, geology, and astronomy, holding this position unti 1910, when he came to Canada. He has published several scientific papers on systematic botany, plant physiology, morphology, cytology and plant breeding.

The Dominion Animal Husbandman, Mr. E. S. Archibald, B. A., B. S. A. was born in Yarmouth, Nova Scotia, in 1885. His father Mr.E. E. Archibald was engaged in lumbering as well as in general Agriculture and fruit growing in that district until 1898 when he removed to Wolfeville, N. S., where he has since been interested in farming and orcharding.

The subject of the present sketch entered the high school at Wolfeville in 1898, matriculating in 1901. He received his Bachelor's degree from Acadia University in 1905, and his Diploma from the Nova Scotia Horticultural School, Wolfeville, in 1904. His practical experience, up to this time, included both horticulture and general agriculture.

The years 1905 and 1906 were spent at Truro where he worked on the College Farm and received the first graduation Diploma issued by the institution. After a visit to Wyoming, where he was sent in charge of a shipment of breeding stock, he entered the third year class at Guelph, Ontario, in the autumn of 1906 and graduated in 1908, being engaged during the summer of the year of his course, in getting practical experience on the farms of well known breeders of live stock.

After graduating in 1908, he accepted the position of instructor in Agriculture and Experimentalist at the Nova Scotia Agricultural College at Truro, and he was appointed Professor of Agriculture and Farm Superintendent at that Institution in 1910, resigning the position to take that of Dominion Animal Husbandmnn.

The work of supervising the Field Husbandry at the various Experimental Farms and Stations will be carried on by Mr. O. C. White, B. S. A. who has for some time been Assistant to the Dominion Agriculturist. Mr. White will not however, assume the title of Dominion Field Husbandman, but will be known as Assistant Dominion Field Husbandman, Mr. J. H. Grisdale, B. Agr. Director of Experimental Farms continuing as Act ing Dominion Field Husbandman, for the present.

Mr. O. C. White was born September 14th. 1887 at Ashburn Ontario County, Ont., where his father was farmer. He received his primary education at the Ashburn Public School and in 1901 took the junior leaving examinations from the Uxbridge High School.

After four years on the farm at Ashburn, he spent a season on a grain farm in southern Manitoba and a few months on a mixed live stock farm in the State of Pennsylvania.

He entered the Ontario Agricultural College in the fall of 1906 graduating from that institution in June 1910, his work there covering both live stock and Field Cultural work. During this period two summers were spent under Prof. W. H. Day as a drainage surveyor and demonstrator. During his final year Mr. White formed one of the Ontario Agricultural College Stock Judging Team at the Chicago International.

His former position of Assistant to the Dominion Agriculturist was assumed immediately after his graduation in June 1910 and he has continued to occupy it until his present promotion.

Failure of Oats to Germinate in Nova Scotia.

A large number of farmers in Nova Scotia are reporting a failure of their seed oats to germinate, and it is evident that a large loss will be entailed. So far as ascertained by the Department of Agriculture, the failure is confined entirely to fields seeded with Western oats, which were severely frosted last year. Those fields that were seeded with home-grown, or in fact, any Maritime Province grown oats, are reported to be germinating excellently and give promise of a good crop. The Seed Division of the Department of Agriculture, Ottawa, has repeatedly warned farmers through the press and on the platform of this very danger which they incur through using Western-grown oats, as well as the danger of importing weed seeds. The Department has strongly urged the farmers to grow their own seed or to buy seed that has been grown as near home as possible. It was with this very aim in view that the Nova Scotia Department of Agriculture inaugurated, three years ago, standing field crop competitions, which were intended to encourage farmers to grow their own seed.

The strange feature about frosted oats, is that the kernels can be frozen so badly as to destroy the germ and yet appear bright and of good quality. In this respect oats differs from wheat, the kernels of which are in the first place not so easily destroyed by frost, and in the second place shrivel up so much that their frozen condition is easily recognized. Mr. Moore, of the Seed Division of the Department of Agriculture, Ottawa, says that one can easily recognize frozen oats that will not germinate, by splitting the kernel lengthwise, when the germ will appear quite dark in color instead of white as it should appear in a normal kernel.

What are the farmers to do this year? It almost looks as if the farmers whose land is seeded down to expensive timothy and clover seed, had better leave their fields alone and be satisfied with the extra stand of clover and timothy. The farmer who has not seeded his land has no alternative but to plow or harrow the field and put in a crop of buckwheat or green feed such as peas and oats and possibly in some cases, oats alone, although, at this late date, they will have difficulty in getting good seed.

The lesson for future years is easy to perceive. Maritime Province farmers should take the advice of both the local and federal Departments of Agriculture and grow their own seed.

In this connection, following the big prices which have been paid for timothy seed, it is to be hoped that many farmers will grow at least sufficient timothy seed for their own use. In former years many farmers did grow their own seed, but cheap imported seed led to their giving up the practice. However, it looks as if the days of cheap timothy seed were over, and that farmers should protect themselves by growing at least enough for their own use. Only one word of warning which should apply whether farmers are growing seed for their own use or to sell, but more especially in the latter. It is illegal to sell timothy or red clover seed that contains more than eighty (80) noxious weed seeds to the ounce. (There are approximately 80,0000 of timothy seeds in an ounce). The most troublesome weeds which are likely to appear are Ox-Eye Daisy and Canada Thistle, which should preferably, when they appear, be cut in the field before the timothy has headed out. In other words, clean the field and there will be no need to clean the seed.—Prof. M. Cumming, Truro, N. S.

The Breeding and Feeding of Dairy Cattle.

Editor Maritime Farmer:—

"The Breeding and Feeding of Dairy Cattle" really involves two subjects but they are so closely related that one cannot be taken up without bringing the other in also. In regard to breeding, the first and all important principle to remember is, to breed to nothing but a pure-bred bull, and further than that breed only to a pure-bred bull, the production of whose dam, and the yearly net profit she makes is known to be above the average.

But such bulls cost money and are hard to get, and just here, I think, there is room for co-operation. Dairymen should get together and buy a bull on shares; then they could purchase a high class bull, thus obtaining his services, with a very small outlay. If two such clubs would take up the same breed, they could interchange their bulls, and still further reduce the cost of obtaining the services of a first class sire. On no condition should a change be made from a bull of one breed to that of another. Choose a breed at the outset, and stay by it through thick and thin.

In buying a bull his show-ring records and those of his sire and dam must not be the only things taken into consideration.

Dairymen are not breeding for the show-ring but for the production of milk, therefore, a dairyman's bull must show production in his pedigree as well as good breeding. Breeders of pure-bred stock are finding this out and there are many who can supply bulls, the yearly production of whose dam can be shown. When the service of a first-class bull is procured; the crop of heifer calves he produces must receive special attention so that they may come to their first calf, if not beef fat, at least in good condition. But great care must be taken not to over-feed during the winter season, and to give plenty of outdoor exercise, insuring a strong healthy cow. It is not advisable to breed heifers to calve any earlier than thirty months old. Give them time to develop and a stronger better producing cow will be the result.

This short outline of breeding dairy stock, touches only the outside of the subject. It is a science in itself and must be given much careful study. The feeding of the dairy cow is, if anything, of more importance than breeding.

A dairyman may feed well and realize some profit without paying much attention to breeding. But he is not making as large a profit as the man who breeds as well as feeds. In the matter of feeding there are a few standard feeds, which must be fed to get the best results. These are roots, clover, hay, oats, bran, oilcake and cottonseed meal. I am speaking now of winter feeding. Avoid prepared dairy feeds, they are generally adulterated. Roots are the best succulent feed for this Province as they can be grown more successfully and more profitably than ensilage corn. Anyone can grow a crop of turnips. And by feeding after each milking no bad flavored product results.

(Continued on page 663)

HORTICULTURE.

Combating the Cutworm.

Tomatoes, cabbage, and other vegetables and garden plants, and especially those which are started under glass and transplanted, are subject to serious injury by cut-worms They appear sometimes in great numbers in spring and early summer and frequently do severe injury before their ravages are noticed. The method of attack is to cut off young plants at about the surface of the ground, and as these insect are of large size and voracious feeders they are capable of destroying many plants in a single night, frequently more than they could devour.

The usual method of control is by the use of poisoned baits. Take a bushel of dry bran, add 1 pound of arsenic or Paris green, and mix it thoroughly into a mash with 8 gallons of water, in which has been stirred half a gallon of sorghum, or other cheap molasses. After the mash has stood several hours, scatter it in lumps of about the size of a marble over the fields where injury is beginning to appear and about the basis of the plants set out. Apply late in the day so as to place the poison about the plants over night, which is the time when the cutworms are active. Apply a second time if necessary.

When cutworms occur in unusual abundance, which happens locally and sometimes generally in some seasons, they exhaust their food supply and are driven to migrate to other fields. This they do, literally in armies, assuming what is called the armyworm habit. At such times it is necessary to treat them as we do army worms whi,e the methods which have been advised are valuable in such cases, these remedies may be too slow to destroy all the cutworms and we have to employ other methods. Clean culture and rotation of crops are advisable also fall plowing and discing.

Protect the Nozzle.

A great many men treat their nozzles something like this: A spray nozzle should give a fine spray with the same disk used all last season; it should never need new disks; never need new packing; it never needs cleaning, but should do perfect work, even though stopped up with leaves, twigs, straw and other things that got in because the top of the tank wasn't covered, or that would have been caught by the strainer, only the strainer had a hole punched in it last winter and wasn't mended yet.

Don't expect a neglected nozzle to do good work. It can't. It should be washed out with clean water every night. The best way to do this is to pull the suction hose out of the tank, stick it in clean water, and then run the pump until clean water comes through the nozzle.

A spray nozzle should have a disk with asmall hole, if a fine spray at reasonable pressure is expected. Disks will wear out. Have plenty of extra ones and use them. Keep the tank clean and strain the solutions into it. It is easier to keep sediment and trash out of the tank than to pick it out of the nozzlesi

The nozzle is the business end of the whole outfit. For it we have engine, pump and hose. It determines the pressure to be carried and the pressure determines the size of the engine, the grade of the hose, the wear of the disks. High pressures are responsible for a good many of the troubles of the spraying. Are nozzles now available giving good sprays as at low pressures as they should?

Thewhirling spray nozzle attains its results by using centrifugal force to send the liquid into the air in a thin, conical sheet, when the resistance of the air tears this thin sheet into a fine mist. This nozzle gives little or no spray in the centre of the cone. Attempts are being made to put a center into the cone, the general plan adopted being to interfere with the smooth whirling liquid inside the nozzle, churn it into a froth, and blow it by main strength sputtering into the air.

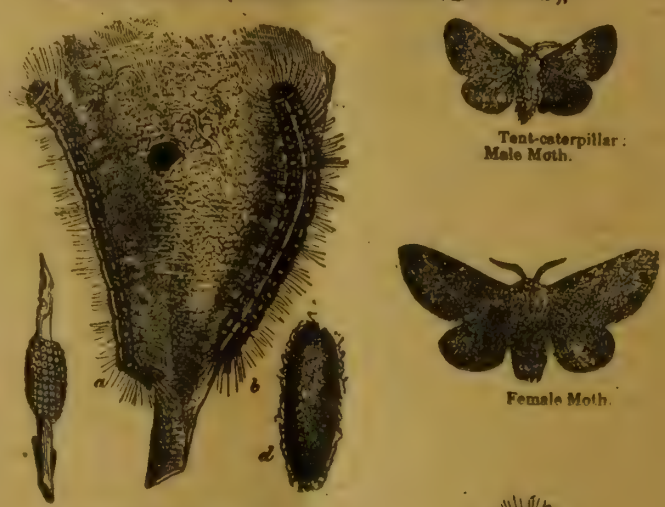
The throat passage is put there to direct a jet into the eddy chamber. There is needless loss of pressure in getting the liquid into this passage if the edges of the opening are not rounded.

The jet should be smoothly turned so it will be directed into the eddy chamber in the direction in which the liquid must whirl. Pressure is lost in throat passages with sharp turns. The shape of the jet after leaving the throat passage must be rectangular, in order to fit into the spiral in which the liquid whirls.

Now suppose there are two throat openings into the eddy chamber, and that this chamber is a true circle in side. What becomes of the stream shot in from the throat? It follows the outside of the eddy chamber, of course, until it comes to the second throat opening, and there if the opening is not protected in some way it strikes squarely into the stream coming out at that point. Result? Eddy and froth, stoppage of the whirl and loss of more pressure. The same thing is going on at the other side of the nozzle.

To sum up the points I wish eo emphasize as essential to the design of a successful low pressure nozzle are: 1, Easy entry into the throat passages; 2, gradual turning of the stream in these passages toward the eddy chamber; 3, a rectangular stream; 4, spiral sides to eddy chamber. Lastly, no nozzle will do good work unless treated right.—Prof. H. W. Riley, N. Y. Col,ege of Agriculture.

TENT CATERPILLARS (*Malacosoma Americana* and *disstria*),



Tent-caterpillar: Male Moth.

Female Moth.

Apple Tree Tent-caterpillars on their web; c, egg-bracelet; d, cocoon.

Forest Tent-caterpillar: Moth and eggs

orest Tent-Caterpillar.

Farm Too Family Fresh.

The following extract taken from the column of the Long Island Agronomist, the Agricultural organ of the Long Island Railway Experimental Farms in the "Home Hamper," contains some suggestions that are well worth passing along to our market gardening readers:

"The market success of the Home Hamper which was originated and put in service soon after the first crops came in on the Long Island Railroad Experimental Station No.1, is our reason for giving the following details which answer innumerable inquiries from both producers and consumers. In the past year quite a number of producers have decided upon this method of disposing of their entire output, and many who have not yet adopted this system are planning to do so. The Long Island Home Hamper, a "Farm to Family Fresh" method, solved a problem of vital interest to both producer and consumer. The Home Hamper is a light carrier measuring 24 inches long, 14 inches wide, 10 inches deep, weighing packed about 35 pounds. It contains six baskets, holding about one half peck each, and filled with from seven to twelve varieties of vegetables, berries and friut in season. Each basket is carefully packed and lined with green wax paper, which not only adds much to the appearance of the package, but also serves to keep the contents crisp and fresh.

The Hampers are packed in the morning, shipped at seven o'clock and delivered in Greater New York about noon. Our charges are $1.50 delivered to the consumer's door, within delivery zone of the Long Island Express. To duplicate contents on the open market would cost from $2 to $4, therefore the consumer always gets his money's worth of fresh, crisp, palatable table delicies. The average family uses two Hampers a week, hence we have established Tuesdays and Fridays as regular shipping days. Many of our customers send in their checks to cover shipments for one or two months in advance, some for even more. All orders are accompanied by checks, no open accounts being kept.

The Home Hamper has been shipped to Michigan, to Chicago, into New England, the Southern States and to France. Reports of these distant shipments have invariable come back: "Hamper received with contents in perfect condition." To satisfy customers is a pleasure; to realize a just and fair profit is business; to pass along a "good thing" is our custom."

Apples.

"Climatic influences last year caused most of the apples by December to show a spent or over-ripe condition, similar to what is expected in normal seasons about the first of March, the result being that before Christmas, when prices generally stiffen, the Liverpool market sagged off fully two shillings per barrel on apples which had been held in ordinary warehouses. Apples, however, which had been carefully selected and kept in cold storage stood up well, were of fine appearance and were crisp and juicy. This well selected fruit, which had been held in cold storage, was in keen demand by the best class of buyers, and realized good prices throughout the seasan.

"Immense quantities of small lots of mixed varieties are still exported from Canada. These small mixed lots hurt the general tone of the market, as important buyers will not give them their attention, the result often being a dull dragging market with declining prices.

"The export of selected apples, properly packed in boxes containing about 40lb. net of fruit, should be encouraged, as there is a growing demand for the box package, if supplied at a reasonable price to the consumer.

"Prizes are now offered at British fruit shows for apples packedin such barrels and boxes, properly graded and packed, and during the past season apples from Kent, well graded and packed neatly in boxes, were, on the same market in Liverpool, quickly cleared at high prices when competing against Canadian and United States apples packed in barrels. —Extracts from the yearly report of A. W. Grinley, Liverpool, England, Chief Cargo Inspector in Great Britain for the Canadian Department of Agriculture.

Warning to Potato Growers.

In regard to the comparative values of Bordeaux mixture and lime-sulphur for the spraying of potatoes, the following is of interest.

"After a careful test, made by the New York Experiment Station in 1911, it is concluded by the experimenters that lime-sulphur solution cannot replace Bordeaux mixture as preventive of potato diseases. The plants in rows sprayed with lime-sulphur were dwarfed by the fungi-40 bushels less to the acre, than plants in check rows; while the Bordeaux-sprayed rows produced 100 bushels to the acre more than the checks. Although the conditions were probably more suitable for the Bordeaux spray, still the experiment conclusively proves it unsafe to use lime-sulphur on potatoes."—Horticultural Division, Fredericton, N. B.

Prof. Saxby Blair Comes Back to Nova Scotia.

The many friends in Amherst and Nappan of Mr. Saxby Blair, formerly manager of the horticultural department of the Experimental Farm at Nappan, but of recent years connected with the McDonald Agricultural College, Quebec, will be glad to know that he has been appointed manager of the new horticultural farm at Kentville, and will have general supervision of horticultural work in the province. Mr. Blair will leave the McDonald School sometime before the end of the present month. His many old friends will be glad to welcome him back to Nova Scotia.

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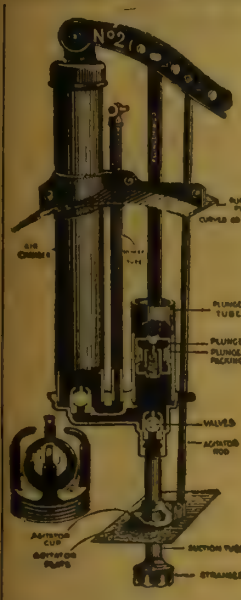

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Dreadful Ravages of Orchard Tent Caterpillars.

The apple tent caterpillar is making dreadful ravages in many orchards in Eastern Canada. Those who did not watch out and spray for it at the right time will suffer serious loss. Many orchards are in the grip of this pest. The trees look blighted, some of them, many in fact, completely stripped of their leaves. These caterpillars, in their legions, have attacked not only orchards, but shade and other trees as well. The conditions could hardly be worse. Their large tent-like spider's web-like nests are so large that they can be seen in the branches at a distance. Some orchards seem to have been hopelessly abandoned to them, probably from the fact that their owners had not the necessary spraying apparatus. It is a pity, too, because the caterpillars can be easily cleared out by spraying. It will, however, serve the purpose of emphazing a lesson for future years, the absolute necessity of spraying and taking the ordinary precautions to prevent this and other pest ravages.

The apple tent caterpillar is so called by reason of the tent-like nest it builds for itself in the branches of the tree. Into these tents the dirty-looking brown masses congregate at night to renew their ravages in the day time and especially in warm weather. They swarm over the trees and eat up the leaves.

This plague of caterpillars is probably due to a deficiency of their natural checks or enemies, and this due to the peculiar conditions of an unusually wet season.

The eggs from which the caterpillars come are laid in masses on the bark of the tree by a moth in the fall. They are securely protected for the winter and are hatched out in the first warm weather in the summer. They then build their nests and commence their depradations. Their ravages, where unchecked, will continue for two or three weeks longer, when they will disappear into the ground, where they pupate and then emerge as the adult moth to recommence their egg-laying in the fall. This is the round of their life.

They can be exterminated by spraying with lime sulphur diluted one to 25 or 30 and arsenate of lead, 3 lbs. to 40 gallons of water. They are killed by eating this poison on the leaves.

Kerosene emulsion, a contact poison, will kill them in their nests by spraying. This emulsion is made as follows:

Formula:

Kerosene oil (coal oil) 2 gals; rain water, one gal.; soap, half a pound.

Boil the soap in water till all is dissolved; then, while boiling hot, turn it into the kerosene, and churn the mixture constantly and forcib,y with a syringe or force-pump for five minutes, when it will be a smooth creamy nature. If the emulsion is perfect it will adhere to the surface of glass without oiliness. As it cools it thickens into a jelly-like mass. This gives the stock emulsion, which must be diluted with nine times its measure of warm water before using on vegetation. The above quantity of 3 gallons of emulsion will make 30 gallons of wash.

The tent caterpillar can easily be disposed of also by going round the trees in the early morning, or towards evening and clearing out the webs with the enclosed colony of worms. During the warmer hours of the day caterpillars are scattered over the limbs of the tree, feeding upon the foliage, and, therefore, it is necessary to attack them when they are all at home in their tent. Some people burn them up in their tents at these same hours.

The Roofings That *Have* and *Will*

Some roofing claims are filled with "wills"—"They will last"—"They will not need repairs"—etc., etc. You hear a great deal about what the *old-time* shingles *have* done.

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TORONTO

DAIRYING.

A Visit to the Island ot Guernsey.

Editor Maritime Farmer.

The Channel Islands are among the oldest possessions of the British Empire, although from their geographical position one would naturally conclude that they belong to France. They lie in the English Channel much nearer the French coast than to any part of England.

Wishing to visit these Islands but to avoid the long crossing from England to Guernsey I tried to cross over from St. Malo on the coast of France. When I arrived at St. Malo I was informed that there was but one regular weekly steamship sailing during the winter months and I would have to wait two days for the first steamer. Realizing that time could be saved by crossing over to England and there take passage on one or other of the steamers sailing on alternate days from Weymouth and Southampton for the Islands of Guernsey and Jersey I returned to Paris, crossed the English Channel via Boulogne and Folkstone and went to London. Leaving London about Nine P. M. at Weymouth I went on board the steamer, and, after what I considered a good crossing we reached St. Peter Port, Guernsey, shortly after seven A. M. Judgment varies; returning a gentleman was telling me what a terrible crossing they had going over by the same steamer and on the night in question.

The Island of Guernsey is known to those of us who live on this side of the Atlantic as the original home of one of our most famous dairy breeds of cattle, but perhaps but few realize what a small place it really is. At its longest part it is but nine and a half miles; at its broadest seven miles. Including curves its coastline is thirty miles. The total area is given as 16005 acres. The soil is a "light sandy loam, with a sub-soil of angular gravel." The population is somewhat over 41,000, and every available inch of land seems to be under cultivation. Generally speaking the farms are small and becoming increasingly so due to subdivision Rents are high; the average for The rate of land for the growth of bulbs which are widely cultivated is from £10 to £12 per acre. The day previous to my visit a steamer having hold and decks loaded with nothing but flowers from these bulbs sailed for England. In addition to the land thus given over to the growth of flowers probably as large an amount is under glass. In these glass houses figs, potatoes, tomatoes etc., are grown for the English markets.

The object af my visit was to see and study the Guernsey cow in her natural home, so I got right away out from the town and having a rig was able to visit many different herds. I was extremely fortunate in having as a companion a prominent American Guernsey breeder and importer. He had frequently been over the Island purchasing cattle and had just completed selecting over one hundred head to ship during March to the United States. Herds belonging to the best cattle breeders were visited, and also others of lesser repute. The best animals of the Guernsey breed were thus seen and handled, and by the way, there are no animals of any other breed allowed on the Island and has not been for almost one hundred years.

To attempt to describe in detail any one of the herds seen or even any individual would be quite beyond the scope of what I set out to do. I shall attempt to write only in general terms regarding what I saw and the impressions which I formed. None of the herds were what would on this continent be considered large. I probably only saw three herds in which the number of animals, young and old, would exceed twenty. I do not remember ever having seen a prettier sight than two of the largest herds tethered out to graze in two adjoining fields. All cattle are tethered when out grazing in the Channel Islands. I saw in various stables and out in the fields individuals, male and female, who were veritable beauties. Along with this beauty in the cows there was combined to a very high degree, milk and butter producing qualities, Some of these animals could not be purchased at any price. The farmers realize that if the quality of their stock is to improve, they cannot afford to allow their best animals to leave the Island. At the Cattle Shows first prizes awarded in each class are not given to the owners until the winners have been subsequently kept on the

sequently kept for a year on the Island. That many cows are bred annually to the best bulls is quite

Hear What Others Say About It

Following are some extracts taken from letters received from owners of Standard cream separators. They show what others think of the Standard :

Standard

"It's skimming by our repeated tests is perfect"—"Your claim 'The World's Greatest Separator' I thought at one time rather far-stretched and sweeping. I now believe it justifiable."—"I think it is the easiest machine I ever turned and very easily washed, and I don't there is a separator that can skim as clean taking it all round."—"Am pleased to tell you that the last test was 0.01"—"No back straining to put in the milk and no dirty oiled smeared around the machine all the time"—"It has the best oiling device I have ever seen"—"I find it a very close skimmer with the milk in any condition and that it will deliver any density of cream with either warm or cold milk, and still flush out easily."

The letters from which the above extracts are taken, are printed in full in our booklet. Send for a copy. It is interesting, instructive, and fully describes the "World's Greatest Separator," the Standard.

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There are a host of machines that are claimed to do these six things. But Empire separators are the only separators actually doing the whole six. That's certainly a bold statement. It's the truth, nevertheless.

FIRST: Empire Cream Separators skim to .02 per cent. and often less. That means the loss of only one pound of butter fat in every five thousand pounds of milk, which is equal to the loss of one pound of butter fat in all the milk a cow gives in one year. The Frictionless Empire *gets all the cream*

EMPIRE

Cream Separators

SECOND: The few smooth-skimming devices of Empire separators are as easily and thoroughly washed as glass tumblers. This cannot truthfully be said of skimming devices with corners, sloths and crevices that soon get clogged up and cannot be thoroughly cleaned. *Cream in perfect condition* —cream without a taint—can only be obtained from a separator that can be thoroughly cleaned.

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Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

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evident. A visit was made to the home of "Governor of the Chene" once champion and yet one of the best bulls on the Island. He is now twelve years old but last year at the show, in spite of his age, stood second in the class for bulls over twenty-seven months. Over 4,000 cows have been bred to him. Another, a young bull, out of a very famous cow, last year brought in over £60 in service fees to his owner.

I was struck with the variation in type of the animals on different farms in the hands of the various breeders. Some have kept most prominently before them the production of an animal beautiful in form but in their efforts have sacrificed considerable in size. Others again have held size to be the most important feature and have succeeded in producing a very much larger but rougher animal, cows which will produce steers capable of dressing 1,000 lbs. of beef. between these two extremes there are various gradations and crosses. Milk producing qualities are held to be of the greatest importance. At the cattle shows the dam of any bull exhibited if on the Island, has to be shown at the same time. The dam of a bull having been tested a certificate of such test is taken into consideration by the jddges in awarding prizes. It may seem strange but nevertheless is a fact that there are practically no official records of milk production in existence in Guernsey. The longevity and prolificacy of some cows was very noticeable. I saw a cow twenty years old and she was in calf at the time. Another nineteen years old had given fifteen calves. I was told of a cow twenty-three years old and had given twenty calves.

The housing of cattle in Guernsey is not nearly as important a matter as it is to us in Canada. Cattle are kept in at night during cold, wet weather, but are put out to graze for at least a part of almost every day during the year. Some of the stables are quite modern and in every respect up to date, others are old, dark and very badly ventilated. Some of the cattle are groomed daily and have their tails and flanks washed. When in full milk, the best cows are milked thrice daily. The most progressive dairymen lay in a supply of hay and roots for winter feeding and purchase in addition bran and other mill products. Numbers are now beginning daily to weigh and keep records of the milk production of their cows.

The past season was one of scarcity in Guernsey as elsewhere. Hay was selling as high as $35 per ton, and in consequence some of the young stock were said to be below normal but the majority were in good growing condition. The number of cattle which can be kept on the Island has reached the maximum. Breeders now look to outside buyers to take the surplus stock. Of the animals exported the vast majority are sent to the U. S. A. At the time of my visit four prominent American importers were on the island and expected to take away about four hundred animals. Numbers of bulls are sold annually to English dairymen and are crossed on the common cattle with a view to improving them. The total number of pedigreed animals in Guernsey, although constantly varying, is said to be only about 4,000. Last year there were about 1,000 females entered for registration in the Herd Book, and about 300 males.

The roads over which we drove were everywhere as good as most town streeets, better than many. Along both sides there were neat hedges or stone walls, but looking over them one could see the well kept fields, often more like lawns than ordinary fields.

Before concluding I must not forget to mention the kindness of all the people with whom we met. Although in every case upon our arrival at a farmhouse the residents were told that I had not come to purchase cattle, they spared no pains in displaying their animals, in answering questions and giving pedigrees. We were invited into their homes and were really in danger of injuring our digestive organs in trying to do justice to the good things set before us. Most of all I enjoyed tne delicious milk given us to drink; I had not tasted its equal for over five years.—K. G. MacKay, B. S. A. Scotsburn, N. S.

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If your dealer cannot supply you, send us his name and $1.25, and we will deliver prepaid to your address a half-gallon can of COW-EASE and SPRAYER for applying. For West of Missouri River and for Canada, above Trial Offer, $1.50.

Satisfaction or Money Back.

CARPENTER-MORTON CO.

BOSTON, MASS.

When your child has whooping cough be careful to keep the cough loose and expectoration easy by giving Chamberlain's Cough Remedy as may be required. This remedy will also liquify the tough mucus and make it easier to expectorate. It has been useds successfully in many epidemics and is safe and sure. For sale by all dealers.

THE WINNERS

Prize-Winning Ayrshire Heifer Owned by Mr. P. Blanchard, Truro, N. S. Who Uses a Tubular

Dairymen making the most money realize that it pays them well to use only high producing cows and the highest producing cream separator. That is why Mr. P. Blanchard, successful dairyman and popular agricultural speaker of Truro, N. S., who owns the prize-winning Ayrshire heifer shown above, uses and recommends the

SHARPLES

Tubular Cream Separator

Mr. Blanchard is but one of many who are equally businesslike and use Tubulars exclusively. Tubulars are prize-winners. Have twice the skimming force of other separators. Skim faster and twice as clean. Dairy Tubulars contain no disks to chop or "taint" the cream or give it a metallic flavor.

By producing the best cream and the most cream, Tubulars make a profit for the user that other separator gets. This extra profit is simply Tubular "velvet" which Tubulars make for other keen, businesslike farmers and will make for you.

Ask for Catalog No. 191 and our book, "Business Dairying." Both FREE.

THE SHARPLES SEPARATOR CO.

Toronto, Ont. Winnipeg, Man.

The Oil You Need For Your Separator

STANDARD HAND SEPARATOR OIL

NEVER GUMS NEVER RUSTS NEVER CORRODES

Standard Hand Separator Oil feeds freely into the closest bearings and gives the best possible lubrication.

It makes your Separator last longer and do better work as long as it lasts.

One gallon cans, all dealers or write to

The IMPERIAL OIL CO., Limited.

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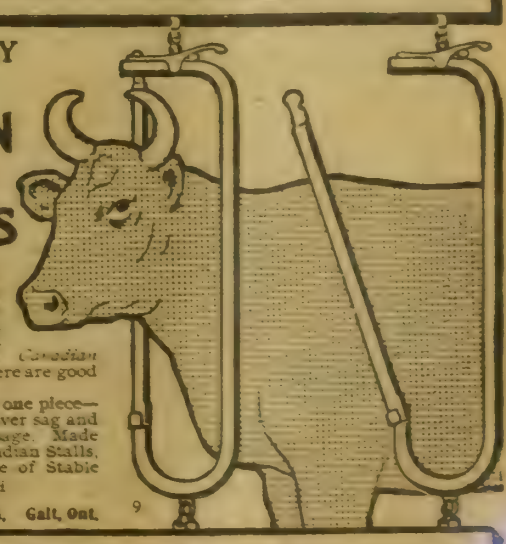
O.K. CANADIAN U-BAR STEEL STANCHIONS



When big stables like the Central Experimental Farm at Ottawa — the new barn at Silver Spring Dairy Farm, Ottawa—the Erindale Farm at Toronto — are equipped with *O.K. Canadian U-Bar* Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue H

Canadian Potato Machinery Co., Limited, Galt, Ont.

HAD DYSPEPSIA
FOR TEN YEARS

COULD NOT KEEP ANYTHING ON HER STOMACH

Dyspepsia is caused by poor digestion, and to get rid of this terrible affliction, it is necessary to place the stomach in a good condition. For this purpose Burdock Blood Bitters has no equal.

Mrs. Norman A. MacLeod, Port Bevis, N.S., writes:—"For the last ten years I suffered dreadfully with dyspepsia, and I could not keep anything on my stomach. I tried several kinds of medicines, but none of them seemed to do me any good. At last a friend advised me to try Burdock Blood Bitters, which I did, and after using five bottles I was completely cured. I would advise any one troubled with stomach trouble to use B.B.B. I cannot recommend it too highly."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

LIVE STOCK.

The Sheep Industry.

A New Appointment in the Live Stock Branch.

Two years ago the prospect of any extension of sheep raising in Canada appeared very remote. Except in the case of breeders of pure bred flocks, the prevailing attitude regarding the possibilities to be attained through a development of the industry was largely one of indifference and unconcern. To-day, however, a very great change in point of view is manifested, particularly on the part of farmers interested only in the breeding and rearing of market sheep. This change has doubtless been brought about on the one hand by the increasing domestic consumption of mutton and lamb. On the other hand, however, it has with equal certainty been hastened and confirmed as a result of the investigations of the Sheep Commission of the problems confronting the sheep farmer in this country and of the manner in which a decadent but attractive business might be revived.

The interest awakened by tne latter movement on the part of the Federal Government was further strengthened by the suggestive lectures delivered by Mr. Ritch during the early months of the present year at meetings attended by him in the Maritime Provinces and later at meetings attended by Messrs. Ritch and MacRae in the provinces of Saskatchewan, Alberta and British Columbia. "The Government is doing something" was the apprecative comment of the Western sheep man, after the conclusion of one of the recent lectures, and this statement is expressive of the temper of sheep growers, both in the East and in the West, who are gratified to know that in their interests something definite is now being undertaken.

An announcement has already been made regarding the action of the Minister in making provision for a special sale, during the months of September and October next, of pure bred rams and grade ewes in the Maritime Provinces and in British Columbia. It has been ascertained that these provinces have need, not only of selected sires, but also of female stock to serve as the foundation of grade flocks for the production of marketable lambs. The co-operation of the Dominion Sheep Breeders' Association has been secured to assist in this work and a grant of $15,000.00 has been made direct to theAssociation, to be expended for this purpose, in accordance with certain conditions imposed by the Minister. The responsibility for the expenditure of this grant has been delegated to a special committee of the Association, in conjunction with the Secretary, Mr. A.P. Westervelt, and the members of this committee, acting in association with officers of the Live Stock Branch, are at present engaged in selecting the most suitable centres for the holding of the proposed sales. They are also personally interviewing the farmers of these districts, with the view of securing their interest and co-operation in connection with the sale of the sheep. Subsequent to the distribution of selected breeding stock in different localities, it is proposed that the appointment of one or more experienced sheep men shall be arranged for who shall spend their time in visiting the farms of those to whom the sheep are sold, in order that the latter may have the benefit of competent advice regarding the management of their flocks, the care of wool, marketing of the clip and disposal of their lamb crop. As the result of this policy, it is believed that these centres will ultimately become distributing points for high-class breeding stock and influential agencies in bringing about an extension of sheep keeping in the different provinces.

In consequence of the work initiated by the members of the Sheep Commission, the Minister is now in receipt, from time to time, of requests for special assistance in connection with certain problems relating to both the sheep and wool industries. The final disbanding of the Commission has made it necessary that definite provision be made for the effective administration of the policy to which the Department is now committed to further the development of the keeping of sheep in Canada. The Minister has, therefore, considered it advisable to arrange for the appointment of a sheep expert to assume charge, under the Live Stock Commissioner, of the work to be undertaken in furtherance of this policy.

He has been fortunate in securing for this position Mr. T. R. Arkell, Professor of Animal Husbandry in the New Hampshire Agricultural College. Mr. Arkell is the son of Henry Arkell, Esq., Arkell, Ontario, the well known breeder of Oxford Down sheep. He received his primary education at the Guelph Collegiate Institute and is a graduate of the Ontario Agricultural College. His early training has made him familiar with every phase of the breeding and management of sheep, and, since his appointment to the position of Professor of Animal Husbandry in the New Hampshire College, he has devoted himself especially to experimental work in feeding and breeding and has made a study, under very advantageous conditions, of problems relating to the production and marketing of wool. He has organized, amongst the farmers of New Hampshire, a co-operative scheme for the sale of their wool clip, and, in addition, has undertaken considerable extension work which has given him very valuable experience. He is now recognized in Canada and the United States as a specialist in sheep husbandry and has won for his work the attention of some of the most eminent experts in breeding and experimentation.

Mr. Arkell is to join the staff of the Live Stock Branch before the middle of the current month and will proceed immediately to the provinces of Saskatchewan and Alberta to advise with the wool growers regarding the handling of their present season's clip and to make preliminary arrangements for the undertaking of an extensive shipment of Canadian wool

The Latest Thing in Stoves

For a midnight supper, as for any other meal at any other time, the very latest thing in stoves—the best that stove-artists can do—is a

It Burns Oil —*No Ashes*
It Concentrates Heat —*No Waste*
It is Handy —*No Dirt*
It is Ready —*No Delay*

New Perfection
WICK BLUE FLAME
Oil Cook-stove

It concentrates the heat when you want it and where you want it. It is as quick as gas, steadier and handier than coal, cheaper than electricity.

The New Perfection Stove has long, enameled, turquoise-blue chimneys. It is handsomely finished in nickel, with cabinet top, drop shelves, towel racks, etc. Made with 1, 2 or 3 burners.

All dealers carry the New Perfection Stove. Free Cook-Book with every stove. Cook-Book also given to anyone sending 5 cents to cover mailing cost.

THE IMPERIAL OIL COMPANY, Limited

The Summer Pests!

At Last You Can Keep Flies off Your Cattle

With the thermometer rising up continuously think of the suffering of your domestic animals that are tortured by flies, mosquitoes and other insects.

As an experienced farmer YOU KNOW that the torment to which your cattle is submitted during the summer months, exhausts them, causes them to decline, to lose weight and in many cases even endangers their life.

There is only one way to keep away the flies, destroy all parasites (lice, tick, fleas, etc.) and restore your animals to perfect health. Simply sprinkle that most wonderful insect destroyer and disinfectant

COW COMFORT

on your cows, horses, swine, goats, sheep, dogs, poultry and all insects will be quickly destroyed. The chemicals in this preparation will positively prevent flies and mosquitoes from swarming about your animals.

Cow Comfort also has soothing, antiseptic qualities that will cure all sores or skin diseases that may affect your cattle.

We cannot insist too strongly upon the benefits YOU will derive from the use of Cow Comfort on your cows—you will find that when they are rid of flies and other insects their yield of milk will be greatly increased and of better quality.

Sold in gallon cans at $2.00 each, but as the contents of a can is to be diluted in four gallons of water, it makes the price really 40c. a gallon.

Special "Sapho" Sprayer $0.50

Write for descriptive circular--It's Free

Agents Wanted Everywhere.

The SAPHO MANUFACTURING CO. LIMITED
586 Henri Julien Ave. (Formerly Sanguinet St.) **MONTREAL**

It Pays to Advertise in the Maritime Farmer.

SUNSHINE FURNACE

Best call and find out the reasons why we so promptly back McClary's guarantee with our own. Let us explain to you why the "Sunshine" is called

"The Understudy of the Sun."

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McClary's

Cow Profits

COW comfort and cow sanitation result in more cow profits, and this alone should induce any farmer or dairyman to install our Sanitary Steel Stalls and Stanchions. They allow free passage of light and air in a stable and ensure perfect sanitation and ventilation—a result impossible with any wooden equipment.

Louden's Stalls and Stanchions

are actually cheaper than wood. Louden Stalls of heavy tubular steel with malleable fittings, have no flat surfaces for dust to accumulate and no rough or sharp corners to injure or chafe the cows. Louden Stanchions give cows the greatest possible comfort and freedom, yet keep them perfectly lined up. Latch easily opened or closed with gloved hand yet is completely "cow proof."

Louden's Barn Equipments

include Feed and Litter Carriers, Hay Tools and Louden's Bird-Proof Barn Door Hanger. Send for complete catalogue. It is cheaper to put LOUDEN QUALITY into your barn at first than to experiment with inferior equipment.

Write to-day for our Catalogue of modern labor- and money-saving equipment.

LOUDEN MACHINERY CO.
Dept. 315 GUELPH, Ont.

A sprained ankle may as a rule be cured in from three to four days by applying Chamberlain's Liniment and observing the directions with each bottle. For sale by all dealers.

to Great Britain in 1913. A systematic collection of wool samples will also be commenced immediately to provide for illustration exhibits of wool, requests for which have already been received from several of our Agricultural Colleges and Winter Fair Boards. A comprehensive effort to systematize and improve the methods employed in connection with the production and sale of wool will, undoubtedly, greatly assist in encouraging sheep farmers throughout the Dominion and in stimulating a wider interest in the business. This work, therefore, will receive Mr. Arkell's first attention and will constitute the primary step in an active and energetic propaganda which it is hoped may promote the organization of a prosperous and progressive industry.

White Scours or Diarrhoea in Calves.

It is now generally recognized that diarrhea among young calves is due to a bacterial infection. Several different kinds of bacteria have been found to cause the disease. The great majority of cases, however, are caused by various forms of the common coli bacteria, or by a nearly related species, the paracoli. These species of bacteria are found in the intestines of all healthy animals. Ordinarily they are perfectly harmless. Sometimes, because of improper feeding or other causes, a calf becomes so weakened that these bacteria are able to set up a severe inflammation in the alimentary canal. This produces the diarrhea or scours, and usually results in the death of the calf. After passage through one or two such calves these bacteria acquire a greatly increased virulence. They are then able to attack healthy calves and cause their death. When such a virulent strain is once established in a barn it is very difficult to get rid of it. The infected calves are daily passing billions of these bacteria with their droppings. These are carried about from one part of the barn to another on the shoes and clothing of the attendants, by the bedding and even by the dust in the air.

The calves may become infected in various ways. Infection through the naval cord happens occasionally, but this does not occur so frequently as is generally supposed. A much more frequent method of infection is through the mouth. The calf brings its nose and mouth in contact with the soiled bedding and the sides of the stall. In this way it may take in many of the virulent organisms. If the milk of the calf is not handled in a sanitary manner this also is a frequent source of infection.

A knowledge of the cause of the disease renders methods of prevention much simpler. On farms where the disease is not serious it is only necessary to see that the calf is born in a clean stall and is kept well supplied with clean bedding. Such a stall should be thoroughly cleaned and disinfected each time before it is used. After the calf is weaned careful attention should be given to the milk. It is necessary that the milk should be handled in a cleanly manner. The milk must be fresh and should be warmed to 95 degs. F. It should be given in clean pails which are kept especially for that purpose. After use these pails should then be thoroughly washed and scalded. It would be still better if all the milk used were pasteurized by heating barely to 140 degs. F. for twenty minutes. Such treatment will kill all diarrhea and tuberculosis germs.

(Continued on page 664)

The General Says:

"If I could show you through my three enormous mills you would then readily see why I can manufacture highest grade, durable Roofing at a low cost and do not hesitate to guarantee it to you for 15 years. That's why I call it *Certain-teed* Roofing, Quality Certified, Durability Guaranteed."

The quality of the asphalt used in roof coverings is important because **roofs don't wear out, they dry out.** The real life of the roofing is in the saturating and waterproofing compound used. Only the best grades of raw materials are used in the manufacture of *Certain-teed* Roofing. These are selected as the result of a quarter of a century's experience and kept up-to-date by the General's Board of Expert Chemists.

Look for the Certain-teed label when you buy Roofing—quality and durability guaranteed.

On each and every roll of *Certain-teed* Rubber Roofing or bundle of *Certain-teed* Rubber Shingles you buy from your local dealer you will find a *Certain-teed* label of quality—a 15-year guarantee. Insist on this *Certain-teed* label—it is for *your protection*. *Certain-teed* Roofing is sold throughout the Provinces of Canada by local dealers, and is distributed by wholesale jobbers in St. John, Halifax, Quebec, Montreal, Toronto, London, Winnipeg, Vancouver and Victoria. Send a postal today for valuable free book BU-2 "*How to Build For Less Money.*"

GENERAL ROOFING MFG. CO.

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RU-BER-OID Roofing

Lasts, Lasts, Lasts, Lasts

We do not guarantee RU-BER-OID Roofing for any definite number of years, because we do not know yet how long it will last.

The first RU-BER-OID Roofs, laid 21 years ago, are still water-tight, weather-proof, and giving perfect service—and they look good for many years more. This remarkable durability is due to the RU-BER-OID gum with which the fabric is saturated and coated. It is a compound of our own, tasteless, odorless, not affected by extreme heat or cold, by fumes, gases, or any other of the enemies which destroy roofing.

In years of tests, on all sorts of buildings, in all sorts of climates, RU-BER-OID has proved conclusively that it gives longer and more complete protection per dollar of cost than does any other roofing. Write for samples and Booklets.

THE STANDARD PAINT CO. OF CANADA, LIMITED.
MONTREAL. WINNIPEG. CALGARY. VANCOUVER. 88

USE DR. WILSON'S DERBY CONDITION POWDERS

FOR HORSES, CATTLE, PIGS and SHEEP

If your dealer does not carry it write to THE BRAYLEY DRUG CO., LTD., ST. JOHN, N. B.

THE HORSE.

Driving Harness Horses.

In ordinary driving, especially when a curb-bit is used, the reins should be separated with the first two fingers of the left hand, the ends passing out of the lower part of it. The thumb should be held with the point upwards, not pressing down firmly upon the reins. The wrist should be bent, so that the knuckles are turned towards the waist and the elbow is bent at the left side. The hand should be held at a height approximately opposite the waistband.

The right hand holds the whip, at about ten inches from the end, the lash-end of it is directed upwards, forwards, and towards the left.

The left hand should always be kept in the same position but the right one, besides holding the whip, should be used to assist the left.

The lower part of the right hand may rest upon the off-rein, in front of the left, to assist in steading the tension of the reins, also in turning and guiding it may be used on either. If the left hand requires aid in exerting traction, the right placed in front, and dividing the reins by the two middle fingers, may assist it; and also in shortening the reins, the right hand pushes them back between the fingers of the left.

The near rein is always held uppermost, passing over the index finger of the left hand, while the off-rein passes between the second and third fingers.

The position of the driver should be easy and unconstrained, but approximately erect, with the arms dropping along the sides, and elbows squarred at the waist. The legs, from the knees downwards should slant slightly backwards, and the driver should not sit too far back in his seat.—Dr. F. C. Grenside in O. A. C. Review.

Weaning Foals.

Comparatively early weaning is beneficial to the foal, and almost essential to the mare if she is again in foal. Keeping a foal unnecessarily long with his dam cannot fail to have a prejudicial effect upon the foal she is carrying, and also to enfeeble the mare.

Weaning time is a crucial point in the life of many a young horse, for many are injured, and some positively ruined, by injudicious treatment. It should be unnecessary to insist upon the fact that the young foal when he is weaned needs generous treatment, fresh air, and plenty of exercise. Even before he has forgotten his dam, and he will not be long in forgetting her, he shouln have a run out every day in a paddock or field where there are no other horses to disturb him. The foals on a farm, if they have been run together when with their dams can also be run together when first weaned, and will be nice company for each other.

But even if the grass they are on looks well, and there seems to be plenty of it, it must be borne in mind that September grass has not the "feed" in it that the grass of early summer has. So the foal must be liberally fed, and the best he can be fed upon are good oats and meadow hay. It is good business to give him the hay as well as the oats, even if the grass is flush and good. This for more reasons than one; autumn grass has a tendency to scour young animals if it is very flush, and the hay will act as a corrective. The foal will, however, soon tell his owner if he is well fed and judiciously managed, and an observant man should be able to detect any drooping off in condition before any mischief is done.

Finally, a couple of hints may not be untimely. The first is that common indifferent oats are never cheap food for horses; the second is to keep a look-out for worms, which are frequently troublesome at weaning time.

Carrots For Horses.

Carrots contain a smaller proportion of moisture and more nutriment than any other roots. They are good for cows or horses, but seem to be especially adapted for the latter. Horse owners who can do so should grow carrots, and those who have not the proper land should buy enough carrots to give a ration every day through winter.

Give half as many oats as usual and make up the deficiecy with equal bulk of carrots, and most horses during the winter months improve in appearance. The carrots give the animals a sleek coat, probably by helping the digestion. It is a diet of exclusively dry feed that makes the hair of many idle horses in winter dry and harsh. If the horse is working he will need the full ration of oats, besides should be given a ration of carrots each day.

The duration of the period of pregnancy in mares extends from 300 to 400 days, but usually ends about the close of the eleventh month. First pregnancies frequently go a year. The extreme length of the period makes rebreeding at the earliest possible opportunity absolutely necessary if the mare is to maintain a record as a yearly producer. The mare that goes barren a year simply reduces the profits of the farm to the extent of the net value of her foal; for while she may do more work when not pregnant, the work can so be arranged as to permit of maternity on her part.

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

Caustic Balsam

IT HAS NO EQUAL

For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.

Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet B.

The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

At the Yarmouth Y. M. C. A. Boys' Camp, held at Tusket Falls in August, I found Minard's Liniment most beneficial for sun burn, an immediate relief for colic and toothache.

ALFRED STOKES.
General Secretary.

A GREAT SCANDAL

Big Efforts to Hush the Matter Up-- The Truth Out At Last. . . .

From exhaustive enquiries made during the last few months we find there have been a number of patients kept under conditions which to say the least of it, is a great scandal.

We trust our readers will bear with us for a moment. The facts of the matter are these, there have been some thousands of cases where horses have been suffering from distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements, of all kinds, and in some cases no attempt has been made to relieve their sufferings, their owners either being indifferent, or where they have thought at all about their animals, have had recourse to cheap so-called remedies, of which there are unfortunately a few on the market, but which, while so may give a little relief temporarily, cannot from the nature of their ingredients give permanent relief or effect a cure.

It is high time in our opinion that something should be done to bring this state of things to an end, and with this in view we are about to take drastic action, to bring before every owner of horses that wonderful remedy known to all as "Dr. J. Woodbury's Horse Liniment."

This remedy has been used for years throughout the Dominion during which time it has been used in hundreds and hundreds of cases, comprising distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in no case to our knowledge, has "Dr. J. Woodbury's Liniment" failed to first relieve, and then to cure the above mentioned complaints.

Every owner of horses should, if they have not already got a bottle of this Liniment in their stable, immediately procure one. It is the only guaranteed remedy we know of, and it is a cheap form of insurance, and it will be found, that, if used immediately any symptoms of any of the above complaints appear, to give immediate relief, and probably save tremendous expense, probably the life of the horse as well.

Dr. J. Woodbury's Horse Liniment is sold by Stores and Chemists throughout Canada, but should your Store-keeper be out of stock he will procure it for you, and if you should find any trouble in getting a bottle, don't delay for an instant in mailing 25 cents and a bottle will be immediately forwarded you.

Sole Owners and Manufacturers:

FRASIER, THORNTON & CO., LIMITED

COOKSHIRE, Quebec, Canada.

INTERNATIONAL
Sold On A spot Cash Guarantee
GALL CURE
Cures Horses While They Work or Rest
PRICE 25 ¢ AT ALL DEALERS
INTERNATIONAL STOCK FOOD CO LIMITED TORONTO

ABSORBINE
will reduce Inflamed, Swollen Joints, Bruises, Soft Bunches. Cure Boils, Poll Evil, Quitor, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle, delivered. Book 7 E free.
ABSORBINE, JR., liniment for mankind. Reduces Painful, Swollen Veins, Goitre, Wens, Strains, Bruises, stops Pain and Inflammation. Price $1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by
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ENGLISH
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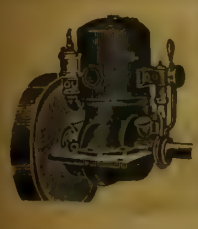
Hot Water Incubator, holder of Worlds championship in hatching. Awarded 53 Gold Medals. Used by the Royal Families of England, and 95 per cent of the Governments of the World. Twenty years ahead of every other make. Thermometer registers on outside of Egg drawer. Lamp burns thirty days with one filling, self-regulating. Finished like a piano. Will last forty years. Made in London, England. Different from common makes. Canadian customers joyful with results. If you send 5c. in postage for mailing, we will send you FREE our beautiful Illustrated Catalogue 1912 as well as a neat little book on Poultry diseases and their cure.

Freight prepaid on Incubators to any station east of B. C. SEND TODAY TO

Fletcher Bradley's Poultry Supply House. 104 Waverly St., Ottawa, Ont


BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete,
12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., Hamilton North Ont.

Thoroughness and Progressiveness

are the ideas which have always dominated the management of this college; showiness and superficiality the rocks to be avoided.

Our reward has been ample and satisfying, our last year being by far the best in our history of 45 years.

No summer vacation. Students can enter at any time.

Send for Catalogue.

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25 HANDSOME POST CARDS FOR 25c
No two alike. These lovely Art Post Cards in beautiful colors and exquisite gold embossed designs comprise one of the prettiest collections ever offered. Send 25 cents at once and we will give you 100 ADDITIONAL POST CARDS FREE. All postpaid. Satisfaction guaranteed. Address, INTERNATIONAL EMPORIUM, BEEBE, QUE.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

POULTRY.

How the Orchard and Poultry Plant Were Successfully Built up Together in a New Hampshire Farm.

A judicious mingling of hens and apples has enabled C. E. L. Hayward of Hancock, N. H., according to the Boston Herald, to develop a rough, rocky and uneven bit of run-out soil into the largest fruit and poultry farm in New England and to earn a profit which varies from $16,000 to $26,000 a year. The result has been brought about by a quarter of a century of unremitting labor and the evolution of a successful scheme of strictly business management.

As it stands today the land supports an orchard of 10,000 trees and 5,000 hens. At first sight it looks like a diminutive town with its long streets of poultry houses which now number 720. At first the hens were merely incidental to the apples and were kept chiefly for their value in producing valuable fertilizer, but with the growth of the industry both branches have been placed upon a paying basis, and both hens and apples contribute to the general success of the undertaking.

When Mr. Hayward first started he had an orchard of some 400 trees in more or less promising condition. He added a few hundred hens soon after taking possession.

As seasons passed Mr. Hayward has added little by little to his holdings. The orchards gradually increased in size as the years went by until today close to 500 acres are covered with 10,000 apple trees.

The soil is a black loam with a hardpan subsoil imprevious to water, thus holding the moisture well. Most of the land is very rocky which does not permit cultivating the orchards.

The young trees are mulched with hay the first few years until they have reached a good growth, but not fertilized to any extent until ten years after they have been set out. Spraying is done twice before the blossoms open. The Bordeaux mixture being usen at an actual cost of eight cents a tree. Pruning takes place from November until March, under the direction of an expert. The brush is hauled away and burned.

The poultry houses are cleaned three times during the year, October, April and July and their contents is spread in a tnin coat in a circle around the trees as far out as the branches extend.

Harvesting the big crop which mounts up some years to 10,000 barrels means a large force of men and several teams to haul the crop to the railroad station four miles away. About 60 men are employed to harvest the apples.

The price per barrel realized for several years has been $3@3.50@$4. Commission merchants in Liverpool, England, handle the fruit and returns are made less cost of shipment and commission.

The actual profit per barrel last year was $2, or upon last year's crop of 6,000 barrels $12,000. A crop of 10,000 barrels, a lew years ago brought a net profit of $20,000.

The poultry houses are arranged in rows in the apple orchards about 40 feet each way. Each house is A shaped with the floor, wind and storm proof on all sides save the front, which is covered with inch mesh wire netting. At the base of the floor the houses are 8x8 feet and 8 feet in height. The roof and back side are shingled, while the front is boarded up 18 inches. The cost of such houses is $20, and they will last about 20 years.

(Continued on page 664)

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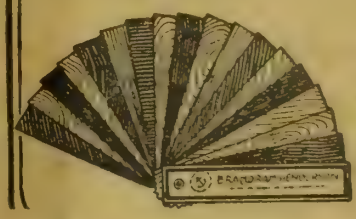

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Unkissed Children.

This world's a rare and joyous place
For those who deem it so,
With smiles enough for every face—
This is no tale of woe.
But yet, when all's been done and said,
Some little children creep,
At cuddling time unkissed to bed,
And sob themselves to sleep.

Their daddy's off at work, somewhere,
Their mamma's tired and worn,
Both burdened down with carking care
From the first break of morn.
Each love-starved young one on the list
Has troubles by the heap,
Yet each must go to bed unkissed,
And sob himself to sleep.

Oh! world of sunshine mixed with storm,
Oh! world of tears and joy,
Oh! world of frozen hearts and warm
Oh! world of man and boy!
Less were your sorrow, less your dread,
If, when night's shadows creep,
Each little lad went kissed to bed,
And smiled himself to sleep.

By Dreamer.

Mrs. McCord's Match.

"Mrs Avery isn't here this morning?" said Mrs. Gross, as she shook hands with the minister.

"No, she wasn't feeling very well, and I told her she would better stay in out of the cold," said Mr. Avery. "She is rather saving her strength for the missionary meeting to-morrow."

With face drawn into severe lines, Mrs. McCord stood by, listening. "Mrs. Gross, I'd like to see you a minute, privately," she said, as soon as the minister turned to another member of his flock. He was at the church door shaking hands with the last stragglers after services, and Mrs. McCord had already shaken hands and assured him how much she enjoyed the sermon. "I have a little matter I wish to speak to you about."

Mrs. Gross sighed, and walked meekly after Mrs. McCord. Mrs. Gross was plump and rosy. while Mrs. McCord was thin and angular but the latter ruled with a rod of iron where she ruled at all. "I do hope you'll be careful not to mention that Mrs. Avery was not at church this morning," she said, in a whisper. "Mr. Avery is new, and he needs all the support we can give him."

'I don't know that there's anything wrong in asking about the minister's wife," said Mrs. Gross striving to pluck up courage to "talk back" to Mrs. McCord, as her husband was ever advising her to do.

.'But the way you said it! It just sounded as if you thought she ought to be in her place. Outsiders are doing a great deal of talking about Mrs. Avery, and it behooves the church people to stand by her. If it got out that the wife of an official member publicy complained about the minister's wife, gossips would make great capital of it. I hope you will be more careful."

"Are you ready, Mary?" asked Mr. Gross, rescuing his meek wife from Mrsf McCord's clutches. "I have been waiting these fifteen minutes. How do you do, Mrs. McCord? Fine sermon, wasn't it?" "Indeed it was," assented Mrs. McCord. I was just telling yout wife that we must stand by the minister and his family. There is some criticism from people outside the church about his delivery and his pulpit methods, but if we stand by him he'll get along all right.

"Oh, he'll get along first-rate," said Mr. Gross, while his wife pinched his arm black and blue. "If gossips and people who think they can run everything in and out af the church will let him get a start, he'll get a good start."

"Just what I said to your wife," said Mrs. McCord. "My words exactly!"

Mrs Gross stopped trying to warn her husband, and instead coughed loudly into her handkerchief. She might have known that Mrs. McCord would never be touched by the plainest of plain hints, for she considered herself the pattern for the whole congregation. Every unkind word she ever heard about the minister she always hastened to tell him, so he would be 'on his guard," and among the members of the congregation she acted like a very busy wasp stinging here and there, as she went about telling this one what to do and that one how to act. Every one knew her, and all made allowance for her, but it required heroism to have patience with her petty directions and fussy ways.

"Yau must come up to the parsonage this week," Mr. Avery was saying to a young lady as they reached the door. "My neice, Cordelia Everton is coming to visit us, and I hope all the young folks will come in to see her. She is just out of high school, and we think her a very lively, interesting girl."

"Now the next thing somebody will be saying is that things are too gay at the parsonage," said Mrs. McCord, as they reached the street. "It beats all how faultfinding and cranky some people are. I'm going to tell Mr. Avery to be on his guard against anything of that sort. For my part, I always have enough to do to attend to my own affairs, but some people are prone to gossip. I heard the other day that Mrs. Warfield said she thought Mr. Avery's sermons sounded as if he got them out of a book, and I intend to call and ask her to be extremely careful what she says. You know how a thing like that runs through a town, and I think the sooner it's hushed up the better.

Finally the McCords—Mrs. McCord and her little, dried up husband—turned down their street, and Mr. and Mrs. Gross went on alone. "Did you ever see such a women?" burst out Mr. Gross. "She would make an interesting character for a novelist. Always running with her little bits of gossip to the parsonage, and always telling everybody in the congregation their duty. I'd give a pretty penny to see her meet her match some day—but she never will. There's only one like her in this part of the world,or the whole globe for that matter."

The next day Cordelia Everton arrived, and to all observers seemed to be a modest, pretty young girl in a stylish but plain costume who greeted the members of the congregation who happened to be at the station, and to whom her uncle introduced her while waiting for the hack, with charming friendliness. Before the end of the week she knew a number of people, and seemed to be enjoying herself in the little city immensely.

"How do you do?" said Mrs. McCord, as Cordelia opened the door for her one cold winter day. "Is Mrs. Avery at home? Out calling on Mrs. Warfield, is she? Isn't that odd! I came to see her particularly this afternoon about Mrs. Warfield. Well, I might come in and sit down a few minutes by the fire. It's a dreadful day, but when I have a duty to perform I never let the weather stand in my way. I feel real worried about your aunt being over there. You know Mrs. Warfield isn't a member of our church, and it is so important that people are careful what they say to her. I heard on good authority that she said Mr. Avery's sermons sounded as if they were taken out of a book, so I thought I'd put our pastor on his guard."

"Wasn't that lovely?" said Cordelis "I think that is the finest compliment Uncle James ever received. He is so scholarly and precise in his language, but often peonle forget to mention it. Mrs. Warfield must be a delightful person."

"Well, er—that is—yes, I do think, Mr Avery uses very good language," said Mrs. McCord. I said to—

"Here comes auntie!" cried Cordelia, springing up tp help that lady remove her wraps. "Auntie, Mrs. McCord came to tell you something very nice she heard about Uncle James. The lady you just went to call on said his sermons sounded exactly as if they were taken from a book. You know every critic says that speaking is so much harder than reading, as grammatical errors will creep in that are most impossible to print, so if Uncle James is pleasing that scholarly element in town, that is a fine beginning."

Mrs. McCord was provoked beyond measure, and tried to change the conversation, but Cordelia again and again returned to the object of her call that afternoon. In sheer desperation the visitor rose to go an hour before she usually departed, and her name was not mentioned by her hostess the rest of the afternoon.

Two days later Mrs. McCord again dropped into the parsonage with another criticism she had heard, but scarcely had she finished telling "she said" and what "I said," when Cordelia who had been sitting on the edge of her chair waiting for a pause in the conversation broke in with: "I heard such a nice thing about you, Mrs. McCord. Mrs. Randall said you were the best informed person on local affairs that she knew. Wasn't that nice? She said if ever any one got out a history of this country, you would be the most valuable person to consult, as you were authority on local events."

"Did Mrs. Randall say that?" said Mrs. McCord.

"Indeed she did," said Cordelia. "She said you had a most wonderful memory and never forgot anything. She says when any one wants to know about the past, especially church doings, you can always furnish days and dates. She said many of the happenings would have been forgotten long ago if you had not kept them alive. How did you ever manage to have such a keen memory, or is it a cultivated possession."

Whether it was cultivated or not Mrs. McCord never explained, for just then other callers came and she made her escape. In her heart she determined to stay away from the parsonage while Cordelia was there, simply because she found herself tongue-tied in the presence of this bright eyed girl; but she could not escape seeing her unless she stayed at home from every church meeting.

"How do you do, Mrs. McCord?" said Cordelia demurely, as that lady opened her front door a week later, and found the parsonage visitor on her step. "You weren't at church Sunday, and I came to see if you were ill. The ladies all said nothing short of sickness would keep you at home, and as Uncle James was busy, I thougv? I wodld look you up. And then, I have something special to see you about," she went on as the hostess reluctantly led her into the parlor. "I have been so anxious to tell that a young couple from my home town are to locate near you. The young man is a dentist and is anxious to get a start in business. You know so much depends upon a good start. And I am particularly worried about his wife. She is a friend of mine and such a nice girl. If the neighbors begin criticising her in a strange town, it will be dreadful. Mrs. Slocum told me you always went around whenever some new people came into the church and cautioned

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Halifax Exhibition, September 11—19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10th to 13th, 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th, 1912.

Charlottetown Exhibition, Sept. 24th., 25th., 26th., 27th., 1912.

the neighbors to be very kind and attentive to them, so I thought of you at once. Mrs. Warren, that's the young women's name, plays a little, and she might feel complimented on being asked to play at church. Mrs. Jessus says the music committee depends on you so much in picking out an organist, that you might say a good word for Mrs. Warren. And she isn't a very good housekeeper, being an amateur, so I thought you might caution the neighbors about that. Somebody told me how you did when the minister came to this town with a young and inexperienced bride once. Was it Mrs. Warfield who laughed at the poor bride's cloudy jelly and you went to ask her not to mention it to any one for fear it would hurt the church work? It seems to me that was the way I heard it."

'It seems to me some people have little to do to tell a pack of stuff like that," put in Mrs. McCord with an acid voice.

"That's just what I say," said Cordelia, "and that's the reason I came direct to you. I knew you had no patience with that sort of thing, so if the neighbors begin talking about Mrs. Warren's housekeeping, which is far from perfect, you will know just what to do to stop all criticisms. It's wonderful to have your ability, Mrs. McCord, but everyone insists that there isn't another women in the world like you."

The young people Cordelia had met during her stay gave her a farewell party at which fun reigned in spite of the fact that they were all sorry to lose her. Mrs. Gross came panting in just before refreshments were served with a huge cake iced with white and decorated with wonderful gorget-me-nots. "I'd just like to see Cordelia a minute," she uanted, out of breath from her hasty walk. "Want to thank her for all she has done for us."

So Cordelia, flushed and happy, slipped out to the kitchen, and Mrs. Gross kissed the glowing cheeks of the girl she had learned to love. "My dear child" she said, looking up at the tall, beautiful Cordelia, "I am so sorry to see you go. You have done us all a world of good and I want to thank you for it. Mrs. McCord hasn't lectured me for a month, and I don't believe she ever will again. Mr. Gross said to tell you he had remarked over and over that Mrs McCord would never meet her match, but he is agreeably disappointed. If ever she does badger us again, you'll come back, won't you, dear?"

"I? Mrs. McCord? What in the world are you saying, Mrs. Gross?" said Cordelia innociently enough but a guilty color stained her round cheek. "Poor auntie had endured so much from just such a women in the town they left and I couldn't bear to see her worried to death here. The people outside the church are angelic compared with one or two members of every congregation who feel it their duty to keep their eyes and hands on every thing for fear it goes to pieces. Yes, if you are sure I have done more good than harm, I'll be glad to come back some day. I don't know whether to regard it as a compliment or not to say that I am a match for Mrs. NcCord,but I'll think it over."

"It is the greatest compliment in the world," insisted Mrs. Gross, and if you need any other reward just look at your aunt's happy face. We'll not forget your methods of managing, but we want you to come back just as soon as you can. And now, dear, you mustn't waste time any longer on an old woman, but hurry back to your good time, and I'll lend a hand with the lunch. Good-bye. Run along quickly."—Zion's Herald.

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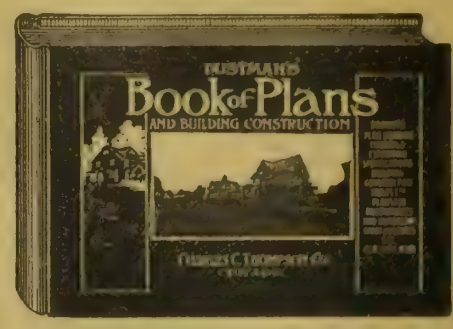

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What's the use of looking untidy when you might just as easily look nice? Why, when you do your own work, and spend a good bit of time in the kitchen, do you not have a frock for it, as well made and as tasteful and appropriate as your afternoon and evening dresses? Why does the ring of the door bell send a pang of d ismay to the heart of many a working house-wife, not because she minds the interruption, but merely because she is "such a sight to go to the door?"

What we need is a Gospel of Kitchen Clothes, then perhaps we will discard the wornout doctrine that anything is good enough in which to do housework. As it is, an observer is bound to remark that kitchen clothes may be divided into three sorts: First, the dressing saque worn with an old nondescript skirt; second, the cheap, ready-made wrapper, which is far from attractive in appearance though it has some good qualities; third, worn out nnery, such as ancient silk waists and frocks, with most of the trimming ripped off and in a general state of forlorn dilapidation. Right here let me say that until you have seen a stained and soiled pale-blue crepe de chene of the style of five years ago busily flying about the kitchen, getting breakfast, you have not seen kitchen clothes at their worst. But the other varieties mentioned can be preety bad. Add to them various ill-fitting and ill-made aprons and you have an ensemble which is guaranteed to effect unhappily the life of any household.

Now, it's all very easy to say what not to wear in the kitchen, but that does not help very far to learn what to wear. So for that we must make a little call on the plain neighbour who lives on the other side of the street from the Pretty Neighbor, and is just as neat and trim in her dress as the Pretty Neighbor is careless.

"I have two kitchen frocks for summer and two for winter," says the Plain Neighbor. "And I make them myself. The winter ones are of cotton flannelet, with a smooth-finished outer surface, that costs fifteen cents a yard, though in some shops you can get it for twelve and a half cents. I got a black-and-white shepherd's plaid and a plain dark blue with little white dots, and made them up in plain five-gored skirts that clear the floor and hang evenly, and regular shirt-waist blouses with long sleeve. I make the cuffs adjustable in size, with two buttons and one buttonhole, and then when I want to push my sleeves above my elbow I can use the outer button and hold them there securely. I wear plain white linen collars, stiff, but not high, and in the regular turnover shape, and for my belts and ties," she laughed, "I have a little idea of my own. For the black-and-white dress I bought two dark-red windsor ties at twenty-five cents each, and I use one for a tie, just as anyone would, and in the other I worked two eyelets, slip my belt buckle into them and use it for a belt. I got dark-blue ties for the dark-blue dress, and use them in the same way.

"For summer I have two dresses—a dull blue chambray, that cost twelve cents a yard, and a gray-and-white-striped gingham. I can use the red belt and tie with the gray-and-white, and the dark blue set with the chambray, and one set of tie and belt lasts for several years—as, indeed, do the dresses themselves. The only difference in the making of the summer ones is that the sleeves are elbow length. All of the dresses are washable and the flannelet irons beautifully.

"The nicest thing about these dresses is that I can take off my apron, answer the bell, receive com-

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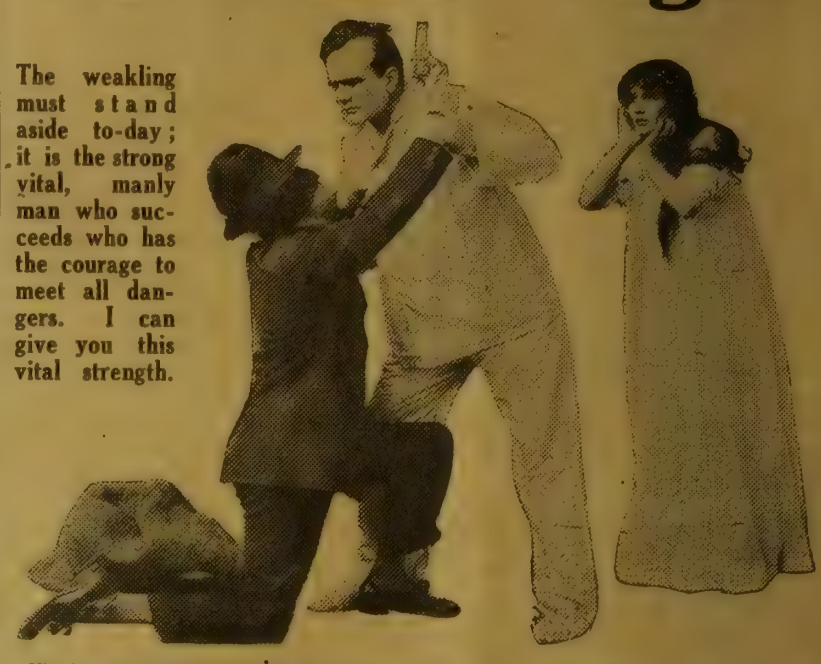

Vitality is the thing which makes success; it gives men that compelling power which sends them forth eager and equipped to meet and overcome all obstacles; it is the thing which gives our young men courage to face death; it is the thing which inspires and holds a woman's love and faith. No matter what your age, I can give you this same vigility. I can restore the vigor you lost, no matter what early or later indiscretion may have sapped your streagth. I can make you "young" and keep you "young." From an intimate and studious observation of possibly 100,000 weakened men I say to you that vitality or the lack of it means all the difference between a manly man and a half man. The man who bubbles with vital power will exert a pleasing influence upon all with whom he comes in contact; women are naturally attracted to him, as are men. Lack of vitality is a negative condition, and it even repels. You wear my Health Belt and suspensory attachment all night; it sends a great, glowing, health-giving current of electro-vimut into your nerves, blood and organs; it takes all the "kink" out of your back and all the coward out of your makeup; it puts you right up in the "feeling fine" class and keeps you there. No stimulation, no false results; just a sure return to manhood and courage. Recommended also for rheumatism, pain in the back, kidney, liver, stomach and bladder disorders. It makes you feel young and keeps you feeling young forever.

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Here is my latest illustrated book, "Health In Nature, containing a fund of privrte information relating to weaknesses of men. All men, young or old, can read every word of this little publication with great profit. Sent to you in plain, sealed envelope by mail. The book is not written with the idea of compelling you to use my Health Belt; it is meant merely as a guide for men, and while my Belt is fully described, there is absolutely uo obligation on your part to purchase. I simply want you to read this book that you may know certain truths about all weaknesses, which have never been printed before. Vitality is the greatest thing in the world, and I can supply you with it. Please fill in the coupon for the free book.

DR. M. F. SANDEN, CO., 140 Yonge St., TORONTO, ONT.

Dear Sirs:—Please forward me your Book, as advertised, free.

NAME .....

ADDRESS .....

pany, go to the store, talk to the postman, and so on, and yet not feel ashamed of my looks. The pretty ties and belt keep the dresses from seeming like a maid's costume, and all four of them didn't cost quite five dollars—and that includes belts and ties, too.

"You see, I had the dressing-sacque habit! I simply lived in them, and they used to irritate me so, for the sleeves would dip in my cookery, and they were so generally sloppy looking that one day I made up my mind that hereafter my husband and children should not have to see me and think of me as being such a fright. So I evolved the plan of kitchen clothes, and it has worked—well. Laying aside the effect it has had on my family, it has made me take greater pleasure in my housework, and really—don't laugh—has given me a lot more self-respect. And I've come to the belief that neatness is just as much a habit and just as easy a habit to acquire as untidiness, and that being neat helps you to be happy!"—Selected.

Sick-Room Hints.

Do not place the patient's bed facing a window, because even when the blind is down the light is apt to disturb him. In cases of serious illness all treatments and the hours when the medicines should have been given should be written down, also any new or unusual symptoms; this will help the memory of a tired nurse and assist the doctor. Make a point of always reading the label on the medicine bottle before pouring out a dose. A medicine measure is much better than tea or tablespoons, as these differ so in size. If the patient is sleeping, do not disturb him or her for anything, unless the doctor has ordered that the medicine or refreshment be given regularly regardless of sleep. To help insure a good night's rest and to prevent bed-sores, rub the entire back with methylated spirits or eau-de-Cologne at night. Pour about a half-teaspoonful in the palm of the hand and rub it well in with an upward stroke. It is very refreshing to a tired back; and if the parts over the hip-bones and the back between the hips are well rubbed for five minutes twice a day, the patient will not have bed sores. Always serve the meals daintily. If the toast and eggs are overcooked it would be better to waste them than to give them to the patient; a well-fed patient makes the quickest recovery. Clean either a bare or a carpeted floor with a damp cloth rung from and well rinsed in a bucketful of water. If the illness is contagious, make the water a milky colour with creolin; also dust the furniture with a cloth wrung from this water. To change the under sheet, fold the clean sheet into narrow folds, lengthwise. Have the patient turn on one side, unfold the clean sheet, one fold at a time, starting at the edge of the bed, and rumpling the soiled sheet loose ahead of it until the patient's back is reached; then when the patient is rolled on to the clean, smoothed sheet the rest of the soiled one can be easily removed, and the clean one smoothed over the other side of the bed.

Spring Greens.

Spinach—If possible have the spinach blanched; but if not, use the best and freshest you can get. Pick the leaves over and wash well, and put on to boil in plenty of boiling salted water; boil about fifteen minutes, drain through a colander and immerse in a pan of cold water. When thoroughly chilled, drain again and chop fine. In this condition it may be kept over night, or for two or three days if kept in a cool place. Put over the fire when wanted and boil until tender, drain any water that may be left on it, season with pepper, butter, salt and serve with a little lemon juice or vinegar.

Mustard Greens—Pick over and wash well about a gallon of mustard leaves; clean six spring onions, tops and all; have three or four small slices of pork side-meat fried rather brown and cut in small pieces. To this hot meat and the two tablespoonfuls of grease that fries out of it add the chopped mustard leaves, and pour over them at once one pint of hot water; cover closely and let boil until tender, then add salt and pepper, and when done remove to a dish and serve with vinegar.

$50 Bank ... No. 52041. ...real.

Pay ... dollars

108 Cheques Will be Distributed Among Canadian Farmers. Will You Get One of Them?

In addition to the twenty-seven first prizes of $50 each, there will be eighty-one other cash prizes, ranging from $10 to $25 in our

1912 PRIZE CONTEST FOR FARMERS

This contest is along the same lines as the one which was so successful last year, except that there are three times as many prizes, and therefore three times as many chances for each contestant to win. Every farmer in Canada who uses "Canada" Cement is eligible to compete. The conditions are such that large and small users of cement have equal opportunities to win a $50 prize.

The contest is divided into three classes, and there are first, second, third and fourth prizes ($50, $25, $15 and $10) in each class.

CLASS "A" - Prizes to be awarded to the four farmers in each province who use most "Canada" Cement on their farms in 1912.

CLASS "B" - Prizes to be awarded to the four farmers in each province who send photographs of the *best concrete work* done with "Canada" Cement on their farms in 1912.

CLASS "C"—Prizes to be awarded to the four farmers in each province who send the best *description*, telling how any piece of concrete work was done with "Canada" Cement. (Entries for this prize must be accompanied by photographs of the work.)

In addition to thus being divided into classes, so as to give small users of cement an equal chance with those who use more, the Contest is also divided into nine divisions, one for each province. So you see you need only to compete with the other farmers of your own province, and not with those all over Canada.

Don't think that because you have never used cement, you cannot win a prize. Many of last year's prize winners had never used cement before they entered the Contest. We will send you a free book, "What the Farmer Can Do With Concrete," that will not only help you in the Contest, but will tell you everything you could want to know about the use of cement on the farm.

Don't delay, but send us your name and address to-day and get this free book and full particulars of the Prize Contest right away.

Use a letter, postal or coupon.

Send me particulars of your 1912 Prize Contest.

Address Publicity Manager

Canada Cement Company Limited

22-32 Herald Bldg. - Montreal

A free book, "What the Farmer can do with Concrete" will be sent to all who request details of the Prize Contest.

Is the Delight of the Potato Grower

FOR KILLING POTATO BUGS

will do 2 Rows at a time as fast as a man can walk. Paris Green can be used clear or mixed with plaster or lime.

AGENTS WANTED SEND FOR CIRCULARS

ILLSLEY & HARVEY COMPANY, LIMITED

Port williams, Nova Scotia.

FLORICULTURE.

A correspondant sends some Aster leaves that are covered with brown spots and states that a large bed of these plants have nearly all lost their leaves persumably by this cause. What causes the brown spots and what can be done to prevent a recurrence of the trouble next year?

The brown spots are evidently a fungous growth and judging by the leaves submitted for examination I would say that the plants are now practicably dead. This trouble may be caused by planting in the same soil year after year. Try fresh soil next season.

A correspondant wishes to know if it is ture that a Century plant blossoms once in one hundred years? ...There are cases on record where the plant commonly called Century plant bloomed at the age of twenty years. Fancy Century plant is more of a name than a fact as far as blooming is concerned.

Tulips that were dug out of beds this spring and heeled as recommended in our floral notes last June should be dug as soon as the leaves turn brown and dried out so that they may be ready for planting in November. Place them on dry sand and after they are thoroughly dry remove the dead tops and roots but not the outer skin. Sort them in sizes, placibg in one lot for blooming all bulbs larger than a chestnut and plant the smaller ones close together in an out-of-the-way corner to grow along for next season's blooming.

Cut the seed pods of the hardy perennials, roses and all plants that are done blooming, they not only look unsightly but injure the plants.

The leaf sent by H. O. N. is a Kennet Geranium and will bloom all summer either in doors or out after the first of June. They require pretty much the same treatment as Geraniums.

All plant purchasers should impress upon their minds that almost all flowering plants that are in bloom are root bound and must be frequently watered. Always make a practice of watering a plant thoroughly as soon as it is delivered by your florist. You will find that this precaution will save many plants as florists, as a rule, do not water heavily when they leave the green houses as it makes them very dirty to handle them when they are wet.

Action of Potash in Plants.

Potash has been found in the tissues of a very large number of plants tested by Weevers of Holland. In all cases tested, the potassium was present in a form soluble in water. Another curious fact revealed for the first time by Weevers, is that the potassium exists in the small air chamber or globular space in the interior of each of the plant's organic cells. instead of being amalgamated into the cell nucleus itself. The potassium is most abundant in the growing tips of rapadly growing plants, or in the outer layers of wood and bark. Chlorophl, the green coloring matter of plants, contains no potassium.

Weever concludes that potassium has little to do with enabling plants to assimilate carbon from the air, but probably is concerned more in building protoplasm at growing points. It is believed that in the leaf processes, potassium functions by combining with protein.

The immediate practical lesson taught by these new discoveries, is that rapidly growing crops require an ample supply of potassium in a form available to the plants, that is, soluble in water, but that slower growing plants do not require such a high degree of solubility.

The Breeding and Feeding of Dairy Cattle.

(Continued from page 649)

Clover hay is not grown to the extent it should be on the Island. Profitable dairying demands clover hay to supply cheap protein for the production of milk. The less clover hay a dairyman has the more concentrates he will have to buy, thereby, cutting down his profits. Timothy hay is very little better than straw for dairy cattle. Oats are the great crop on the Island and they supply lots of protein and make a splendid milk production feed.

Bran can now be fed only in small quantities on account of being so high in price. Oil-cake is more profitable buying and cottonseed is still more profitable but the latter must not be fed in too large quantities. These meals may be fed in the following proportions, and give good results. Six parts crushed oats, one part each of bran, oil-cake and cottonseed. Individual cows will eat different amounts of this meal ration; no hard and fast rule can be laid down. The feeder must use his own judgement. In regard to summer feeding, while the grass is good nothing need be added, but preparations must be made for Autumn and late fall feeding by sowing patches of peas, oats, and vetches, which can be fed night and morning in the stable, not thrown to them in the field. Fodder corn may also be grown for late fall feeding.

Dairy cows must have all the water they need in summer and winter. I do not think it advisable to install inside watering systems; they are a great advantage for a few stormy days in the winter, but a sure result of this method of watering is that of keeping the cows too much in the stable, weakening the constitution of the herd and its progeny. We must have healthy cows as well as a large production of milk. A sheltered yard and a watering trough is the best method of watering stock. Insuring enough exercise and no needless exposure. To sum up, dairymen must breed for production, by using bulls of heavy milking strains, and give their heifers every chance to develop, and feed their dairy cows all they will profitably consume in order to make profits that will warrant them continuing in this important industryf—W. R. Clark, P. E. Island.

To Calcalate Power Needed.

Six horsepower will drive a grain separator and thresh 2,500 bushels of oats in 10 hours.

Three horsepower furnishes all power needed to make 5,000 pounds of milk into cheese in one day.

Six horsepower will run a feed mill grinding 20 bushels of corn an hour.

Five horsepower grinds 25 to 40 bushels of feed, or 10 to 20 bushels of ear corn an hour.

Seven horsepower drives an 18-inch separator, burr mill and corn cob crusher and corn sheller, grinding from 12 to 15 bushels of good fine meal.

Six horsepower runs a heavy apple grater, grinding and pressing 200 to 250 bushels of apples an hour.

Five horsepower will drive a 30-inch circular saw, sawing from 50 to 75 cords of stove wood from hard oak in 10 hours.

Six horsepower saws all the wood four men can pile in cords.

Twelve horsepower will drive a 50-inch circular saw, sawing 4,000 feet of oak or 5,000 feet of poplar in a day.

Ten horsepower will run a 16-inch cutter and blower, and elevate the ensilage into a silo 30 feet high at the rate of seven tons an hour.

One horsepower will pump water from a well of ordinary depth in sufficient quantity to supply an ordinary farm-house and all the buildings with water for all the ordinary uses.

Always Sign Your Letters

We have three letters, containing cash or its equivalent that were forwarded without, signature to this office. See notice in our one cent per word cnlumn. If you have forwarded us any money and the label on your paper does not show that you have been credited with the amount enclosed notify us, if the description in the ad referred to conforms with that of a letter you may have sent. We would like to get this signatureless tangle unravelled.

Spring Foals.

The advantages of the spring foals are that this is a natural breeding season, the foals are usually stronger, they can spend a greater proportion of their early life outdoors and will be less trouble than the fall colts. In any case, colts should not be allowed to run with the mares when at work. In the fall they may be left in box-stalls. If spring colts, they should be left in the yard or paddock, preferably a grass plot, and allowed to be with the mares only when the latter are brought in for feeding during the day. This will be no hardship to the colt, there will be less risk of its being injured, and more work will be gotten out of the mare, because she will not fret, and the colt will not be in the way on the fields.

P. E. I. Crop Conditions.

The weather during the last month has been exceptionally favorable for the growth of crops. Rainfalls were fequent, and the weather moderately warm, with the exception of two days, which were very warm. There is now more water in the wells than on May 10th. Pastures and old Meadows look much better than usual at this time of year. About 12 per cent. of the new meadows are a complete failure and many of them have been ploughed up and seeded with oats and peas. Where the seed survived the drought of last summer there will be heavy clover. Even with the continuence of favorable conditions, the hay crop is not likely to be up to the average. Seeding was completed about June 5th., except in the lower lying parts of Western Prince County. Potato planting is now general and the average will likely be larger than usual. The bloom on fruit trees of all kinds is very abundant. The crop of lambs is better this spring than usual. Young pigs, which were plentiful the last of April are now reported as being very scarce.

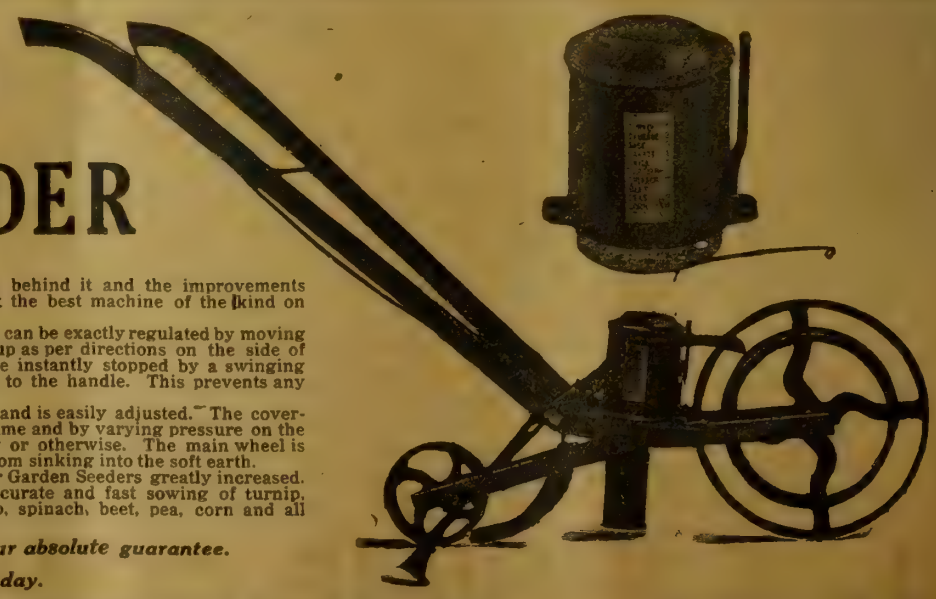
The following are the market prices for June 10th., 1912.

White oats, $1.78 per hundred lbs;
Black oats, $1.85 per hundred lbs;
Potatoes .85 per one hundred lbs.
Hay .75 per one hundred lbs.
Straw, .32 per one hundred lbs.
Pork, $10.50 per one hundred lbs.
Beef Cattle, $6.75 per one hundred lbs.
Butter, $26.00 per one hundred lbs.
Eggs, .20 per dozen
Pigs (5 weeks old) $6.00 per pair—June Circular.

Summer Grain Shipments.

A shipment of 50,000 bushels of grain has arrived in St. John and is in the Intercolonial Railway elevator awaiting shipment this week by steamer to London. It is expected that each steamer of the Furnace Line during the summer will carry about the same quantity.

GARDEN SEEDER



Our Seeder has years of success behind it and the improvements recently added, makes it without doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. The flow of seed can be instantly stopped by a swinging cut-off operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. The covering wheel is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. The main wheel is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our Garden Seeders greatly increased. No better seeder can be built for accurate and fast sowing of turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn and all other kinds of garden seed.

Every machine carries our absolute guarantee.

Send us your orders today.

The Sussex Manufacturing Co. Limited, Sussex, N. B.

British Investors Interested

The touring party of British financiers and manufacturers under the guidance of Mr. W. Leonard Palmer of the London Financial Post, took very careful note of the development and prospects of St. John and in the province of New Brunswick generally. It was not with them a mere holiday trip. They made careful inquiries concerning real estate, trade conditions and the outlook for manufacturing enterprises. While in St. John several of them purchased a number of lots of real estate, and others enquired as to the suitability of St. John as a location for branch factories. They stated frankly that they were looking for business openings during their tour of Canada, and wanted to be shown what each locality had to offer. They were much impressed with the natural gas in Albert County, and saw the gas in use in Moncton factories. They saw the St. John River valley and other parts of the province, and were most favorably impressed with its natural resources.

Englishman Buys Farm.

The farm lands of New Brunswick are attaacting a good deal of attention in the old country and a company has been formed in London to purchase a large farm in the province where the sons of well-to-do people may be trained in the agricultural methods best suited to the province before taking up farms for themselves. W. G. Pine-Coffin, who has large estates in England, lately visited New Brunswick, and before leaving on his return to the old country purchased seven farms in Kings, Queens and Carleton Counties, aggregating 1061 acres. One of these farms, containing 210 acres, he purchased for his own brother, by whom it will be occupied. This is the largest sale of farms to a single outside purchaser that has been put through in the Province for many years.

Back to New Brunswick.

Elaborate preparations are being made for the comfort and pleasure of visitors to St. John and other parts of the Province in the back to New Brunswick week, July 9th. to 14th. As the date approaches more and more assurances are received that thousands of former residents of the province will take the back trail the first week in July. There will be special celebrations in a number of the towns on certain days, and everywhere the glad hand will be extended to the homecomers, who will find greater activity and progress than their native province has ever before known.

Cleanliness in the Dairy.

Cleanliness is a most important consideration in the dairy, and dairy machinery that is easy to clean commends itself to the thoughtful farmer. Thousands of our readers who are turning Sharples tubular separators twice every day appreciate the fact that the few parts these separators have to clean, and the ease with which they are washed, reduces the tiresome drudgery and saves the wife both time and labor. The Tubular is easy to clean. Look into this matter before you buy a separator. Compare it with other makes, both as to skimming qualities and ease of operation, and be guided accordingly. You can do this without the cost of more than one cent. Send a post card today to The Sharples Separator Co., West Chestur, Pa., and ask for free Catalog 194, or is there is a Sharples agent in your neighborhood, ask him to let you try it yourself. "The proof of the puddling is in the eating." In sending for this information we ask our subscribers to be kind enough to mention this paper.

The Bean-Weevil.

The one pest that hampers the bean growing business is the bean-weevil. It is smaller than the pea weevil, which in other respects it closely resembles. The eggs of the female are deposited on the green pods of the bean and hatch in a few days. The larvae worry their way through the pods into the seeds on whose interior substance they feed. With the growth of the pods and the seeds, the holes made by their entrance are closed, and when the crop is ripe there is no indication of their presence. Many of the larvae pass through their various transformations before cold weather, but the greater number continue to feed through the winter, and do not become perfect or full grown beetles till the next spring. On the approach of warm weather these beetles leave their cells, and like those which completed their transformations the preceding autumn, seek sheltered places in gardens and fields, or, in other words, get ready for another crop of beans and more devastation. The best time to fight the bean weevil is after harvest and during winter. As there is no remedy for injury already inflicted by these pests, the fight against them must be taken up along preventive lines. Planting late in the season, or during the latter part of June, and even as late as July 10th. or 15th., is practiced with good results in some localities, as the released beetles perish for substance before the new crop comes in. But this cannot be practised everywhere, as planting at so late a date would not allow sufficient time for the crop to mature. Heating the beans, as soon as they are dry, to a temperature of 145 degrees will kill the larvae they contain, and if carefully done will not produce premature germination. A more desirable, as well as a more efficient method is to dry the seed thoroughly as soon as harvested, place in air-tight barrels, and turn into each barrel, just before heading, a gill of bisulphide of carbon, spirits of turpentine, or chloroform. But care must be taken in using these materials that they are not opened or handled near a fire or lighted lamp, as they are explosives. After pouring in the liquid close the head of the barrel tight, and the all-winter fumigation will do its work. In the spring the beans should be examined, and if the weevils are still found alive in them, pour in another gill and give an additional fumigation of a month or two. Of course, killing bean-weevils is just like exterminating orchard or any other pests with which the farmer has to contend—individual effort counts but little. The work of one careful grower may be "back-capped" by the neglect of his careless neighbors.

"THE following letter from Mr. Gilbert Graham is proof conclusive of the high quality of MOLASSINE MEAL for feeding Horses.

Messrs L. C. Prime Co., Ltd.,
St. John, N. B.

Sirs:---I have been feeding Molassine Meal to my Horses for some time with excellent results, particularly to a two-year-old Colt.

A short time after starting to feed this Meal, the old hair came out of the Animal and her coat became slick and glossy. She now weighs 1100 pounds.

I know of no Feed to equal MOLASSINE MEAL for bringing and keeping Animals in the pink of condition.

Yours truly,

Gilbert Graham

Magundy, York Co., N. B.

The sales of MOLASSINE MEAL have been far beyond our expectations and the demand from Ontario and Quebec has been so very heavy that we have opened offices in both Montreal and Toronto. We are also shipping large quantities to Manitoba and many parts of Western Canada.

Middlings and Oats are grown in Manitoba and are much cheaper than here. MOLASSINE MEAL is much higher in Western Canada than in the Maritime Provinces on account of the high rates of freight from here to Western Canada. No further arguments are necessary. If you are not using it today, you will be using it tomorrow or next day for feeding your HORSES, CATTLE, SHEEP, PIGS and POULTRY."

L. C. PRIME COMPANY, LIMITED

DISTRIBUTORS. - - SAINT JOHN, New Brunswick.

Had Indigestion, Sour Stomach and Severe Headaches

FOR OVER A YEAR

Mr. W. Moore, 132 Lisgar St., Toronto, Ont., writes:—"After having been troubled with indigestion, sour stomach, and severe headaches for over a year, I was induced to try Milburn's Laxa-Liver Pills. One vial greatly benefitted my case, and three vials completely cured me. I can heartily recommend them to any one suffering from stomach or liver trouble."

Milburn's Laxa-Liver Pills stimulate the sluggish liver, clean the coated tongue, and remove all waste and poisonous matter from the system.

Price, 25 cents per vial, or 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Have City Conveniences

REPLACE the pestilent, dranghty, dangerous and offensive out-of-doors closet with an indoors closet which requires no sewer, no plumbing, and no finshing system. Have city conveniences in your home. Safeguard family healih by installing a

"Tweed" Closet

Sanitary and Odorless

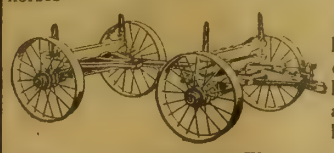
"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list.

THE STEEL TROUGH & MACHINE CO., LIMITED,

DEPT. 103 TWEED, Ont.

T-A Wheels Defy Bad Roads

These Wide-Tire Steel Wheels are built especially to overcome the troubles of travelling over rocky, sandy or muddy roads. They carry 25 to 50 per cent. heavier loads without causing any heavier draft on the horses



Built low for ease of loading and unloading

Get a T-A Handy Farm Wagon—It's just the kind you need on your farm. This sturdy little wagon will get over the ground quicker and with less strain on your horses than any other wagon that's made.

Tudhope-Anderson Co., Limited,

ORILLIA, Ont.

Drop us a card and get our catalogue telling all about

T-A Wide-Tire Steel Wheels and Handy Farm Wagons

Each age of our lives has its joys. Old people should be happy, and they will be if Chamberlain's Tablets are taken to strengthen the digestion and keep the bowels regular. These tablets are mild and gentle in their action and especially suited for people of middle age and older. For sale by all de alers.

White Scours or "Diarrhoea" in Calves.

(Continued from page 665)

Such precautions if carefully carried out will prevent the disease on farms where it is not a serious infection.

On farms where the infection has gained a strong hold, prevention is a much more difficult task. On such farms the virulent bacteria are spread throughout the barn and the young calves become infected through the straw or even the dust. At such places it might be possible entirely to isolate the young calves in a new stable where with special attendants and a careful attention to details it might be possible to eradicate the disease. Such methods, however, are usually not practicable.

Dr. C. O. Jensen, Copenhagen, Denmark, has devoted a great amount of time to the study of calf diarrhea. As the result of his work he is able to produce a serum or rather several serums against the different forms of this disease. This serum treatment is now used extensively and with excellent results in Denmark and in many parts of Germany.

The preparation of such serums requires a great amount of labor and care if they are to prove successful. Since there are a number of different strains of both coli and paricoli bacteria which can cause the disease, it is always necessary to examine calves from each farm in order to find out just which strain of these organisms is causing the disease. Then a serum which corresponds to this particular organism must be used. After a serum appropriate for a given form has been obtained it is only necessary to inject a small quantity of this under the skin of the calf. This renders the calf immune to that particular organism and usually no further trouble will be experienced. Dr. Jensen has clearly shown that such methods will both prevent and cure the disease.

It is clear that such serum production can only be undertaken by the different experiment stations. A commercial firm will not ordinarily take the trouble to examine calves from each individual farm. Without such examinations for each farm where the treatment is to be used its success cannot be certain. It would be to the interest of cattle breeders to urge their experiment stations to undertake investigations along these lines.—F. M. Surface in Breeders' Gazette.

How the Orchard and Poultry Plant Were Successfully Built up Together in a New Hampshire Farm.

(continued from page 657)

A small aperture in front to the left of the door is left so that the hens may thrust their heads through for water, which is placed in the iron dishes.

There is another opening in the rear of the house. This is for summer use only, and is closed up during the winter. A little eaves trough of galvanized iron carries what rain water falls on one side of the roof into the drinking dish, thus eliminating the water question except in a time of drought. In late fall and winter before snow comes, boiling water is used as it will not freeze so quickly. Later when snow comes it is given the hens in place of water.

The houses face the south and even in January the fowls do not suffer from disease or cold. The temperature extreme is 20 below, the mean is 30 above during the winter months.

From September until December pullets are purchased to replace the old stock. These are shipped from Maine, New Hampshire, Vermont and Canada, and are sold at 16 to 20 cents per pound.

Twelve pullets are kept in each house. In each there are two roosts extending across the back of the house, a dusting box, two nest boxes filled with sawdust, a dry feed hopper a box with a supply of grit, charcoal and oyster shell. Sand is spread upon the floor every third week. The pullets remain confined in these houses until the following July or August, when they are disposed of. They are sold live-weight in Boston during the Jewish holidays and bring a good price per pound.

The pullets are fed twice daily, at 7 and 3.15. For this work five men are employed and each has more than 100 houses to look after. The grain is distributed with a wagon in galvanized iron tanks, a double set being used and when one set is filled,

Is This Offer Fair?

You do not risk a cent. You must be either delighted with this tea's rich, mellow flavor, or else your dealer wants you to take advantage of this guarantee:—

You have only to return the broken package to get your money back, if you do not like the flavor exceptionally well.

KING COLE'S excellence prompts this offer. The 40c. grade is unusually flavorful. You will surely admit this if you try it.

35c., 40c. and 50c. per lb.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.

There is not a catch about it anywhere, it's a straight above board business proposition

It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

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50 MEN AND WOMEN WANTED TO LEARN THE BARBER TRADE

Short hours, easy occupation, good salaries.

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Tools supplied free. Write for catalogue--- it costs you nothing.

The PATTERSON SYSTEM OF COLLEGES

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empties are returned to be refilled to various points and from these points a wheelbarrow is employed to carry the supplies to each house. Thus snow and rain does not affect the grain. The eggs are gathered once a day when the temperature is 20 degrees above, and when below that point three times daily.

The dry mash or egg-laying formula used is as follows:

500 pounds mixed feed
200 pounds stock feed
300 pounds corn meal
100 pounds American poultry feed
200 pounds beef scraps
100 pounds animal meal
100 pounds cut clover or alfalfa
10 pounds salt.

This mixture of dry mash is kept in a dry feed hopper which is replenished at stated intervals. Whole corn is fed every night save Sunday, when wheat is substituted. The eggs are shipped by express to a commission house in Lowell. The net profit per fowl above the expenses varies from 75 cents to $1.

Five men and two horses are necessary to carry on the poultry plant and at the same time work more or less among the orchards. Most of the pruning is done by the same force, while spraying and harvesting are done by outside help.

In addition to the income from fruit and hens, a considerable amount is received each year from grass sold standing. This grows rank in the larger fields where the older orchards are planted. Thus the total net profit in some years has reached as high as $26,000, while other years it has dropped to $16,000, depending upon the size of the apple crop.

One of the most interesting things about this plant is the legion of A-shaped houses which look like the pitched tents of an army. The work on the plant goes on with the precision of clockwork. Each man is assigned to certain duties which must be performed at stated intervals. All the eggs and live poultry bought and sold, as well as all the grain fed, has to be hauled three miles.

Summer Care of the Dairy Herd.

The supply of water is an important factor in maintaining a milk flow and the health of the dairy herd. such diseases as typhoid may be transmitted from cows to the human family through the use of water from impure and stagnant sources. Unless the pasture is well supplied with fresh running water or water from springs they should have water pumped from deep wells during the dry summer weather. Cows that have to drink impure water fall away in condition rapidly. Water is fully as important as food.

Cows should have shade during the heat of the day. Many argue that cows will give as much milk when confined in a pasture without shade, but humanity dictates that we should make our cows comfortable by protecting them from the direct heat of the sun during the summer weather.

Anything that we may do to alleviate the suffering of the cows during the season when flies are troublesome will be amply repaid us in the increased flow of milk and gains in flesh condition. One pint of blood from each cow daily is the heavy toll demanded by the flies during August and September. Such losses and suffering mean they can return no profit at the pail. In nearly every dairying section flies cut down the receipts of milk from 30 to 40 per cent. during August and September No dairy section can stand such losses. Carefully spraying the cows greatly reduces their suffering during fly time. The following formula has given excellent results wherever it has been used under favorable circumstances.

Fish oil	100 parts
Oil of tar	50 parts
Crude carbolic acid	1 part

The cost of this mixture is about 30 cents a gallon and it may be applied with a hand sprayer every two days. If applied once a day less will be required and better results will be obtained.

Each year adds convincing proof that it is unwise to depend on pastures alone to sustain the dairy herd during the summer.

It is imperative that we plan some means of carrying the cows over the time when pastures are failing. A steady flow of milk and growth of young animals can only be obtaioed by supplying additional food as soon as the pasture shows signs of failing. Supplying supplimeneary feeds early makes tne change more gradual and at the same time insures us against a loss of milk flow and condition. We must supply green feed to the cows during this critical period. It is a waste of grain to feed it to cows that do not have an abundant supply of palatable and nutritious roughage A drouth-stricken pasture does not furnish this. It is not necessary to plan an extensive system of supplemental crops to feed the cows during this period. Clover, alfalfa, oats and peas and corn that are grown in the regular rotation practiced on the best dairy farms make excellent supplemental feeds (in case ensilage is not available) and they are the very best of feeds to cut and feed green.

To Prevent Tools From Rusting.

Any steel tool will rust if exposed to damp air, yet I found that tools subjected to the following treatment every three months will not rust unless actually thrown on the ground or exposed to hard rain.

Take two parts each of graphite and tallow and one part gum camphor; melt together, and if not soft enough to form a stiff paste, add more tallow or lard. Remove all rust from the steel surface, wipe dry, and apply the paste. Let it remain on for 24 hours, then rub dry. Unless the tool is needed, even longer than one day will be still better for the tool to be covered with the preparation.

The above preparation has the effect of a coating of oil though every vestige has apparently been removed for months.

M-L FLAT-WALL COLORS

HELP TO DECORATE YOUR ENTIRE HOME FREE

Write us to-day on the coupon for the "Wall Beautiful and Hygienic." It helps you to decorate your home in rich, mellow color that just suits each room. We give you expert help FREE in selecting these charming colors to show your home at its best. Send to us to-day.

DECORATIVE advice of the right kind is hard to get. It costs you a great deal of money to employ an expert. But we will give you the special advice and color scheme each individual home needs without a cent of cost. The color effects will be as good as an expert's work. This is your chance to have one of the most beautiful color schemes for your home, free. Send the coupon below to-day. It will bring you news, too, about M-L Flat Wall Colors, and where to get them.

M-L Flat Wall Colors are something new in oil paints for plaster or woodwork, in dainty, rich effects. They don't shine or glitter, but are restfully dull. You can wash them with soap and water, and they don't spot. Quite unlike kalsomine or water washes and finishes. They resemble expensive dull finish enamels, but can be applied perfectly by anyone. Usually, decorative advice costs a great deal. We tell you, free, how to decorate your home in the right shades of M-L Flat Wall Color, but your only expense is for the colors alone—very moderate cost. Write us to-day on the coupon. Send this coupon now.

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Gentlemen—Send me free your booklet on "The Wall Beautiful and Hygienic," with particulars regarding FREE ADVICE on decorating my home.

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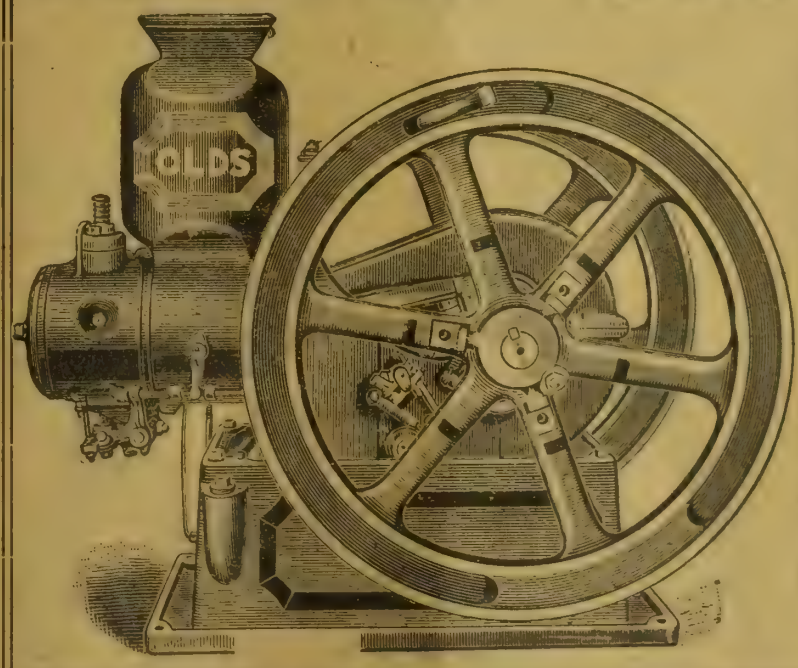
IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole Sale Representatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited
Moncton, New Brunswick.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

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GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

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ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shddiac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, St. John, N. B. We are also in receipt of letter from Summerside enclosing eighty cents, and asking for premium Ben Hur or Handy Andy. This letter is also without signature. Kindly notify The MARITIME FARMER office. St, John. N. B.

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Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

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Dollar Bottle Free

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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

ANNAPOLIS VALLEY FRUIT FARM

Beautifully located 29-acre farm; just out from village and all advantages; splendid young orchard of 175 trees, variety small fruits; 7-room house and stable; fine section for profitable farming and pletsant home; owner's business away. unable to occupy; for immediate sale all farm tools thrown in; price only $1000, part cash; for traveling instructions to see this and a 220-acre farm with an income of over $3000 last year, price only $3200, write The MARITIME FARMER, St. John, N.B.

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MARKETS.

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GRAIN Oats, 59c. to 61c. per bush. Peas, $6.75 to $7.00 per bbl.; Barley, $1.75 to $1.80 per 100 lbs.

FEEDSTUFFS—Bran, $26.50 to $27.50 ton; Shorts, $28.50 to $29.00 ton; Middlings, $29.00 to $30.00 ton; Oil-Cake, $45.00 to $46.00 ton; Corn Meal, $1.90 to $1.95 per 98 lbs.

GRASS SEEDS—TIMOTHY, 19c. to 20c. per lb.; Com. Red Clover, 22c. to 24c. per lb.; Mam. Red Clover, 22c. to 24c. per lb.; Alsike, 22c. to 21c. per lb.

LIVESTOCK—Milch Cows, $35.00 to $50.00; Sheep, 8c. to 11c. per lb.; Lambs, $3.75 to $4.00 carcass; Hogs, 8c, to 10c. lb. for carcass.

DRESSED MEATES—Beef, (carcase) 10c. to 13c. lb.; Beef (retail), 16c. to 25c.lb.; Veal, 15c. to 18c. per lb.; Pork, 12c. to 17c. per lb.

HORSES—Drafters, $250.00 to $300; Roadsters, $200.00 to $300.00; Carriage, $175.00 to $275.00.

DAIRY PRODUCTS—Creamery Butter, 28c. to 30c. lb.; Dairy Butter, 25c. to 27c. lb.; Cheese, 15c. to 16c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 18c. to 20c. doz.; Fowl, 15c. to 18c. lb.; Chickens, $2.00 $2.50 pair; Geese, 17c. to 19c. lb.; Turkeys, 22c. to 24c. lb.

MISCELLANEOUS—Hay, $17.00 to $19.00 per ton; Straw, $10.00 to $10.-50 per tonl

VEGETABLES—Potatoes, $2.50 to $2.70 3bus. bags; Turnips, $1.40 to $1.50 3 bus. bags.

Charlottetown.

GRAIN—Wheat, $1.25 to $1.60; oats, White 55c. to 60c.; Black, 60c. to 66c.

FEEDSTUFFS—Bran, $1.40 to $1.50 Shorts, $1.50 to $1.65; Middlings, $1.-60 to $1.70; Oil-Cake, $1.90 to $2.00 Gluten Meal, $1.60 to $1.75; Corn Meal, $2.10 to $2.75.

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DRESSED MEATES—Beef (carcass) 9c. to 12c.; Beef (retail), 8c. to 16c.; Mutton (retail) 8c. to 14c.; Veal, 5c. to 6c.

HORSES—Drafters, $150.00 to $225; Roadsters, $150.00 to $225.00; Carriage, $150.00 to $225.00

DAIRY PRODUCTS—Creamery Butter, Solids 24½c. to 25c.; Prints, 25c. to 26c.; Dairy Butter, 18c. to 20c.; Cheese, 12½c. Board price.

POULTRY AND POULTRY PRODUCTS—Eggs, 18c.; Fowl, 10c. to 16c

FRUIT—Apples, $3.00 to $4.00 per bbl.

MICELLANEOUS—Hay, $13.00 to $13.50; Straw, $6.00 to $7.00; Wool, 21c.; Calf Skins, 12c. to 14c.; Beef Hides, 10c.; Lamb Skins, 15c. to 25c.; Sheep Skins, Wool off 15c. to 25 c.

VEGETABLES— Potatoes, 40c.; Turnips 20c. to 25c.

Since last report market has remained steady in most lines, potatoes are lower, also lower prices for butter which is offering pretty freely. Eggs are steady at 18c. now and the the supply will be getting smaller and quality not so good. We do not know what to expect but do not look for very much change. This was our first cheese board meeting and about 950 boxes were offered on the board which sold at 12½c. The cold wet weather of the past two weeks has kept the growing crops almost at a standstill and things do not look as good as we had hoped to see them from prospects of two weeks ago, still with a spell of good warm weather the loss may be overcome and everything come out all right. Good beef cattle are reported very scarce.

St. John.

DRESSED MEATS—Beef (carcass), 10c. to 13c.; Beef (retail), 12c. to 24c.; Mutton, 8c. to 10c.; Veal, 9c. to 11c.; Pork, 10½c. to 11½c.

DAIRY PRODUCTS—Creamery Butter, 21c. to 25c.; Dairy Butter, 20c. to 23c.; Cheese, 13c. to 14c.

POULTRY AND POULTRY PRODUCTS—Eggs, 19c. to 22c.; Fowl, $1.25 or 22c. lb.; Chickens, $1.50 to $1.75; Ducks, $1.50 to $2.00; Turkeys, 20c. to 23c. lb.

MISCELLANEOUS—Wool, 14c. to 22c.; Beef Hides, 11½c.; Calf Skins, 18c.; Lamb Skins, 15c. a piece; Sheep Skins, 75c. to $1.00.

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We are Headquarters in the Maritime Provinces for the most modern appliances for Bee-keepers.

PRICE LIST FREE

E. L. COLPITTS, Petitcodiac, N. B.

Lawndale Stock Farm

offers for sale the following pure bred Shorthorn Stock.

Our herd bull "Prince Mistletoe," color roan, aged 3 years good size and in good condition, bredby N. S. Agricultural College. Also three of his sons, viz:—1 roan bull, 14 mos. old, out of a good milking cow and 2 bull calves, 5 mos. old; color roan. Prices very reasonable, write or call.

J. M, LOVETT, M. D., Prop.
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FOR SALE

One pure bred Aberdeen Angus heifer guaranteed in calf. Also an Angus Bull, 1 year old in August. They are of different breeding from prize winning stock at Ontario Shows. Also dual purpose Shorthorns.

Laurie M. Anderson, Sackville, N.B.

Pure Bred Ayrshire Stock For Sale

Heifers 1, 2, 3, and 4 mos. old. 4 Bulls, 2 mos. old. Also a choice lot of Pure Bred Berkshire Pigs, six weeks old. Prices on application to

The S. H. White Co., Ltd.,
SUSSEX, N. B.

FOR SALE

A very fine Gurnsey male fit for service. Solid fawn, well set up in the pink of condition. An animal of great promise, no better bargain in the Maritime Provinces. We consider he is so entirely satisfactory in every way if purchaser is not pleased he can be returned at our expense. Price within the means of anyone who wishes to purchase a good registered sire. All necessary information on application.

Sarah E. Moses Smith
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ALLANDALE AYRSHIRES

2 HEILFER CALVES,	Nov,	1911
1 " "	March,	1912
1 " "	May,	1912

Come and look them over and also see the type of cows they are bred from.

E. ALLAN SCHOFIELD, Hampton, N. B.
Stables near the Station.

FOR SALE

25 S. C. Brown Leghorn Hens at $1.00 each. 100 S. C. Brown Leghorn Chicks, 6 weeks old at 50c. each. 1 Cyphers incubator 244 egg capacity. Price $20.00.

W. H. HENRY,
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FOR SALE

One Yorkshire sow nine months old, due to farrow in Sept. also three litters that will be ready to ship in July.

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"Rose Bank Farm" Silver Falls,
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For Sale or Exchange

Peerless Incubator (200 egg) and Cypher's Hygenic indoor Brooder, new last year and not used this season. Will sell or exchange for pure bred stock of any kind. Both first class machines.

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The S. H. White Co. Ltd., Forest Glen, N. B.
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Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

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Size	Price doz	Fifty Tags
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Light Cattle	60c	$1.50
Sheep or Hog	40c	$1.00

No postage or duty to pay. Cattle size with name and address and numbers: Sheep or hog size with name and numbers. Get your neighbors to order with you and get better price. Circular and sample free.

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at reduced prices after May 1st. Brown Leghorns, $1.00 per 15 eggs. Single and Rose Comb R. I. Reds, $1.25 per 15 eggs. Guaranteed 80 p.c. fertile.

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Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

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Offers for prompt sale:—
1 Holstein bull 3 years old.
1 Holstein bull 16 months old.
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1 Holstein Heifer 7 months old.
All from good milking strain and prize winning stock. Must be sold early to make room for new stock.

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In Buff, Black and White.

At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

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A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, including the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
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Reduced Prices for Balance of Season

on Strawberry and Raspberry plants, also half price on Utility Barred Plymouth Rock and Fancy Columbian Wyandotte Eggs for hatching.

Orchard Hill Farm,
Brown's Flats,

Shorthorn Bulls for Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
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YORKSHIRE PIGS.

No Jerseys for sale at present. We have three litters of Yorkshire pigs, five weeks old for sale. Price five dollars, registered.

JOSSELYN & YOUNG, St. John, N. B.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

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Eggs For Hatching.

More winners in our pens of B. P. Rocks, than in any others of this variety east of Montreal. We have been in comptition with the best and more than held our own. Eggs are one quarter the price of imported stock and issue every time ahead. Inquiries as to prices solicited.

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4½% For Your Money

Why leave money on deposit in the bank at 3 p.c. when you get half as much more by buying municipal bonds with it? We can sell you town bonds of New Glasgow, Dartmouth or any one of a dozen towns in the Maritime Provinces, to yield 4 1-2 p.c. or better. Send for particulars as to how to make your savings earn more.

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., JULY 9, 1912 No. 19

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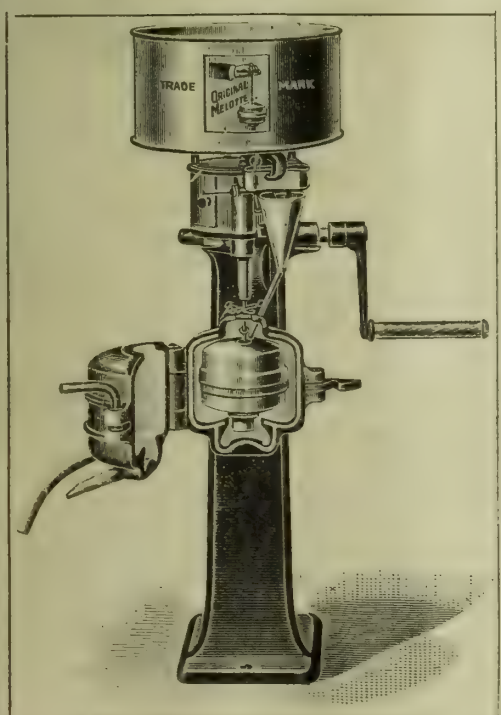

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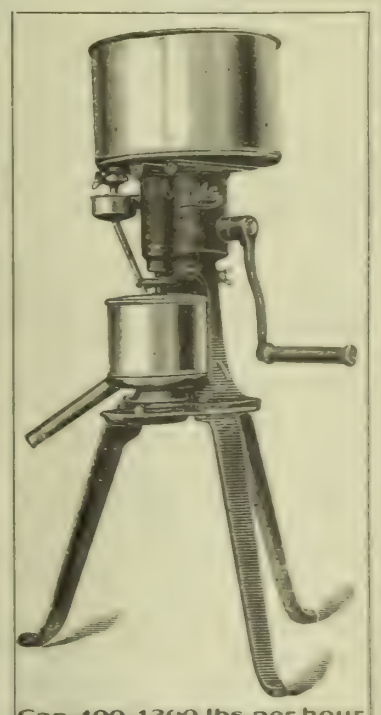
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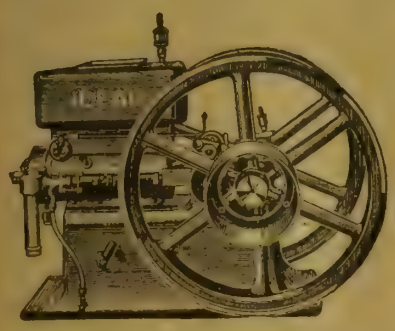

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Volume 17. ST. JOHN, NEW BRUNSWICK, JULY 9, 1912. Number 19.

Poisoning the Potato Beetle Effectively.

Apply Arsenical With Bordeaux

F. H. HALL, Geneva, N. Y.

SINCE the advent of the Colorado potato beetle some thirty years ago it has usually been almost impossible to raise a good crop of potatoes in some sections of the East without a vigorous campaign against this insect. On small areas, or on larger ones in especially favorable years, hand picking may keep the "bugs" in check; but usually on large fields the labor cost of hand picking is prohibitive and poison must be used. For this purpose paris green was for years the one remedy recommended; and though other arsenicals have recently taken its place to a limited extent it is still the main standby of the potato grower.

ARSENICALS OCCASIONALLY INJURIOUS.

Now, soluble arsenic is almost as harmful to plants as to animals or insects; and since paris green always contains a small percentage of arsenic not completely combined with a base, and may contain, when not properly made, a considerable proportion of such soluble material, it is not surprising that it has occasionally burned the foliage of the potato plants to which it was applied.

The leading authorities have for years recommended that this and other arsenical poisons be used in lime water, or, better, in bordeaux mixture, so that any soluble arsenious acid might combine with the lime and thus become harmless to foliage. But many growers still continue to dust on the poison or to sprinkle it on mixed with water alone; and such users sometimes suffer from burned foliage. For this reason there has, lately, been considerable complaint about paris green and much hesitancy about applying it to potatoes. The advocates of certain non-arsenical "potato bug" destroyers have not been slow to use the results of wrong application of paris green as arguments against its use at all.

PARIS GREEN SAFE WHEN PROPERLY USED.

But if injury from misuse were to prevent all use of materials, we would be obliged to discard many valuable agents. If paris green and other arsenicals are injurious only under certain conditions we should learn to control the conditions, not discard the poisons; for these materials are far cheaper than the non-arsenical substitutes proposed for them.

To ascertain to what extent paris green is injurious to potato foliage, how the injury is caused and under what conditions it occurs, a careful test was made at the Station in 1904. The results were surprising in several ways. There was no injury from the paris green, however applied; and the poison was found to have considerable power as a fungicide as well. That is, the rows on which paris green was used suffered much less from late blight than did check rows from which the bugs were picked by hand, and gave much larger yields.

METHODS OF APPLYING PARIS GREEN.

The dry, or powder gun, method of applying paris green is inexpensive, but it is not considered as effectual as spray treatment, so it was not included in the test. The poison was applied in water, in lime water and bordeaux mixture, the rows thus treated lying side by side; while a row on one side was left unsprayed as a check, and a row on the other side was sprayed with bordeaux mixture only, these two rows being kept free from bugs by hand picking. This series of five rows was repeated five times so that each treatment was used on one-tenth of an acre of potatoes.

The plants were sprayed five times between July 7 and August 25, the spraying being done very thoroughly with a knapsack sprayer, going out at one side of a row and back the other.

Poison was omitted at the last treatment as the foliage of the rows not treated with bordeaux was so badly injured by blight at that time that no paris green injury could have been detected. One pound of the poison was used to each 50 gals. of liquid. The paris green was analyzed in the Chemical Laboratory and found to be of good average quality, well representing the material generally found in market in the State. The amount of spraying liquid applied varied from 125 gals. at the first treatment to 225 gals. at the fourth. This gave from 2 1-2 to 4 1-2 lbs. of paris green to the acre at each application, and a total during the season of 12 lbs. to the acre. In the lime-water mixture, 2 lbs. of freshly slaked lime was used for each 50 gals. of water. The bordeaux was made by the usual 6-4-50 formula (1-to-8 strength) except in one spraying when 6 lbs. of lime was unintentionally used instead of 4 lbs. The poison was added to the bordeaux without using any more lime.

RESULTS OF TEST.

The potato beetles were perfectly controlled on all the rows. As already stated, there was no evidence of foliage burning by the paris green, not even when the poison was used in water alone and at the rate of 4 1-2 lbs. to the acre. On the contrary, all through the season the foliage on the two rows sprayed with poison in water and in lime-water was noticeably more free from blight, more perfect, greener and more vigorous than that on adjoining check rows from which the bugs were picked by hand. It was quite evident that the paris green was aiding the plants to resist blight, though of course to a less extent than did the bordeaux mixture on the other

Bee Hives on Beabody Bros. Farm, Woodstock, N. B.

two rows of each series. There was no noticeable difference between the foliage of rows on which lime was used and those on which the poison was used in water alone; nor was there any contrast between the bordeaux-sprayed rows, with and without paris green.

Digging time, however, brought out more strongly the advantage of the paris green; and indicated that its fungicidal value was not all obscured even when it was used with bordeaux. Surprising differences were also shown between the rows where lime was used with the poison and where poison was used alone, which seem unfavorable to the use of lime. These differences were constant throughout the series, but are too small to overturn previously held views without more evidence. The average yields are shown below:

YIELD BY SERIES IN THE PARIS GREEN EXPERIMENT.

Series.	Rows.	Treatment	Yield of marketable tubers per acre.	
			Bu.	lbs.
I	1, 6 and 21.	Check; not sprayed; bugs hand picked.	175	—
II	2, 7, 17 and 22.	Paris green in water, four times.	221	9
III	3, 18 and 23.	Paris green in lime water, four times.	208	53
IV	4, 19 and 24.	Paris green in bordeaux four times and bordeaux alone once.	165	—
V	5, 20 and 25.	Bordeaux alone, five times; bugs hand picked.	317	30

Paris green in water increased the yield 46 bu, 9 lbs per acre.
" " " lime water increased the yield 33 bu. 53 lbs. per acre.
" " with bordeaux increased the yield 150 bu. per acre.
Bordeaux alone increased the yield 142 bu. 30 lbs. per acre.

Paris green in this experiment certainly was not injurious to the plants, as its use in water increased the yield 46 bu. to the acre, almost one-third as much as did the bordeaux mixture; while its use with bordeaux increased the yield over that where bordeaux only was used, by a small, but constant quantity. The surprising feature, that the use of lime with paris green apparently lowered the yield, may possibly be explained in this way. Though conditions of weather—rain, sunshine, etc.—appeared favorable to development of foliage-burning, none occured; so there was no chance for lime to exert a favorable influence; and its presence may have interfered slightly with the fungicidal action which the experiment proves paris green to have.

While the test strengthens the view heretofore strongly advocated by this Station, that bordeaux should always be used as a carrier for paris green on potatoes, it does not cause us to change the advice to use lime with paris green if the grower is determined to apply only the insecticide. If all conditions had been right to produce burning, it is quite certain that the use of lime would have shown a benefit.

ARSENITE OF LIME.

A comparatively recent addition to the list of insecticides is arsenite of lime, or arsenite of soda in lime water which forms the same compound. The basis of this is white arsenic, a more soluble arsenic compound than paris green and therefore one which it would be entirely unsafe to use in its original form. But by boiling with lime, or better by boiling with soda and adding the resulting solution to lime water, an insoluble compound is formed which is cheaper than paris green, which remains in suspension better and which is a most effective insecticide.

Unless very carefully prepared, however, this arsenite of lime (or arsenite of soda) is quite liable to burn foliage. It was tested at the Station in an experiment similar to that with paris green though only four rows were necessary in each series since there could be no question about using the poison in water alone. Such treatment would mean the death of every plant sprayed.

PREPARATION OF ARSENITE OF LIME.

Rows in each series were, in order, unsprayed, sprayed with arsenite of lime water, sprayed with arsenite in bordeaux, and sprayed with bordeaux only. The bugs on the check row and that sprayed with bordeaux only were picked by hand.

The stock solution of arsenite of lime was prepared by the Kedzie formula:

White arsenic ..... 2 pounds.
Sal soda (washing soda) 8 pounds.
Water ..... 2 gallons.

Boil 15 minutes or until the arsenic dissolves, leaving only a small quantity of muddy sediment. Replace the water lost in boiling. This makes a stock solution of arsenite of soda which may be placed in tightly stoppered jugs and kept on hand for use is needed. In preparing the spray mixture use two pounds of freshly-slaked lime with each pint of the stock solution in the desired quantity of water or bordeaux mixture. The arsenic of soda and the lime unite to form arsenite of lime. The arsenite in one pint of the stock solution is equivalent to four ounces of paris green.

In different sprayings the quantity used varied from two to four pints in 50 gals. of liquid, and the amount of liquid from 100 to 225 gals. to the acre.

RESULTS.

Within a week after the first application a heavy rain fell. On the day following it was noticed that considerable burning of the foliage had occurred where the arsenite was used in lime water; but none where it was used in bordeaux. Similar injury occurred after the second and fourth sprayings; but after the third, perhaps because there was less rain, no injury was noticed. After the second spraying the injury was marked, leaves of all ages being affected with large copper-colored dead spots, some of them closely resembling the spots of late blight. A photograph of a healthy plant and one injured by the arsenite is reproduced on the title page. There was no sign of burning on the bordeaux-arsenite rows at any time. By the time of the fifth spraying the check row and that sprayed with arsenite in lime water were practically all dead, so only the bordeaux sprayed rows were treated.

At harvest, the yields were as follows:

YIELD BY SERIES IN THE ARSENITE OF LIME EXPERIMENT.

Series.	Rows.	Treatment.	Yield of marketable tubers per acre.	
			Bu	lbs.
I	1, 5, 9, 13 and 17	Check; not sprayed; bugs hand picked.	142	25
II	2, 6, 10, 14 and 18	Sprayed 4 times, arsenite of soda in lime water	94	15
III	3, 7, 11, 15 and 19.	Sprayed 4 times with arsenite of soda in bordeaux and once with bordeaux alone.	295	45
IV	4, 8, 12, 16 and 20.	Sprayed 5 times with bordeaux alone; bugs hand picked.	329	45

Arsenite of soda in lime water reduced the yield 47 2-3 bu. per acre.
Arsenite of soda with bordeaux increased the yield 153 1-3 bu. per acre.
Bordeaux alone increased the yield 187 1-3 bu. per acre.

From this test it is quite evident that the arsenite of soda in lime water is unsafe to use on potatoes, even when, as in the first and second sprayings, the actual amount of arsenic contained is only half as great as in the paris green which was used without harm in lime water in the other experiment.

The figures would also indicate that the arsenite is injurious, even in the bordeaux mixture; for there were more potatoes where bordeaux was used alone. But there was no evidence of foliage injury on the bordeaux-arsenite sprayed rows; so the difference in yield may have been to quite an extent accidental.

It is safe to say that whatever arsenical is used it is safest and best to apply it with bordeaux.

Bacteria Affecting Milk and Cream.

By W. F. Droge, Deputy Daiay Commissioner, Manhattan, Kansas.

Bacteria are very small one-celled organisms, so small that they can be seen only with a high-power microscope. These organisms are present in almost every nook and crevice in the world, from the top of snow-capped mountains to the bottom of the seaf They are found in the soil, in the air, and in our food. They are very abundant in milk and cream.

The terms "bacteria, "bacilli," "germs," and "microbes" are practically synonymous. The word "bacteria" suggests to the average person such organisms as produce disease. A graet many bacteria do produce disease, but a large proportion of them do not. However, most of the latter class are objectionable. Milk is an excellent food for bacterial growth, and nearly all types find it a good place in which to thrive.

TYPES OF BACTERIA WHICH DO NOT PRODUCE DISEASE.

LACTIC ACID BACTERIA.—Under this type of organism come all those varieties which act upon the milk sugar by changing it to lactic acid. This acid causes the milk to become sour much as when vinegar, lemon juice, or other sour substances are added to milk. When enough of these acids are added, the milk will curdle, and this same action takes place when the bacteria produce lactic acid. Acid is the only substance which will directly sour milk and cream. The lactic acid bacteria cause the natural souring of milk. These types gain entrance from various sources. They are found in the teats and udders and on the hair and skin of cows, on the hands and clothing of milkers, and in water, hay and manure. Milk is the natural habitation of these bacteria; and if it is kept at a temperature suitable to them, they will increase in numbers very rapidly.

The common milk-souring bacteria thrive best at about 78 degs. to 80 degs. F., while most of the disease producing organisms grow best at blood temperature, or about 98 degs. F.

There are several varieties of bacteria which produce gas in milk and cream:

BACILLUS COLI COMMUNIS.—A common gas producer is the bacillus coli, the organism commonly found in the colon of the intestines of man and animals. When a large number of these organisms are found in milk, it indicates contamination with animal feces or stable manure. These bacteria are often the cause of bad flavors and foul odors.

BACTERIUM AEROGENES. The bacterium lactis aerogenes belongs to the lactic acid group, but it produces both acid and gas. It is the organism that causes the gas spaces in cheese curd.

BACTERIA CHANGES IN MILK AND CREAM.

When milk or cream is kept at a temperature of about 80 degrees F., the number of acid bacteria increases very rapidly, and so much acid is produced that in a short time the milk will become sour. The number of bacteria increases as the acid increases until a certain per cent (about .7 per cent) is reached. Here the acid becomes so strong that it kills the lactic acid bacteria, and types which are more reticent to acid will predominate. These are mostly putrefactive bacteria or those which putrefy the proteids.

The putrefactive bacteria in milk belong to the same class as, and many are identical with, those which cause the decay of meat when it is exposed to the air.

BACTERIA PRODUCING ABNORMAL CONDITIONS IN MILK.

Slimy or ropy milk is caused by an organism which produces a gelatinous substance. Milk so affected can be drawn out in long threads. Its occurrence is usually in milk over twenty-four hours old.

The source of this organism may be the wash-water, the rinse-water, or particles of dirt or dust. When it once gets into a can of milk, it is easily transferred to other cans and

The organism thought to cause fishy flavor in butter. (It is on the border line between a bacterium and a mold.)

unless proper precautions are taken and all utensils are thoroughly cleaned and scalded, it may cause a great deal of trouble and financial loss.

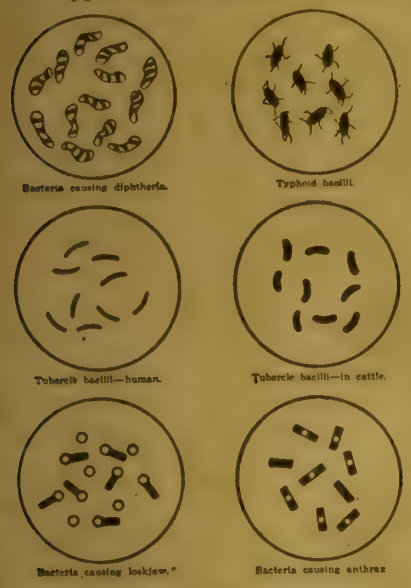
Bitter milk is caused chiefly by bitter weeds eaten by cows, but is occasionally caused by bacteria.

Soapy and colored milk is caused by certain undesirable kinds of bacteria whose occurrence in this country is rare.

Yeasts are often a great source of trouble, especially in old cream. They can easily be detected, as they produce a large amount of gas, causing the cream to swell and give off odors similar to those that rise from sour bread dough.

Molds are abundant in old cream that has been handled and kept in damp, musty rooms, cellars ot caves.

A type called oidium lactis is thought to be the cause of fishy flavor in butter.



Bacteria Dangerous to Human Life.

DISEASE-PRODUCING BACTERIA.

Among the disease-producing bacteria commonly found in milk or cream are those causing tuberculosis, diptheria, typhoid fever, and foot-and-mouth disease. Less common are those causing cholera, lockjaw and anthrax. All these usually gain access to the milk from diseased animals or their attendants and milkers. One person or animal may spread the disease throughout a whole community. Every precaution should be taken in preventing diseased persons or animals from coming in contact with others, and milk from such animals should not be used for any purpose whatever unless itis boiled; even then it should be fed only to stock. When an epidemic breaks out among cattle, notify the State Live Stock Sanitary Board, Topeka, Kan.

TUBERCULOSIS.—Tuberculosis is one of the most serious diseases which confronts the dairyman. It has been rapidly increasing for the last twenty-five years, both in cattle and in the human race. It is widely distributed, but is more prominent in countries that have long been settled and are thickly populated.

Among the human diseases there is only one other, pneumonia, that claims more victims than tuberculosis, but as this takes only persons of low vitality, usually the very young and the very old, it is not of so much economic importance as tuberculosis. Tuberculosis claims mostly men and women of middle age.

In 1910 more people in the United States died from tuberculosis than were killed during the four years of the Civil War. In spite of all our modern methods of prevention, this dreadful disease is steadily increasing. One out of every seven deaths is caused by tuberculosis.

In cattle the disease is more virulent than in man; and where once it gets a foothold, it is apt to run through the whole herd.

There has been much dispute about whether or not tuberculosis from cattle is transmitted to human beings, but the probability of such transmission is now conceded.

The bacterium of tuberculosis is a small rod-shaped organism. When it attacks animal tissues, it forms little masses of cheesy or wax-like yellow tubercles. When a lung or other infected organ is examined, these little tubercles can be plainly seen. The lungs and air passages are most commonly affected but other organs, as the spleen, the kidneys, and sometimes the milk ducts and udder are also affected. When the disease is located in the udder, the milk is dangerous as an article of food.

The examination of milk for tubercle bacilli does not always show that the animal is infected, and the only sure and practical method is by the tuberculin test. This should be performed by a competent veterinarian.

TYPHOID FEVER.—Typhoid fever is often spread by the use of infected milk. Cows do not have this disease but the milk, after being drawn, becomes infected, usually from persons who milk the cows or otherwise handle the milk, or from wash-water which is infected. It may also be carried to and from the daity in empty bottles or vessels. Such containers should all be scalded before being used.

DIPTHERIA is a serious and often fatal disease among children. Many cases of diptheria have been attributed to the milk supply. A diptheria patient may recover from the disease but still carry the organism in the throat. If such a person is allowed to handle milk, the disease may be easily transmitted to others. A convalescent from diptheria should keep away from places where milk and cream are handled until he is certain that he is free from the organism.

SCARLET FEVER is another disease often spread by the use of infected milk. Although not so fatal as diptheria,its relation to milk is about the same. The organism has not yet been found, but the disease is very contagious and easily transmitted.

DISEASES OF THE INTESTINAL TRACT. The death rate in the human race is the greatest among children under one year old, and the majority of these deaths are due to disorders of the intestines. There are many causes for such disorders, but much can be attributed to milk, as it is the principal food fed to infants. Dysentery, diarrhoea, cholera morbus, and summer complaint are usually caused by bacteria which get into the body with the milk. Too great care can not be taken in the production of milk for babies.

DISEASE GERMS LESS COMMON IN MILK.—Such diseases as lockjaw, anthrax, and foot-and-mouth diseases are very rare, but, when they do occur, they are violent and fatal. Although transmitted through milk, these diseases can usually be detected in the animals before infected milk is consumed.

The following table will show the number of bacteria to the drop found in a sample of average milk kept at room temperature and tested at various times:

First test 7,650 bacteria a drop.
1 hour later 26,950 bacteria a drop.
2 hours later 30,300 bacteria a drop.
4 hours later 34,000 bacteria a drop
7 hours later 50 100 bacteria a drop.
9 hours later 102,000 bacteria a drop
25 hours later 425,000 bacteria a drop.

HOW TO CONTROL BACTERIA IN MILK AND CREAM.

STERILIZATION.—This is the practice of subjecting milk to a high degree of heat, at least the boiling point. The heating may have to be repeated for three consecutive days to kill all bacteria and their spores, it must be repeated a sufficient number of times for the accomplishment of the desired result.

Sterilization is not satisfactory on a commercial scale, as the boiling of milk coagulates the albumin and renders it hard to digest.

PASTEURIZATION. This is the practice of subjecting milk to a temperature of from 140 degrees to 180 degrees F. for a few minutes and immediately cooling it. This method

Bacteria Causing Changes in Miik.

destroys most of the common types of bacteria and especially the lactic acid bacteria, but it kills neither the spores nor all the bacteria of the objectionable or harmful types. The chief objection to the pasteurization of milk is that such milk is apt to be kept too long, and that thus the harmful types of bacteria, although they have no apparent effect upon the milk, will increase in such numbers as to render the milk dangerous. The tubercle bacillus, however, is killed by efficient pasteurization.

The safest and most practical method of controlling bacteria is by producing milk under sanitary conditions and immediately cooling it and keeping it cool.

The Farm Homestead Water Supply.

By Frank T. Shutt, M. A., F. I. C.,
Dominion Chemist, Ottawa.

There seems to be a little necessity now-a-days to emphasize the vital importance of a pure water supply for our cities and towns. Thanks to the investigations of the chemist and bacteriologist and the collection of civic statistics during the last three decades, an intimate relationship between the quality or, more correctly speaking, the purity of the water supply and health has been firmly established and this relationship, thanks to the many and various ways we have in these days of easy publicity, has in a very general way been recognized by our citizens. The fact that outbreaks of typhoid fever in our large centres have, in many instances, been directly and indisputably traced to a common source—a polluted water supply—has served to win this general admission and made it comparatively easy for the authorities of our cities and towns to obtain large sums of money to procure an ample supply of wholesome, disease-germ-free water. And we further find in our more enlightened centres that the expenditure for the systematic, periodic, scientific examination of the supply is considered a very wise one. In this matter of what I call the scientific control of the water supply, I think this Association may do useful service by impressing upon our people and civic authorities that pure supplies may at any time, by accident or otherwise, become contaminated and that without a careful, systematic watch such contamination may remain unknown until too late—until the epidemic that will eventually follow is upon the citizens. My experience leads me to put great emphasis upon this phase of the question. If such a course had been in force there can be little doubt but that many severe typhoid fever epidemics in our cities and towns might have been prevented.

But my purpose to-day is to speak of the water supply of the farm homestead, a matter to which as chemist of the Dominion Experimental Farms, I have given considerable attention during the past twenty-five years. And first I have to remark upon the general apathy among the rank and file of our farmers towards this question. It has been quite a different matter to arouse in our rural districts anything like the keen interest that is evinced by the inhabitants of cities and towns. In spite of lectures, bulletins and propaganda of various sorts our farmers as a class, are not yet fully alive to the value of unpolluted water for themselves and their families, for the health and thrift of their stock and the quality and wholesomeness of their dairy produce. Nor do they realize how easily and frequently certain forms of disease—diseases by no means uncommon in the country—are contracted by the use of a polluted drinking water. Perhaps this is not altogether to be wondered at, for hitherto the farmer's mind has moved slowly in learning and appropriating the teachings of science and the attitude "what was good enough for my father is good enough for me" is still to be found among those who are tilling the land. I would not, however, leave this phase of the question without recording a much brighter outlook lor reform than existed twenty years ago. The good work of disseminating information is having its effect and the younger farmers, more especially, are looking more closely into the character of the water supply. Instances are becoming more numerous every year of farmers going to considerable expense to secure a good and ample supply—a supply beyond suspicion—and piping it for use in the farm house and for the watering of their stock. Hand in hand with this there is the putting in of a bathroom and the adoption of the septic tank system for the disposal of the household sewage. This is an encouraging sign of the times. I

(continued on page 692.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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CHILDEN'S VIEWS ON ROADS.

Many an adult called upon to prepare a thesis on "What Good Roads Mean to Canada" would find himself nonplussed. He would know perhaps, in a vague indefinite way that Good Roads would mean much for this country, that it would make for its betterment socially, its advancement commercially, and its rapid development. He would understand that Good Roads would bring in a large influx of tourists, and decrease the cost of living. But if requested to state these facts in a clear, logical manner, and to draw deductions aud conclusions therefrom, the average man would confess his inability to prepare a satisfactory paper.

And yet this is just what nearly five hundred of Canada's school children have done. The Canadian Highway Association some time ago, offered valuable prizes for the best essays on "What Good Roads mean to Canada". Evidently this was a popular subject, for students from all parts of the Dominion sent papers to the headquarters of the association in New Westminster, including essays so carefully prepared that the judges took over two weeks to decide the three prize winners.

This nducement to the children to study the question of better roads is commendable in every way, and it is gratifying that this first propaganda among the young people has met with such signal success.

In their report, the judges mention the thoroughness with which the children treated the subject, for instance the stress the children placed upon the social aspect. Canada, perhaps unconciously, is striving for a higher moral plane, and the children recognize the factor that Good Roads would be in this. The boy of today is the man of tomorrow. The Good Roads question will not be settled in this or the next decade, and the study of the subject which the preparation of these essays has involved on the part of the young people will inculcate in them a desire for better roads, which will not be eradicated by the passing of time. Some day some of the children whose essays have just given the Westminster judges such a trying time will be occupying high places in this Dominion. Some will be reeves or councillors of municipalities: some will be members of Parliament; one may be a Premier of Canada.

Because of this study of the question in their youth, they will have a truer, clearer knowledge of conditions than could otherwise have been the case, and the result of their study in 1912 will make for the benefit and the betterment of their communities ten or twenty years hence.

The Canadian Highway Association has already accomplished much commendable work, but it is doubtful if its propaganda and its deputations to parliament will have done as much to awaken the public conscience as this offer of medals to the children of Canada. The Gold Medal essay in this competition appears on another page of this issue.

SELF-RELIANCE.

The farm is the greatest training schoolin the world for self-reliant men. The farmer and the farmer's sons simply have to do things themselves. There is nobody else around to do them. The farm boy early in life learns to do things, and if he can't accomplish the thing which has to be done one way he casts about for another until he finds out how to do it. This makes him resourceful. It develops in him the ability to find a way out of the difficulties about him. This training follows him all through life, and for this reason he is more apt to be able to take care of himself in almost any situation than the man who has never had to rely on himself. It is this sort of thing which develops manhood. Unfortunate is the boy who is surrounded by luxury conveniences and wealth, for he has little opportunity to learn to depend upon himself.

The Journal of the American Medical Association refers to the actual physical weakness and moral weakness which is the natural result where no exertion is required and points out that the individual or species for which things are made easy loses those functions which they do not make use of. This journal says: "It has often been observed that living organisms require for their fullest development a certain amount of resistance in their environment. The individual or the species for which things are made too easy loses the unused function. The butterfly helped from its chrysalis has imperfect wings; the man fed on soft food has bad teeth. The parasite is always a degenerate monster. The parasite dodder, which draws all its sustenance from the sap of its host, is a plant without a root or a leaf. The hermit crab, which instead of growing a shell for itself like other crustaceans, makes use of the cast off shells of mollusks, is atrophied in some of its members and enfeebled in its whole organism. So with the intellectual environment and the mental qualities of man."

CORPORATION AND COOPERATION.

Corporation is the method of modern business organization. By this means, several people put their money together so as to gain the advantage that comes from a larger amount of capital. The building equipment and running of a railroad, for instance, requires more money than one man has, so many people put in their money—in some cases thousands. The building and equipping of a factory usually requires more money than the one starting it possesses. By others putting in their money the factory is made possible. In one sense the corporation is a cooperative affair. It is many people working together with their money for the good of each other.

The corporation does not lend itself so well to the organization of farm business, but the underlying principle of the corporation, that is cooperation, is admirably adapted to farm affairs. In this case it will not be only money that is put into the cooperative affair, but it will be the producing of farm products, marketing farm products, social life, credit, good will, education.

In the producting of farm products, there are two ways of cooperating-- cooperation in the growing of some one crop, as potatoes, producing of the one variety working towards a high standard of quality so as to make the locality known for that one particular kind and quality of potato. In stock raising, grow one kind of stock and that of a high quality so as to make the locality known for this.

The other way of cooperating in growing the crop is the cooperative ownership of machinery that is expensive and not much used, as silage cutters, potato planters and diggers. Threshers sires, etc.

Where there is cooperation in production it will not be difficult to bring about cooperation in marketing such products as potatoes and butter and in buying such things as machinery, binder twine and coal.

Cooperation in education is being worked out through the consolidated school. This is being furthur developed through farmers' clubs, where farmers exchange their experiences and observations. The social life and religion need to be closely united. The church should be the leader in the social life. The denomination should come together and agree on one church and make that a strong one instead of having several weak ones.

Farmers could well cooperate in the establishing of credit associations or at least in borrowing money. If farmers had an organization and this would stand back of loans there is no reason why money could not be secured for 5 per cent and 6 per cent where 10 per cent and even more is now the rule.

Cooperation will do for the farmer what corporation has done for business. The marvelous development of modern industry and business could never have done except as a result of the corporation which enabled people to work together, or if yet please, to cooperate--likewise a rapid development will come in farming when proper use is made of cooperation. Each one working by himself will not get far, neither in business nor in farming.

The whole question of cooperation among farmers is attracting more and more attention.

The Prince Edward Island Farmer says that the island province lost ten thousand in population between 1901 and 1911, without counting the natural increase which should have taken place. The soil of the island is rich, its climate good, and general conditions favorable for agriculture, but apparently farming is not sufficiently profitable to prevent the movement to the cities and to the west. The trouble, as the Island Farmer sees it, is that "on the margin between what the farmer receives and what the consumer pays an army of middlemen are not only fed but fattened." Hence it says:

There is one feature of the situation which should set our farmers thinking. They are the only class of producers in the world today who are unorganized. The manufacturers, whom the farmers outnumber almost infinitely, are so organized that they can dictate terms to governments, to transportation companies, and can even set the prices of farm products. The farmers numerically in a position to rule the world, cannot secure a reasonable concession on a government railway or company steamship. Organized, as the manufacturers are, they could command kings, governments and even railway companies. Is such organization possible? What would it mean to the world? What if the farmers had the power to set prices on the products of their farms, as the manufacturers do on the products of their factories? And the power is theirs if they only use it. As things are now, farming by the masses does not pay. It is because it does not that the farmers are leaving their farms and taking to the middle ground in the cities.

Cooperation has been tried with success by the fruit growers and shippers of the Annapolis valley, and representatives of different coopera-

tive bodies met at Berwick this week to discuss the organization of a central association with which all of them would affiliate. Such action was decided on but deferred in order to meet certain legal requirements.

Seventy farmers of Kings County will make a test of the values of organization, under conditions which would seem very favorable. They are incorporated as the Farmers' Dairy and Produce Company Limited, with a capital of $9,000 to establish and carry on a general wholesale, retail and manufacturing business in milk, dairy products, farm products, and farm supplies in all its branches. They hope to steady the price of produce, and also to reduce the average yearly cost to the consumer. If they succeed, their example will not only be followed by other farmers, but the consumers will be in full sympathy with the movement.

Use and Care of the Mowing Machine.

Editor The Maritime Farmer:—

I consider the mowing machine as the most useful labor saving implement on the farm. How often we see it kept in such a condition that it cannot do its best!

The one great point in the use of this machine is the keeping of it in proper working order. It is said that any one who can drive a horse can use a mowing machine, but I am sorry to say that there are many operators who do not keep their machine cutting as it should. The most important part of a mowing machine is the cutting bar. Keep the knives sharp, not only by grinding often but carry a file in the tool box and when you stop to rest your team for a few minutes give the knife a little touch up with the file. If there are no stones on the field a rub with a three cornered whetstone—which may be bought at almost any hardware store—will answer the purpose. These whetstones cost only a few cents each and their frequent application to the knives will be agreat saving to the team in the extra energy they have to use when the knives are dull. After mowing for an hour or so just whet up the knives for a few minutes and see how much nicer the knives will cut. The driver should be able to tell from the sound and feel how his machine is working.

The guard plates should be kept in good order. They cannot be much improved by filing. If they get worn thin and rounding on the edges they should be replaced with new ones. If the machine is properly cared for, it will last a long time; but if it is left out in the fields during nights and for days during rainy weather it will wear out much quicker. When the plates get wet they rust and the next time the machine is used the rust will wear off and they soon become rounded on the edges. Always put your machine under cover when you are not using it, if you want to get the most out of it.

Keep the guards true and level. Look them over occasionally and level them up as they frequently get knocked out of place when they strike a rock. Another point that is often sadly neglected is not keeping the machine properly oiled. When you start out give every running part a good oiling. On warm days, when the grass is dry the cutting bar and the fast running parts should be oiled at the end of every fifteen or twenty minutes. It is not necessary to use a great quantity of oil, a few drops used often is better than a lot put on at long intervals. In grinding the knives try and keep the levels as long as when the sections were new and when they get worn to a sharp point or get gapped by stones replace them with new sections. Sections cost so little now-a-days that there is no excuse for using them when out of shape. See that no belts work loose. Keep the nuts tight. The operator should be able to tell by the sound as soon as a part works loose or gets out of order. If you keep your machine in good order it will reward you by doing good work. Any one of the mowing machines that is on the market will do good work if kept in proper order. A great deal of the dissatisfaction with machines is due to the carelessness of the operator and not the machine.

Just think of your team working in the heat, perhaps tormented with flies, having to put up with using a lot of their energy in hauling a machine that could be made to run smoothly and easily if you exercised a little precaution in keeping it in good working order.

I once went to a field where a man was mowing with one horse and although his machine was only on its second season's work it was cutting badly and working very stiffly. I told the operator that his knives were dull but he said they were not as he had ground them before he had started in the morning. I asked him to get me a file and I went over the knives in about five minutes, oiled it up and asked him to drive on, when he found the machine did much better work and was easier on the horse.

Would a man think of mowing for two or three hours and not whet and sharpen his scythe. The same man, however, will often expect his horse and machine to work under very unfavorable circumstances.

Ihave had over thirty years experience with mowing machines and know that you cannot do a good job of mowing and do justice to your team unless you keep your machine in good working order.—S. G. Eccles, N. B.

What Good Roads Mean to Canada.

...The Carthaginians were the first people to make a systematic practice of road-building, but no nation derived so many various benefits as that of Rome. Great and wonderful are the monuments that perpetuate the name of Rome and everything connected with it, but none are so famous as herroads. Rome's military, commercial and imperial success was due, primarily, to her splendid system of highways, the relics of which extend from the Pillars of Hercules to the Temple of Jerusalem. But the Roman roadmakers have a far more important lesson for Canada. The world will, for all time, remember the message of Christ, which was delivered to humanity through the medium of Roman roads. There are thousands of people existing in hamlets throughout Canada, who are awaiting religious instruction. They will not emerge from their semi-barbarous state until the "Good Roads Movement" has won its way into every nook of this new country.

The attendance to the rural meeting place is diminishing; the attendance to the school-house is dwindling; friendship is being severed with the neighbor living a short distance away; and with the person to whom you regularly send a letter; and the village preacher is being discouraged. What is the reason for this? Impassable roads and nothing else. Country communities are not going to wade through mud to post a letter, to go to school, to go to church, or to visit a friend, neither will they suffer their horses to attempt it. They will not be pestered with doctor's bills because the road is transformed into a quagmire. Rural inhabitants are being degraded educationally, socially and morally. Country folk are not migrating to cities because they don't like rural life, but because the roads, if they may be called so, are impassable. These people are intelligent enough to see that all the discomfort and prevention of social enjoyment is due to the lack of good roads. Here lies the greatest lesson of the Roman road-builders. You cannot estimate in dollars and cents the national loss entailed by the constant withdrawal of labour from farms, and by the fading of the influence of the character-building institutions of the country.

Bushnell, a great American thinker says: "If new ideas are abroad, new hopes arising, you will see it by the roads that are building." Simultaneously with the movement for the need of good roads arises one far-reaching idea, even more profound than the enhansing of land values. It is the social betterment by which Canada is playing a distinguished part in the uplift of the world.

Now we turn to the meaning of roads in the economic sphere. Is it a good business policy? Canada's manufacturers, men of commerce and business admit that Canada needs such a policy, but because they cannot see any solid, unrestricted and available gain that would accrue, they don't care. The cost of a breakfast roll would be trifling did it not cost the farmer eighteen cents a bushel more to transport wheat nine miles to a railway station than it did from New York to Liverpool, a distance of three thousand one hundred miles. The cost of a boiled egg is the payment of transportation from the hen to the household. The intrinsic value of the egg is a mere trifle compared with the expense of carriage through two feet of mud.

Over the deep-rutted roads, as they exist at present, a farmer can haul, on an average, six hundred pounds in five hours with two horses. If good roads were constructed, however, it has been calculated that one horse could draw twelve hundred pounds and more in two hours. Not only would the farmer save time, conserve his energies, make better use of his vehicles and horses and thereby save money; but the consumer, too, would receive his needs at lower prices. And as Canada's agricultural production is annually increasing by leaps and bounds, a greater proportion of money would be saved by all classes of people year by year; and, probably, the high cost of living in the urban districts would recede to the normal.

"It cost the average Canadian farmer two dollars a ton to haul his produce to the market town, to the railway station or lake port. It is known that the production of field crops alone amounts to about 40,000,000 tons a year. It would be moderate to estimate that 25,000,000 of this tonnage is hauled over roads, one way or another; so we have $50,000,000 as cost of teaming field crops by the farmers. This cost could be reduced if we had first-class roads, to $20,000,000, a saving of 6 per cent., leaving $30,000,000 as a saving on one class of product alone."

The building of good roads would increase the value of taxable lands not only in the vicinity but also in the most remote parts. Stupendous amounts could be collected in taxes and the assets of the nation as well as the landlord would increase. New towns would spring up; new railway branches would be built; and Canada would be settled and developed at a miraculous rate.

Our convicts could be profitably employed building roads. Of course, it is useless to have them constructed unless carried on in a systematic and scientific way. The roads must be "graded, topped and rolled." They should be constructed so that water will quickly drain off and so that the greatest applied pressure will not force upon the foundation and cause mud to ooze up and ruts to be renewed.

Well-constructed roads shorten distances by reducing time to travel. They would give rise to a further exploration of sparsely settled districts and would result in the discovery and adoption of more mineral and timber wealth.

I feel confident that smooth hard roads would mean more to Canada than any other project. I believe that a remarkable awakening, a renaissance would take place. The economic and national advantages that would ensue are incalculable. The energetic settlement and development of Canada would swell the treasury and the country would enjoy an era of prosperity unequalled in its history. Good roads in Canada would mean a higher standard of citizenship; a people pervaded by education and good morals; and a better understanding and a mutual sympathy between the divers peoples in the Dominion.—S. Cieman, 262 Major Street, Toronto, Ont.

2000 N. S. Farmers Enjoy Outing.

The flower of the population of the Annapolis Valley, contingent to the Dominion Atlantic Railway, came to Truro on June 21st. more than two thousand strong, to enjoy a picnic at the Provincial Government Experimental Farm, and to visit the College of Agriculture. They packed two trains of nine coaches each, and there were no spare seats. The trains arrived at one o'clock, and for one and a half hours opportunity was given to the excursionists to take lunch or spread a repast where opportunity offered. Tea and coffee were dispensed at ten cents a pitcher full, but butter and sweet milk, at five cents per pint, were in heavy demand throughout the afternoon.

One exhibit of the live stock was given on the lawn in front of the College building, at the beginning of the formal programme. Then there was Prof. Smith in his laboratory, where he was kept busy identifying insects and pests. Mr. E. E. Saunders, of the Dominion Entomological Department, had specimens of the "San Jose Scale," which has proved such an awful destructive pest in the United States. A. McNeil, chief of the Fruit Division, Ottawa, was on the grounds all day, and made an instructive address from the platform.

Principal Cumming, Mr. Stevens, the newly appointed farm Superintendent, Mr. Landry and Supt. Fuller of the Agricultural Society branch of the Provincial Government service, and B. H. Landels also made addresses. The latter had in operation the Nova Scotia Government's ditching machine and gave a very effective version of the work this machine can do.

Demonstrations were made in the Dairy Department, both in butter making and soft cheese making. This proved exceedingly interesting. There were brief addresses by various visitors, and on the whole a most instructive, as well as enjoyable five hours was spent in Truro and the College property on the whole.

The old proverb in agriculture was that lime makes the father rich, but the sons poor. That might be paraphrased to say the lack of lime makes the father poor and his sons poorer. The intelligent use of lime does not make any one poor; it is the abuse of lime that might make the sons poor.

This is the time to note the effects of good preparation of the soil. Compare fields that were prepared properly last fall with fields that had to be prepared hurridly this spring. This will convince you, if you are not already convinced, that it pays to break the land early and do the work well.

An interesting fact about seeding on new soil is the length of time profitable crops may be grown without barnyard manure or fertilizers of any kind, and with no rotation of crops.

HORTICULTURE.

The San Jose Scale.

The San Jose Scale has been found recently coming into Nova Scotia alive on Ontario Nursery stock. Although all infested trees are being destroyed, the situation warrants a review of the scale proposition in other countries, and its probable effect on the orchards of Nova Scotia, should it become established.

San Jose Scale is rated by all authorities as the most serious orchard pest in America, introduced into California from Japan about 1880 and from there carried on nursery stock to New England nurseries in 1887, it has spread into almost every state and territory of the American Union and into Southern Ontario in Canada. When first introduced into these countries the damage was immense, as modern methods of fighting the pest had not then been introduced. Fumigation was not understood and Lime and Sulphur was not known as an insecticide. Crude oil and resin washes, and whale oil soap were the remedies and in many cases they did as much harm as good. Owing to its being so inconspicuous and little known it often did immense damage before the owner suspected what the trouble was. The writer, on one occasion, in Southern Illinois, saw 160 acres of peach orchard, all dead to the trunk, and was then the first one to tell the owner that San Jose Scale was affecting his trees.

The San Jose Scale, in addition to being the most destructive of orchard insects, is the most inconspicuous. When very badly infested or encrusted, as it is termed, the bark presents the appearance of being dusted with ashes when wet. When scraped with the thumb nail small yellow specks appear, the bodies of insects which are concealed under the outer scale and when numerous enough are termed "greasy." The lighter infections are hard for an untrained eye to detect. The most typical form is the half grown winter form, which is less than one third millimeter across, dark ashy colored and often concealed in crevices and in the edges of wounds. A strong magnifying glass is required to identify the scale which appears as a miniature volcano with a small nipple in the centre of the crater. As soon as the sap begins to flow in the tree, the scale starts growing and in less than a month is full grown, in the case of the female 1½ millimeters across, in that of the male, a very small two winged fly. Fertilization now takes place and a month later the females begin producing living young and continue to do so for about six weeks, at the end of which time the old female dies. The first born of the young scales are now producing the first of a second brood, breeding continues until killing frosts in the fall. Half grown scales entering the winter will live over, those younger or older, for the most part die. The immense powers of reproduction in the San Jose Scale differentiate it from our native scales, which are all single brooded. In the latitude of Washington D. C. where the scale is four or five brooded, Sanderson gives the possible increase from one female scale, in one season, as 3,216,080,400. The actual increase of course is much less.

Usually the San Jose Scale is spread, in the first instance, by importing trees into a district from an infested nursery. Once established, the wind and birds are usually the agents. The young insect moves freely over the bark of the tree from twelve to thirty-six hours after it is born and then settles down and inserts its beak into the bark, and in the case of the female remains stationary for the remainder of its existence. To move it means to kill it by breaking the beak or sucking tube. These young free moving insects will blow in a high wind from 30 to 50 feet and establish themselves on a new tree. The spread by the wind is therefore very slow. In the case of the birds, the young free moving insects often get stuck in the mud on the birds feet and are often carried half a mile by this means.

San Jose Scale will attack most plants belonging to the order Rotrceae, the Peach, Japanese Quince, Mountain Ash, Apple, European Pear, Plum, Rose, Currant and Lilac being susceptible in the order named. Of our native wild trees, the Thorne will become moderately, and the Elm and Acacia slightly infested. Coniferous trees, Maple, Birch, Beech, Ash and Alder are not susceptible. The age of the tree, in many cases influences its susceptibility. In Illinois apple trees are often found, in badly infested regions, very slightly infested. In New York State an old tree is looked upon as being just as susceptible as a young one. As our climate and conditions favors New York rather than Illinois we would look for our old trees to be quite susceptible. In the apple and peach the smooth bark is attacked only, when the bark is sloughing on the trunk no scale will be found.

At the present time living scale has been found on about 200 trees of 1911 planting. These infested trees are widely scattered, the most found in one orchard being 38, more often, however, there are only two or three. The living scale has so far been found on the stock of two Ontario nurseries only. Twelve Provincial Inspectors are now busy examining all the trees of 1911 planting and where living scale is found the infested trees are destroyed and the orchard will be kept under observation until the danger of the scale development on adjacent trees is past. In regard to 1912 importations from Ontario, nothing definite can be said at present. About 20 per cent. of the whole lot bears dead San Jose Scale. It may be August before an inspection of them can be made.

While the chances of complete extermination are small yet considering all things the attempt is well worth while, as most, if not all of the valley will be cleaned. In the present state of affairs all selections inspected are more or less infested and if the trees were allowed to remain every orchard in the valley would be infested in five years. If the inspectors can succeed in even cleaning up 90 per cent. of the sections, it will mean that probably 15 to 25 years will elapse before the whole valley would become infested. Every effort is being made by the inspectors for eradication, and if they succeed their feat will stand unparalelled.

As regards the probable damage should it become established in Nova Scotia. We are near the northern limit of the scale, and there would be little more than two broods. Our winters are mild and might in a measure offset this advantage by allowing more to live in the winter. One advantage which we have which no other infested area had when first infested is the fruit growers of the Valley not only are fitted up and well used to spraying, but they are used to spraying with Lime and Sulphur, which when used one gallon of concentrated to nine gallons of water and applied to every part of the tree in the latter part of March or in April, is above all other sprays the best for controlling the scale and more than that, it is one of the best fungicides known and will pay for its application in reduction of fungus diseases in the orchard. Miscible oil sprays are used extensively, but they have not the fungus destroying properties of Lime and Sulphur.

The up-to- date orchardist of the Annapolis Valley will receive no setback if the San Jose Scale should by annual winter spraying will pay for itself in cleaner and more fruit, and the scaby, wormy fruit which comes from unsprayed orchards and which now compete with his own on the market will to a great extent be removed by the destruction of unsprayed trees by the scale. In this regard I may cite the case of the Niagara district in Ontario, before the San Jose Scale appeared there there was usually either a bumper crop when prices would be down followed by a very short crop when prices would soar, but total returns small. Since the scale appeared there, and annual winter spraying with Lime and Sulphur become a necessity, they have not had a failure nor a bumper crop, but a succession of even crops which feed the market almost all it will take and still keep the price as high as a short crop. Many of the Niagara growers contend that the San Jose Scale has been a blessing in disguise, and we can see no reason why what is true for Niagaras should not be true for the Annapolis Valley.

The net returns from an orchard infested with San Jose Scale and under proper management, are usually as large, and in many cases larger, than from similar properties not infested, and where winter spraying is not practised. Therefore the Annapolis Valley Fruit Growers should not look upon scale as a pest which will depreciate the value of his property, but as an insect which will force him to adopt a newspray, which will control the scale absolutely, although it will not exterminate it, and will pay for itself as a fungicide in cleaner and better fruit.—G. E. Sanders, N. S. Field Officer, Division of Entomology.

Spraying Letter.

Owing to the Black Spot making its appearance upon the apple crop this last few days, we consider it is our duty to throw out a warning to the fruit growers who have been using our spray.

If good results are not obtained, even through carelessness on the part of the user, Lime-Sulphur will get the blame. Hence our reason coupled with our interest in fruit growing for writing this article.

Upon close observation from different parts of the fruit growing Counties of Nova Scotia, we feel safe in predicting that a large percentage of this years apple crop will be worse than valueless, that is if the ravages of the Spot continues as it has during the past week.

In some sections of the country we find orchards where the fruit growers think they have been spraying, with very little visible spray upon the leaves. These are the orchards where as one man said only yesterday, "Why half of my Gravensteins are already spotted."

Again, we could name a few orchards where about every leaf upon the tree bears evidence of thorough spraying. We hope later on with the owners permission to publish the names of these fruit growers, for without doubt those orchards will be a monument to show up surrounding carelessness or indifference. Right here we want to say to the man who is making a 40 gals. bbl. of spray go over a dozen large apple trees in full foliage, they must not blame Lime-Sulphur if they do not get good results.

Prof. Caesar of Guelph College, Ontario, says it takes from six to ten gals. to thoroughly spray a large tree at one spraying. How many orchardists in the Valley have applied one half of it? Yet the same Fruit Growers say, "Why I sprayed thoroughly," and in the end will only encourage some "doubting Thomas."

Our advice to those who have already made two or three sprayings is to continue, and those who have not if there are any such, to immediately get busy and cover the surface of their apples and leaves to prevent the clean ones from Spot and its spread over the ones already infested. According to the fruit crop reports recently at hand, apples will be worth something this year and every barrel of otherwise No. 1 apples packed as No. 3 will cost the owner from $2.00 to $3.00 per bbl.

In conclusion we wish to say that spotted apples this year will have to go either into the No. 3 bbl. or the cider mill. The good work the Co-Operative Companies are doing will not allow trash to ruin the reputation of honest packing.

Fruit growing is getting to be a science and those who do not believe in efficient and thorough spraying had better court some other livelihood.—Niagara Spray Co. of Nova Scotia, Limited, Kentville, June 25 1912.

Keep the Orchard Healthy.

So feed the orchard as to maintain a healthy tree growth and to supply needs for a bountiful yield of fruit. The quantity of plant food to be added will depend, of course, on the fertility of the soil. It is an excellent plan when the trees are in bearing, to apply broadcast each season, preferably during July or August, from ten to fifteen big loads of good stable manure per acre, if you can get it, or its equivalent in commercial fertilizers. Applied at the time suggested, it matters little whether the fertilizer is left on the surface or cultivated into the soil. Water from subsequent rains sinking into the soil will carry the plant food down to the tree roots.

Circumventing the Squash Bug.

Last season I tried the old way of trapping the squash bug, and it was an emphatic success. I laid down a shingle beside each hill and early in the morning turned them over and killed the bugs.

At the start I would find from three to 18 clinging to the underside of each shingle. The numbers grew less and less, till finally they seemed all gone, and the vines were the rankest and thrieftiest I ever had. On account of the depredations of the bugs it is almost impossible to raise Hubbard squashes in this vicinity. If 10 days vigilance at the start will head them off, it is time well spent. —E. P. Snyder, Huron Co. O.

Mr. R. J. Messenger, Ex-president of the N. S. F. G. A. was in town yesterday, soliciting special prizes for the Nova Scotia Horticultural Exhibition to be held in Bridgetown, next September. Mr. Messenger says the apple crop in Lawrencetown will not be a heavy one, besides that he fears a spotted crop if the fruit growers do not spray continuously, owing to the wet season. Although he has, himself sprayed four times he finds the black spot appearing upon the leaves of his fruit trees. His advice is to spray faithfully if clean apples are expected.—Kentville Orchardist.

Moisture is very essential to the development of vegetables at this season of the year. Where the garden soil is not quite as rich as it should be for vegetables it requires an enormous amount of moisture when the weather is warm and the dry evaporating winds sweep over the country. Those who can sprinkle are fortunate as under such conditions good vegetables can be produced during late summer when they are most needed.

The destruction of weeds is not nearly so important, usually, as late in the season as keeping a dust mulch on the soil. Save the soil moisture by cultivation.

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Orchard Spraying Experiments.

The Maine Agricultural Experiment Station has issued under the above title Bulletin No. 198, which is a second of a series giving the results of spraying with fungicides and insecticides of the apple. The work of 1911 is preceded by a condensed account of similar experiments of the season of 1910. The 1911 experiments are discussed under two heads: Those carried on at Highmoor Farm; and cooperative experiments in the orchards of three practical fruit growers in the town of Greene. The results in both places were practically alike.

It was shown that the season was very unfavorable for the development of the enemies of the apple and that in the absence of pests the comparative results regarding their control are not so striking as in the preceding year when both insects and fungi were abundant.

The calyx injury which was noted in 1910 on trees sprayed with lime-sulphur and lead arsenate is now considered to have had a more direct relation to the vigor of the trees than to the chemical action of the spray. The superiority of lime-sulphur over bordeaux mixture as a fungicide for susceptible varities such as Ben Davis has again been demonstrated when conditions were most favorable for using bordeaux. A large amount of bordeaux injury occurred, whereas no spray injury was done to leaves or fruit on the lime-sulphur plots.

Sunburn or sunscald of the fruit as the result of the unusual heat wave of last July is shown to have been entirely independent of spray injury and very largely due to insufficient protection of fruit by the foliage. No injury to fruit or foliage resulted from the use of the carbonic acid gas sprayer in making the applications. The results did not indicate any definite relation of fruit russeting to the strength of the lime-sulphur used. Nothing appeared in the experiment which pointed to the chemical composition of the lime-sulphur-lead arsenate combination as a factor related to russeting of fruit.

An appendix gives the latest formula for making the stock lime-sulphur concentrate, with the dilution table and directions for using the latter.

The Cost of Apples.

After a review of several hundred replies from apple growers in the state of Washington, the state agricultural college concluded that the cost of growing and placing a box of apples (one bushel) upon the market, using only the best method and highest standard of pack, is 53·1 cents. Eighty-four per cent. of these growers started orchards with one year old trees, planted 70 to an acre, at a distance varied from 16 to 33 feet. The cost of setting out the trees ranges from 10 to 12 cents for each tree planted. The cost of planting and caring for an acre of apple orchard for the first six years amounts to $69·35 under the conditions estimated for the Palouse district; $90 an acre is the average capital for bearing orchards.—The Evaporator.

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DAIRYING.

Cheese Prospects.

Having in view the export from Canada in the near future of the 1912 new cheese, your Commissioner has interviewed the trade of Lancashire on the prospects for next season, and for general information and suggestions.

The first week of May found cheese stocks very low—the lowest for many years—and the past and present week has helped to clear all stocks of old Canadian cheese, and in consequence of labour troubles in London, the market just now is very strong; New Zealand averaging 76s. to 78s. per cwt., and some choice cheese have touched 80s.

The importers interviewed here suggest, that they cannot take much interest in the Canadian new season's cheese unless prices come down a great deal, and point to reported extra large shipments from New Zealand as well as the fact that Cheshire cheese is coming forward very freely. However, when consideration is given to the fact that the general trade of this district is excellent, with better wages being paid to all sections of workers—who are the cheese consumers—there is no doubt that the coming season should be a 'bumper' one, and that Canadian cheese should command a better price than last year, especially if the quality will average up to the past season's standard; all dealers stating that the quality of Canadian cheese was never better than that of last year.

The size and weight of cheese is debated to a considerable extent, some claiming that there are many breakages due to the increasing size of Canadian cheese, which results in rough handling. However, there is a very divided opinion in regard to this question, as the larger retail dealers who cut up a large quantity of cheese, desire big sizes, as they make a better display on counter and in the window; while the retailer who handles a less quantity in a given time, prefers the smaller cheese, as it will not go dry before he cuts the whole of it up. It would seem, taking all points of view into consideration, that Canadian cheese would be more acceptable if they did not run over 80 lbs.

Another complaint made was, that from some districts the boxes seem to be made from as poor a quality of wood as it is possible to obtain, and in connection with this, there is no doubt that some very poor attempts at cooperage are shown in a large percentage of the cheese shipped over here.

The chief grievance as laid down by all cheese importers, is that Canadian cheese invariably arrives here weighing less than the amount stencilled on the box, which of course results in a loss to the trader on this side. It is a very rare exception that cheese arrives here full weight, and these exceptions are from Ingersoll, Belleville and Brockville districts alone.—W. J. Egan, Trade Commissioner, Manchester, England.

Healthy Cows.

It is of more vital importance that cattle of this land be healthy than any other stock. Milk is consumed raw, butter is raw, and a great per cent of the beef is consumed in practically a few (we say "rare" at the hotels) states. It behooves us then to be more concerned in the health of our cows in particular because they are more subject to disease and spread it more rapidly than the beef cattle.

As a rule the dairy cows are too closely housed. This would not be detrimental to health if proper attention were given to sanitary conditions in the barns. But we know that barns with proper ventilation and clean mangers and floors are few in number.

The cause of such a state of affairs is natural. For years farmers have known that the cow was a sure source of profit. So when a young couple get married and start to farm they naturally look to the cow as a sure income to help in time of greatest need. A little cow shed is built and soon it is overcrowded with the offspring of the cow. They build a larger shed, for they are not yet out of debt, and use the old shed for the calves. It may be years before a good barn can be built. In the meantime the poorly ventilated sheds have been overstocked and have received little sanitary care. The young farmer was too busy getting a start to fuss with such matters as cow comforts and sanitation.

Disease gets a foothold in the stuffy shed. The herd increases and so does tuberculosis. Losses occur in the herd, and now and then a hog wastes away. Little is thought of it and when the new barn is finally built it is at once polluted with disease from that same herd. Fortunate is the man whose family has not likewise been rent in twain by the great white plague.

How can we remedy this condition of affairs? Men must start poor and build cow sheds, and they must at times overcrowd these sheds.

The remedy is to put in a ventilating system in every shed or building where stock is housed. Fresh air and sunshine are death to disease germs. Stock can be crowded pretty close for a time when necessary if they are not denied fresh air and sunshine.

Do not wait for the law to compel you to dispose of your diseased stock. You can't afford to carry the risk. It is to your best financial interests to prevent disease. It is cheaper to build a fresh air shaft than to lose just one cow. It is cheaper to keep barns clean than to pay the tax of death.

Let in pure air—lots of it. Use white-wash—lots of it. Keep things clean externally, internally and eternally.—Western Farmer.

Choosing a Sire.

In selecting the sire for the herd, a great many breeders, particularly among the amateur breeders, make only one demand—that the sire be be purebred and registered. One should go farther than this and demand that the ancestors of the animal in question be animals of merit, large producers and be typical for the breed. A great many of the purebred bulls in use today as herd headers are no better than scrubs. For the best results we should demand that the female ancestors be large producers of milk and butter instead of being satisfied with knowing that the sire or dam or some other animal in the pedigree carried off the show ring prize at a certain fair. The dairyman is primarily interested in how much milk and butterfat he can obtain from his herd. This is the basis of income and profit. Very few milk producers or dairymen will ever lead their herd bull into the show ring. Then why should so much attention be paid to the show ring ancestry of the bull or of the bull himself?

The immediate ancestors of the herd bull are ones that should concern us most. It is more important that his dam and granddams be high producers than for him to be related to some great and wonderful cow that appears in his pedigree five or six generations back. Too much attention is paid to individual animals or families that may be represented or appear in the pedigree.

In selecting the herd bull there are two courses open to the breeder. The one is to select a young bull, and the other is to select an old bull that has been tried and proved to be a prepotent animal. The advantage in selecting a young bull for the herd is that it is cheaper and less risk is attended toward getting a mean and ugly bull as well as bringing any disease into the herd. In selecting a young bull one runs greater risk in getting one that will transmit the characteristics desired than in selecting an old bull that has been tried. The performance and records in the ancestry are about the only guide that can be used in this selection. When one selects an old bull that has been tried he has some certainty that this animal will raise the production of his herd. When this can be done it is probably the best method to use, but where one knows the value of a bull the price asked for him is oftentimes prohibitive.—Selected.

Age to Sell Cows.

What is the use of raising cattle that do not pay? Cattle were designed for two special purposes, milk and beef, and the present day farmer is getting some pretty good lessons on the utility features of the cow. It is found that some cows of practically all breeds pay from a milk standpoint of production, while a great many of all breeds do not pay. Can the farmer or cow owner afford to keep the kind of cow that does not give milk enough to put her on the paying side of the account? Some cows of the beef breed give all the milk and more than the calf can take when they are fresh. Is this a good quality in this cow or is it not?

On the other hand, there are a great many cows whose milk supply is not sufficient to raise a good, well fed calf. It is believed by many close observers that the nearer approach to masculinity in the cow the farther she recedes from the motherly qualities and fitness to fulfil the natural relationships of mother and offspring, the less powerful she is in transmitting her breed characteristics that tend towards improvement in the animal. The big milkers, the liberal milkers, in all breeds find favor with their owners and this quality in the cow has never been a cause of turning a prospective buyer away, while the lack of it is a never ending source of objection. Who ever heard of a cow that raised her calf too well? If there are such objectionable cows they are provided with two calves and the objection is cured.

The time is close at hand when the big milker, it matters not what breed she represents, is the cow that will be in demand. Not particularly because she is required to fulfil any dairy test or milk producing obligation that demands a butter fat record, but because she is expected to produce and raise from her own personal resources a big, fat, healthy calf, unaided.

The difference between a cow that will produce 450 pounds of butter in a year and one that produces 150 pounds is the proposition that the practical dairymen are finding out today. This is the test of value in the dairy cow, to determine whether she is paying expenses or not. There was a time when it did not make any difference, the farmer kept about so many cows at any rate, and there were many or few milked, just as the conditions, help, etc., seemed to favor. That time has passed and the emphasis is being more and more placed on the cost of things.

False Economy.

It seems exorbitant and unreasonable to many farmers to pay from $150 to $300 for a good bull and yet they do not seem to have the same sense of unreasonableness when they make other purchases. They will not hesitate to buy a good horse paying from $200 to $300, and yet such a horse can never be made to yield the profit on the investment that a good bull will. Moreover the work a horse does lasts, as a rule, but one season, while that of the bull is carried on for years to come.

There is a lack of sense of economic values in this attitude of mind that amounts to a serious drawback in the fortunes of many farmers. Not long since we were talking with a well-to-do farmer in a neighboring township. He was telling us of some of the short-sighted moves he had made, and said:

"Fifteen years ago I was offered 10 registered Holstein heifers and a first-class pure-bred bull for $2,000; I thought it was too much money to pay. I looked only at the money and not at what it would bring me; I ought to have borrowed the money, even at high interest, and bought the cattle, for if I had I would have made several thousand dollars by it."

A wise old farmer once said to us that he had never seen a farmer grow poorer by trying to improve his soil, or his cattle, or his buildings. And still in the face of this big truth how many farmers do we see who for years have hesitated about doing either of these good things because they thought it would "cost too much."

It pays to search for a few principles like the foregoing and stay by them just as a sea captain will stay by the compass when he is out of sight of land. Every farmer loses more in 10 years, by having poor soil, or by having unprofitable cows, or by having unsanitary stables, than what it would cost to have them made efficient.

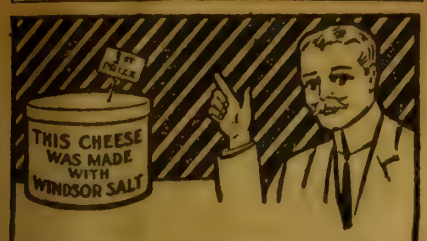
It is this hesitating, false sense of economy, that has kept thousands of farmers under the harrow all their lives.—Hoard's Dairyman.

Extra Cost of Producing Clean Milk.

G. M. Whitaker of the bureau of animal industry, has found that to increase the score of a dairy from 42 to approximately 70 points, there may be in 15-cow dairies an added expense of five cents per cow per day for labor, plus, in extreme cases, 5½ cents for a new or additional equipment; and if five cents more is added to remunerate the proprietor for his extra care and vigilance, there will be an extreme increase of 15½ cents per cow per day. The product of a cow ranges from 4,000 to 10,000 pounds of milk a year, or from 5 to 12 quarts a day. The added expense for labor would, therefore, he states, amount to about half a cent to one cent a quart, and in rare instances where great additional expense is required for repairs, new construction and new equipment this might raise the increase one to two cents a quart more. But this added expense of improved methods and equipment would no doubt be partly offset by increased production and increased eronomy of feed, so that the net extra expense of producing clean milk would probably be somewhat less than this. A reasonably clean milk is worth two cents more than common slovenly milk. The former is safer and therefore cheaper, at the increased price. Dirty milk ought not to be considered a merchantable article at any no matter how low.

Cream must be kept cool if good butter is to be made. A warm temperature means rapid development of lactic acid bacteria and often those organisms that produce undesirable flavors.

A Holstein cow died at Phillipsville, Ont., after undergoing milking tests four times a day for two weeks, in which a record was made. A cow is like a man in some respects. It can be worked overtime, but not for long without suffering. Nature exacts a penalty when it is abused.



NOTHING in cheese making is more important than salting the curd.

The flavor—even color—smoothness—keeping quality and market price—all depend on the way the curd is salted, and on the salt used.

WINDSOR CHEESE SALT

Makes Prize Cheese

It gives a smooth, rich flavor to the cheese—dissolves slowly—stays in the curd—and makes the cheese keep as good cheese should.

Windsor Cheese Salt is cheapest in the end because it goes further. 73C

Cow-Ease

Prevents Ticks.

KEEPS FLIES OFF

Cattle and Horses

and allows cows to feed in peace, making **More Milk** and **More Money** for you. A clean, harmless liquid preparation, applied with a sprayer. Keeps cows in good condition, and saves five times its cost in extra milk.

TRIAL OFFER

If your dealer cannot supply you, send us his name and $1.25, and we will deliver prepaid to your address a half-gallon can of COW-EASE and SPRAYER for applying. For West of Missouri River and for Canada, above Trial Offer, $1.50.

Satisfaction or Money Back.

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BOSTON, MASS.

Replace Your Out-of-doors Closet

WITH A TWEED SANITARY CLOSET and get rid of the thousand and one dangers and troubles of the old fashioned outhouse.

The "Tweed" Closet is easily installed indoors and requires no sewer, no plumbing and no flushing system.

"TWEED" CLOSET
Sanitary and Odorless

can be placed in the cellar or in any suitable room in the house.

The use of "Tweed" Chemical—a liquid disinfectant and deordorizer—keeps the closet absolutely odorless. For ventilation, the "Tweed" is connected by a pipe to a chimney hole or stove pipe.

The "Tweed" Closet was awarded a Diploma at Ottawa Exhibition 1911.

Send for illustrated price list, mailed on request.

STEEL TROUGH & MACHINE CO., LIMITED,
9 James St. TWEED, Ont.

The Loss of Butterfat in Whey.

In a recent issue of your valuable paper I noticed an article on "The Loss of Butterfat in the Whey," which calls to mind an incident that I witnessed a short time ago near Marion, Wis. In a cheese factory which was at the time receiving about 4,000 pounds of milk, representing the milk from about 50 cows, a whey separator was being tested out. The milk was made into American cheese and was being handled in every respect according to the established custom. The milk was normal in every way. After the whey was drawn it was run through the whey separator, which recovered from it 36 1-2 pounds of cream, testing 32 per cent. butterfat, which would make about 14 pounds of butter, representing the product of about 20 average cows. In other words, to allow this whey to go unskimmed would be equivalent to practically throwing away the butterfat produced by 20 cows.

The cream was remarkably smooth and seemed to be of excellent quality, different from normal cream only in that it seemed to be thinner. While there was a slight whey flavor noticeable, this was not pronounced enough to be called objectionable. The run I witnessed was the first one that had been made with this particular whey separator and it had not been properly adjusted. I understand the machine is designed to deliver a cream containing from 60 to 70 per cent. of butterfat, and in fact tests have been made with it in which the percentage of butterfat in the cream ran as high as 78 per cent.

This exceedingly rich whey cream contains so small an amount of whey that the addition of sufficient good, clean skim-milk starter to reduce the percentage of butterfat to 35 or 40 per cent. should make a cream that is equal to all intents and purposes to a good first-class creamery cream, and butter that is made from whey cream treated in this way will, without doubt, be equal to extra creamery butter and sell for such on the market.

The incident above referred to convinces me that the cheese factory patrons in the State of Wisconsin have lost millions of dollars on account of not skimming their whey.—Hoard's Dairyman.

Coarse or Fine Withers

The one conclusive test of the value of a dairy cow is that which comes through the scales and the fat test. But there are several points in connection with a dairy cow's conformation to which considerable importance may be attached, and which in many cases are about all that a buyer can depend upon. Suppose, for instance, that one in purchasing a heifer that has never had a calf and that will not be fresh for some four months yet, one cannot, in the very nature of things, enquire about what her milking performance has been, because she has never been in milk.

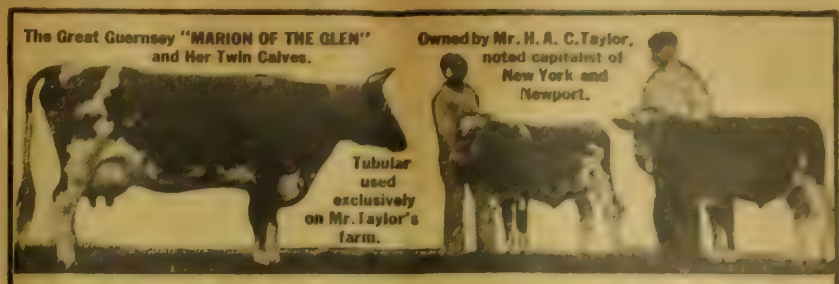
A few months ago a dairy professor at one of the largest experiment stations in the United States took the writer through the dairy barns and told him the records of a score or more of cows that had been tested for milk and butter fat production for several years.

"Is there any peculiarity of conformation, by which, more than any other, you can pick out the heavy producers?" we asked the professor.

"If I had to name the characteristic that seems the most constantly to accompany heavy milking and liberal butter production in this herd," he said, "I would name the sharp, fine wither."

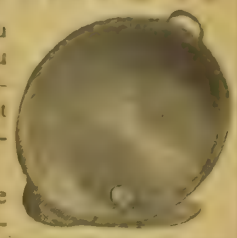
Then we took a look over the herd to see how it worked out. In every case we found that the top-notch cows had very sharp withers. One cow that seemed to possess fair dairy conformation in some respects but that did not give one-half as much as many of the others was very coarse in the withers. And the rule held pretty well all through the herd.

Look over your own cows and see how this rule applies to them.


The Great Guernsey "MARION OF THE GLEN" and Her Twin Calves.
Tubular used exclusively on Mr. Taylor's farm.
Owned by Mr. H. A. C. Taylor, noted capitalist of New York and Newport.

What You SEE You KNOW

That is why we show you these two pans. We want you to SEE and KNOW the difference between the World's Best Cream Separator and less modern machines.



The full pan contains the disks taken from one of the thousands of separators which have been replaced by Tubulars. They tire a woman and try her patience, they twist, wear loose, eventually give cream a metallic or disky flavor, and waste cream in the skimmed milk.

The other pan contains the only piece used inside the marvelously simple, wonderfully clean skimming, everlastingly durable

SHARPLES **Dairy Tubular Cream SEPARATOR**

What a difference! Take your choice, of course, but remember that mistakes are unpleasant and costly and must eventually be corrected. Why not ask those who have discarded other separators for Tubulars? Their advice is valuable; they have paid good money for experience—they know the difference.

Write for a full, free trial. Other separators taken in part payment for Tubulars. To get prompt attention, ask for Catalog 194

Sharples 31 Yrs

The Sharples Separator Co.
Toronto, Can. Winnipeg, Can.

Everybody's Favorite

These strong features make the WATERLOO BOY Beltless Pumping Outfit a universal favorite:

First--Simplicity, no belt to stretch or slip. In point of simplicity, strength and price there is nothing on the market that compares with this outfit.

Second---Strength. The strongest puller on the market.

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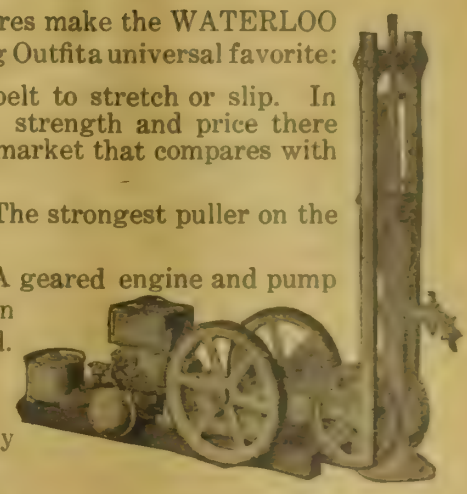

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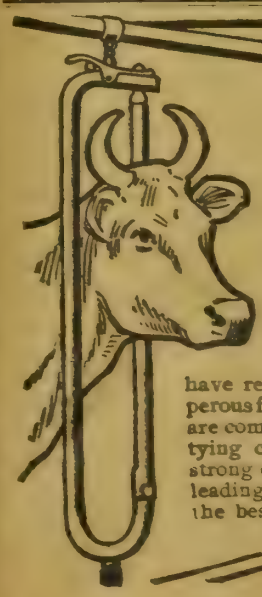
SUSSEX, N. B. CANADA.

Fit Up Your Barn With These Old Reliable Stanchions.



THE farmer of today knows that chains, halters and wooden stalls in the cow barns are expensive, unhealthy, often dangerous makeshifts.

O.K. Canadian U-Bar Steel Stanchions

have replaced them in the modern barns of prosperous farmers. O.K. Canadian Swinging Stanchions are comfortable and easy for cattle—save time in tying cattle—no trouble to latch and unlatch—strong enough to stand rough usage. Used by the leading farmers and stockmen for years—because the best and most satisfactory stanchion on the market.

5 sizes—write for new catalogue.

Canadian Potato Machinery Co., Limited, - Galt, Ont.

LIVE STOCK.

Beefmaking and Dairying.

There can be neither economic nor moral opposition on the part of dairymen to the expansion and maintenance of the beef cattle industry. For reasons equally sound, breeders and feeders of beef cattle cannot have any valid objections to the development of dairying up to the hilt of its possibilities. Productive industries that nature and the requirements of mankind have combined for interdependent usefulness are not mutually antagonistic.

Dairying has a large and exceedingly important niche to fill in the economy of modern agriculture; beefmaking likewise has its broad and special place. Neither of these industries are at war with the other; both are indispensable as cteative arts, yielding human food that classifies as an economic necessity. In most cases the peculiarities of individual temperaments preclude the breeding of both beef and dairy cattle on the same farm, or even in the same community, which because of favorable physical conditions or temperament of its farmers may have adopted one to the practical exclusion of the other. Some men are adapted to the exacting details inseparable from dairying; they like the work and delight in mastering it. Others have an innate antipathy to dairying, but look upon beef-making, from the breeding to the feeding out of the stock, as an art in which they can express their abilities and find satisfaction.

After all, in this young country men who own land can and eventually will do largely as they please. Necessity does not commonly spur or whip the land-owner. He may be gently swerved by its threats, but he is in a position to live his life; follow his fancies and respect his personal demands for this or that kind of activity, unhampered by economic thraldom. In such circumstances he can practise methods or pursue systems that he knows to be less profitable than others which he could easily employ; but he has himself to please, and that means more to him than making greater profits. While not indifferent to the financial side of his operations, there are other facors involved which to him have a deep personal significance.

It is in the realm of the temperament that one is to seek the causes of which the different systems of farming are the effects. Hundreds of farmers are destined by unalterable traits to breed or to feed beef cattle; as many others are qualified in the same way for handling the dairy cow. Enthusiastic champions of these types of production attempt the impossible when they set about to convert a neighborhood of farmers to one or the other. Imagine the W. S. Van Nattas, the W. A. Drydens, the W. A. Harrises and the B. R. Pierces personally managing a business of which the milkcan is the symbol! Fancy the H. B. Gurlers, the W. D. Hoards, the E. A. Powells and others of their unshakable faith in the dairy cow ransacking the Chicago stockyards for carloads of feeder steers!

All the precepts and examples that dairymen can summon up in an attempt to convert beefmakers to their way of thinking are futile; all appeal from advocates of the beef production to bring dairymen into their fold is unavailing. But we need enthusiasts. We shall never have enough dairymen who are absolutely sure that theirs is the best business in the world; we shall never be oversupplied with beefmakers who are convinced that in the long run theirs is the soundest system of agriculture open to cornbelt farmers. America is a land of great spaces, with ample room for all the pure-bred stock that can be raised, whether it be for beef, milk, power or wool.

What should be avoided is a narrow disinterested attitude on the part of beefmakers toward dairying and on the part of dairymen toward beefmaking. Neither side has any warrant for a feeling of competitive jealousy. Neither threatens or can supplant the other. Bring the case down to actual life, and we find dairymen enjoying steaks and chops no less than beefmakers relish prime dairy products.

Beefmaking and dairying are twins that can and should attain magnificent stature without the slightest fraternal friction.—Breeders Gazette.

Pig-Eating Sows.

F. R. writes:—"Please give me a cure for the habit that some sows have of eating their newly-born pigs. One man says that it is caused by feeding fresh meat before farrowing time; that the sow gets in a frenzy during the birth of her pigs. Another says that if sows are properly fed they will not eat their pigs. Some sows are said to eat their pigs from habit, one having eaten four litters in succession. It is discouraging for the farmer to have sows kill their young when the price of hogs is as high as at present."

Improper feeding and handling may get the sow into an unhealthy condition at farrowing time so that she is feverish, and consequently restless, uneasy and easily disturbed. Under such conditions she may kill a pig and having killed may also eat it. Again some sows have been fed an insufficient amount of protein, so that they have a great craving for this material, and since the body of a young pig is very rich in protein the little fellow may be killed and eaten to supply this nutrient. The same may also be said in regard to mineral matter. It is even possible that sows will kill and eat pigs from force of habit. Having done so once for reasons outlined, it may become a habit with them, so that it is continued. Mature sows do not need much protein in their ration at any time, but they should have a sufficiency of it and sufficient mineral matter together with water and the other necessary attentions to put them in good condition, and then with good care and treatment they ought not to kill and eat pigs.

Community Breeding.

A writer in an exchange offers many valuable suggestions for community breeding. In many parts of Ontario this practice maintains, notably in Hastings county, and round about Osgoode and Perth.

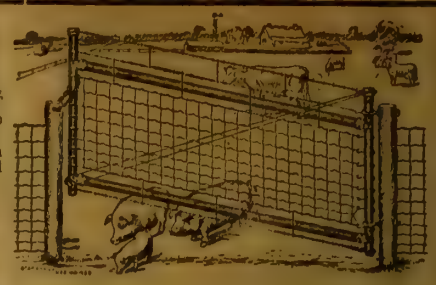
WHY?

"1—Community breeding should be established to elevate the standard of (a) interest—a breeder's interest is always increased when his neighbors and townsmen are engaged with him in the same line of work, thereby affording an opportunity for measuring progress; (b) improved methods, increased interest, and easy means of making comparison is invariably followed by improved methods; (c) uniformity of type. Frequent conferences with other men engaged in raising the same breed of stock will lead farmers gradually to think and to act along the same lines. Appreciation of what others are doing, of stock they are breeding, will lead to exchange of stock; and consequently to a more general breeding along the same lines, and these conditions will bring about greater uniformity of type.

"2—Community breeding will establish a reputation for increased interest, improved methods, and uniformity of type, will produce better stock,

Farm Gates

HAVE GATES THAT HANG TRUE, OPEN AND SHUT EASILY, LIFT OVER SNOW IN WINTER; that keep back breachy stock; that will not burn, or, blow down, sag, bend or break; that last a lifetime; that are guaranteed against all defects. In short have



Clay Steel Farm Gates

on your farm. Made of high carbon steel tubing of large diameter and heavy wire fabric. May cost more but worth more.

Clay Gates are sent for 60 days free trial that you may prove them before buying. 20,000 sold last year on these terms. Send to-day for illustrated price list

Clay Gates are made to many styles and sizes—a gate for every purpose. They can be raised to let small stock through, yet keep back horses and cattle.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace, free of cost any parts or the entire gate giving out for such reasons.

H. RALPH STEELE
Manager.

Canadian Gate Co. Ltd., 54 Morris St., Guelph, Ont.

Given Away Free

A First Class Kit of Barbers Tools, Consisting of

Two first class razors	One First class Strop
Two white linen coats	One Barbers mug
One Imported German Hone	One Hair Brush
One Fine ground shears	One Lather Brush
One No. 1 Clipper	One duster

THE ENTIRE SET GIVEN AWAY FREE TO EVERY MAN or WOMAN Learning the Barber Trade at

The PATTERSON SYSTEM OF COLLEGES

41 Craig Street, East - - Montreal.
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Our New Perfection Broiler

Is pleasing many women. It enables the housewife to broil as well on the New Perfection Stove as over a coal fire.

It uses all the heat.
It cooks evenly.
It broils both sides at once.
It doesn't smoke.

And of course you are familiar with the

New Perfection
WICK BLUE FLAME
Oil Cook-stove

It is such a convenience all the year round. It will bake, broil, roast and toast just as well as a regular coal range.

Ask to see the New Perfection Stove at your dealers. It is handsomely finished in nickel, with cabinet top, drop shelves, towel racks, etc. It has long, enameled, turquoise-blue chimneys. Made with 1, 2 or 3 burners. Free Cook-Book with every stove. Cook-Book also given to anyone sending 5 cents to cover mailing cost.

THE IMPERIAL OIL COMPANY, Limited

SUNSHINE FURNACE

"The Understudy of the Sun."

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McClary's

MAXWELL'S HIGH SPEED CHAMPION

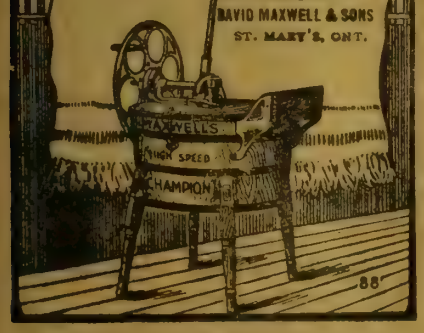
is in a class by itself—the easiest running, the most substantially built, the most satisfactory washer, ever invented.

Only washer worked with crank handle at side as well as top lever—and the only one where the whole top opens up.

Ask your dealer to show you the "Champion" Washer.

"Favorite" Churn is the world's best churn. Write for catalogue.

DAVID MAXWELL & SONS
ST. MARY'S, ONT.



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4-6 h.p. Combination, $145 Complete,
12 Sizes. Free Catalogue.

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It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

enhance values, increase numbers, establish a reputation and attract prospective purchasers.

VALUE TO THE INDIVIDUAL.

"1—Improved stock are close at hand from which to select.

"2—A great stimulus is caused by the enthusiasm of others. A man's ambition to excel is aroused and he is more likely to set out on a comprehensive plan of stock improvement.

"3—Opportunities for co-operation in the buying, selling, and exchanging of stock are enlarged.

"4—Value of stock is increased.

VALUE TO THE COMMUNITY.

"1—Reputation of a community as a distributing centre is established.

"2—Opportunities for profitable sale of live stock are multiplied and the community at once gains a valuable asset.

HOW ESTABLISHED. ...

"Several plans, separate and distinct in their organization, have been put in successful operation:

"1—The first plan we will outline includes the organization of an association, the co-operative ownership and use of pure-bred bulls, and financial assistance from the government.

"2—The second plan involves the organization of an association and incorporation of the same; its division into groups based upon the number of cows owned by the members; the purchase of one pure-bred bull for each group, and the exchange of bulls at the close of each two-year period from one group in the association to another group in the same association.

"3—In the third plan an association is formed for the purpose of promoting a particular breed of stock, and each member pledges himself to use only a pure-bred bull for the particular breed adopted by the association.

"This plan admits of the ownership of pure-bred males, either individually or co-operatively, and is the general plan thus far adopted by the associations already organized in Maine, of which there are six. Plans are now being formulated to stimulate the interest in associated work along these lines to increase the number and to organize more definitely the constructive work of our associations.

Can Prevent Foot and Mouth Disease.

Berlin, June 1.—A discovery of the first importance to the Canadian and American cattle raising industry is reported by Professor Wilhelm Grugel, dean of the Hygenic institute and the University of Rostock.

Professor Grugel announces that he has not only found the bacillus which caused foot-and-mouth disease, but has also found serum immunizing cattle against the malady. The serum is not curative, but preventive, and can, therefore be administered only to healthy animals. Experiments with a large number of cattle, it is stated, proved unqualifiedly successful.

Professor Grugel says the only feature requiring further investigation is the determination of the strength of the serum and the length of time the immunization remains effective. He is continuing his experiments along these lines.

It is stated that Professor Grugel would have been able to announce his discovery several months ago, but for the bureaucratic opposition he encountered on the part of the Prussian department of agriculture.

The serum is not yet available for general purposes, but it will soon be obtainable. Professor Grugel says it can be produced so cheaply as to enable its sale at the rate of 75 cents per animal treated.

BEE-KEEPERS' SUPPLIES

We are Headquarters in the Maritime Provinces for the most modern appliances for Bee-keepers.

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Write us about our co-operative scheme.

We can save you just half of the money you pay for Pure Parchment.

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For New Vitality Send Me The FREE COUPON

There is to-day no excuse for any man remaining weak. The vital, manly man is admired by all men as well as all women; there is an influence about him no one can resist; he knows no fear; he knows no weakness; he knows no result of debility. It is this same VITALITY which carries our young soldiers to war without thought of death. Vitality, reader, is what you MUST have if you would enjoy a life of health, strength and manly vigor. I can give you this same life and vitality; if I can do for you what I am doing for thousands of others I can put the vigor of youth into your blood and nerves; I can make you feel young again and keep you feeling young; I can drive away all dibility, weakness and despondency. You will laugh at trouble, you will tackle obstacles with the vim to win, just as all other hearty vital men may do. I don't ask you to use drugs. I ask no change in your present mode of living; just cease all dissipation and then use my HEALTH BELT. All else will come. My Health Belt with suspensory attachment is the greatest nature cure and VITALITY supply that the world has ever known or probably ever will know. Nothing is taken for granted: you feel better immediately, at once, from the first time used. Worn all night, while you sleep, it pours a great stream of Vitality and energy into your weakened system: it is a wonder-working giant of power; made as I now make it, I am getting results of which no man ever dreamed. Just think, over ten thousand men applied to me during the month of February. I am now sending great shipments of my Health Belt to every part of the civilized world. There is a reason, I am curing; I am giving men back their lost strength. It makes you feel ambitious, full of vim; you awaken mornings sparkling with bright, clear-eyed, clear-brained health; the weakness has all disappeared from your back; you are "just feeling fine." Special attachments to my Health Belt cure rheumatism, kidney, liver and stomach trouble.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man, young or old, who would be strong in manly vigor. It is a word of hope, a carefully written interesting booklet, which should be in everyone's possession. Therefore, send to-day. If in or near the city, call at my office

DR. M. F. SANDEN CO. 140 Yonge St., TORONTO, ONT.

Dear Sirs:—Please forward me your Book, as advertised, free.

NAME

ADDRESS

THE HORSE.

Feeding Work Horses.

The problem of feeding work horses is one involving the economical production of energy and maintenance of health. It is of considerable importance to know how much hay and how much grain a farm work horse at hard labor should receive in order that he may work with the greatest efficiency and economy. With high priced grains it is very desirable to know the relative value of different roughages in order that economy may be practised in making up a ration for work horses. In order to determine some of these points a number of experiments have been conducted at the Illinois Experimental station in feeding horses used for teaming and field work.

The object of those experiments was to secure data for comparison of rations for feeding farm work horses with respect to the following points: First, maintenance of weight; second, their health, spirit and ability to work; third, economy of the ration.

In the spring of 1908 a test was planned involving seven teams, whereby one horse in each team was to receive timothy hay the other clover hay. With but a few exceptions each horse in the team worked an equal number of hours with his mate and at the same kind of labor.

After a text extending over 336 days the following conclusions were reached:

Where a mixed bran ration of oats, corn, oilmeal and bran is fed, clover hay is equally as efficient if not a little superior to timothy for horses at hard work.

There was no observable difference in the effect of clover and timothy upon the spirit of the horses or their ability to endure hot weather. Those receiving clover had a glossier coat of hair and their bowels were looser, but not too loose to endure hard work.

When clover is used as horse feed the quality should be good and the quantity fed limited.

A slight saving in grain may be made by mingling it with chaffed hay, but saving in this test did not appear to be enough to justify the expense.

There may be a benefit not shown in these tests in preserving the horse's health by mingling the grain with the chaffed hay. The results of this test are not conclusive on this point.

Where the grain was ground and mingled with chaffed clover and with chaffed alfalfa, the latter proved to be a little more efficient in preventing loss in weight than where timothy hay was fed. In this test there was a saving of about 22 per cent, of grain.

Though too short to be conclusive, these facts indicate that mature horses at hard work can be maintained quite satisfactorily, for a short time at least, on corn fed in conjunction with alfalfa hay and at a saving in cost.

A saving of about 10 per cent' may be made by grinding the grain for farm work horses when at hard labor. It requires twice as long time for horses to consume ground grain fed dry as when the same quantity is fed thoroughly dampened.

Farm work horses at hard labor should receive from 1 1-5 to 1 1-3 pounds of grain and from 1 to 1 1-4 pounds of hay per 100 pounds of live weight per day, in order that their weight may be maintained.

Satisfactory results have been secured by feeding the grain in three equal feeds and giving one half the hay at night, the other half being divided between the morning and noon feeds.

The grain fed should be redneed one half on idle days, until four days have elapsed, or until they are again put to work, when it may be again increased if desirable. By following this method attacks of azoturia were prevented.

The results of the experiment indicate that the general impression is correct that horses may very properly be given a more bulky ration when idle or doing light work than when at heavy work. It is believed that the practice of permitting work horses to gorge themselves with hay is all too common.

Care of the Horse.

See that your horse has a bed.

Watch your horse's teeth, and if he has any too long, saw them off.

Water your horse before feeding him.

Feed a draught horse 15 pounds of hay a day or less. The majority of people feed too much hay.

Don't let your horse have much water when he is over-heated.

Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

Minard's Liniment Co., Limited.

Dear Sirs,—This fall I got thrown on a fence and hurt my chest very badly, so I could not work and it hurt me to breathe. I tried all kinds of Liniments and they did me no good.

One bottle of MINARD'S LINIMMENT, warmed on flannels and applied on my breast, cured me completely.

C. H. COSSABOOH.

Rossway, Digby Co., N. S.

A GREAT SCANDAL

Big Efforts to Hush the Matter Up-- The Truth Out At Last. . . .

From exhaustive enquiries made during the last few months we find there have been a number of patients kept under conditions which to say the least of it, is a great scandal.

We trust our readers will bear with us for a moment. The facts of the matter are these, there have been some thousands of cases where horses have been suffering from distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements, of all kinds, and in some cases no attempt has been made to relieve their sufferings, their owners either being indifferent, or where they have thought at all about their animals, have had recourse to cheap so-called remedies, of which there are unfortunately a few on the market, but which, while so may give a little relief temporarily, cannot from the nature of their ingredients give permanent relief or effect a cure.

It is high time in our opinion that something should be done to bring this state of things to an end, and with this in view we are about to take drastic action, to bring before every owner of horses that wonderful remedy known to all as "Dr. J. Woodbury's Horse Liniment."

This remedy has been used for years throughout the Dominion during which time it has been used in hundreds and hundreds of cases, comprising distemper, coughs, colds, kidney troubles, contracted hoof, swellings, splints and enlargements of all kinds, and in no case to our knowledge, has "Dr. J. Woodbury's Liniment" failed to first relieve, and then to cure the above mentioned complaints.

Every owner of horses should, if they have not already got a bottle of this Liniment in their stable, immediately procure one. It is the only guaranteed remedy we know of, and it is a cheap form of insurance, and it will be found, that, if used immediately any symptoms of any of the above complaints appear, to give immediate relief, and probably save tremendous expense, probably the life of the horse as well.

Dr. J. Woodbury's Horse Liniment is sold by Stores and Chemists throughout Canada, but should your Store-keeper be out of stock he will procure it for you, and if you should find any trouble in getting a bottle, don't delay for an instant in mailing 25 cents and a bottle will be immediately forwarded you.

Sole Owners and Manufacturers:

FRASIER, THORNTON & CO., LIMITED

COOKSHIRE, Quebec, Canada.

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and 49

Cleanse the System

"Canada's Biggest Piano Value"

Style 70—Colonial

Sherlock-Manning 20th Century Piano

Examine the Sherlock-Manning 20th Century Piano. Listen to its exquisite singing tone. Ask about its many quality features---Otto Higel Double Repeating Action; Poehlmann Wire (the best **imported** piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.

Then, when you've found out all there is to know about the **Sherlock-Manning 20th Century piano** when you've been **convinced** that this instrument represents the **best** piano value in the Dominion—then ask us the price. You'll find it much less than you expected.

But there are sound reasons to account for the lower price as for the greater excellence of these splendid instruments.

Write us to-day for full particulars and handsome art catalogue—and we'll tell you how **you can save $100** on the purchase of as fine a piano as can be made at any price.

Sherlock-Manning Piano & Organ Co.

LONDON - - CANADA

(No Street Address Necessary)

27

POULTRY.

Eggs for Profit.

It has long since been decided that the best and quickest profit from the utility flock is eggs. Therefore, great care should be used in selecting the breed you wish to handle,

Select a breed that lays well in winter. It is not always the hen that lays the most eggs in the year, that lays the greatest number of eggs in the winter.

The best winter layers are the breeds that have heavy fluff, because it keeps them warm aud comfortable in cold weather, and it is the comfortable bird that lays best.

After deciding on the breed you should get the best you can afford to buy: for the standard bred fowls eat no more than the cull. Then a pretty, even-colored flock of fowls always creates some enthusiam and you stand a very good chance of selling some eggs for hatching.

An unfertile egg will keep fresh indefinitely and by letting your customers know that you sell strictly fresh eggs or guarantee them to be fresh, you can usually get a price a little higher than the local market.

By not allowihg any cock bird with your utility flock you will get unfertile eggs.

A sick hen will not lay, so the health of the flock should be guarded with care. Keep all coops, houses and runs well cleaned.

Study the different diseases common to poultry. After you have learned to know the disease when you see it, you can soon get a treatment for each ailmen .

It makes no difference how much ground you use for your flock, it should be fenced chicken-proof, for several reasons: first, you get all the results; second, you do not lose as many fowls; third, they are not disturbed as often—the hen that is always being shooed out of the garden or flower bed doesn't lay well.

Make them a home and let them have it all to themselves. Decide on the proper house and build it for them.

Study the feed question, learn what food produces bone, feathers and eggs and feed accordingly. Raise and care for poultry scientifically.

If you intend to raise poultry for profit, study he chicken business.

Egg Eating Hens.

A short time ago nearly all the poultry magazines had questions asking how to cure egg eaters. Here is a remedy that cures. With a sharp knife pare both the upper and under part of the beak until it is down to the "quick," don't make it bleed and pare only the front end 1-4 inch back. This makes the beak tender and when she pecks at an egg shell, it hurts. Put a few china eggs in the nest for her to try it on. The beak will quickly grow out again. This has never failed to cure egg eating and the egg output is interfered with for only a day or two.

Deep Nests.

Deep nests are to be avoided, a heavy hen jumping down into a nest with several eggs in it is quite liable to break one and immediately finds the most delicious thing she has ever tasted.

International Poultry Food

Prevents Cholera and Saves the Little Chicks

A little chick is just like a little baby—its health depends on its food. Improper feeding opens the way to disease. Chicken Cholera, Roup, Apoplexy, can be prevented and cured by feeding INTERNATIONAL POULTRY FOOD.

My chickens had Cholera until some of their combs were turning black. After using a few feeds of "International Poultry Food," I never lost another fowl, and Cholera has left my premises.—J. P. Bannerman.

Give all your chickens a daily feed of "International." It keeps them well—prevents sickness—makes hens lay all the year round—keeps the cocks vigorous—and insures raising the little chicks. If you want to make money out of your fowls, feed "International Poultry Food."

25c., 50c. and $1.00 a box. At dealers everywhere. Write for free copy of our $3,000.00 Stock Book, the greatest book ever written for farmers.

INTERNATIONAL STOCK FOOD COMPANY

Limited

TORONTO

10

Rid Your Cattle of the Fly Pest

With the warm summer days come the yearly torture of domestic animals by flies and biting insects—prevent this useless suffering by using

COW COMFORT

an inoffensive yet powerful liquid preparation that will rid your animals of the flies that swarm about them; destroys lice, ticks, fleas; cures skin diseases, scabs, tetters etc.; cleans, disinfects and removes offensive odors.

You know that animals cannot be healthy when devoured by insects—you know that quickly hogs decline in weight when they are troubled with vermin—by preventing suffering to your cattle you not only perform an act of humanitarism, but assure perfect health to your animals and profit by it in the end.

Sold in gallon cans at $2.00 each, but as the contents of a can is to be diluted in four gallons of water, it makes the price really 40cts a gallon.

Descriptive circular sent free upon request

SPECIAL "SAPHO" SPRAYER $0.50

AGENTS WANTED EVERYWHERE

The SAPHO MANUFACTURING CO. LIMITED

586 Henri Julien Ave. (Formerly Sanguinet St.) **MONTREAL**

Covers Canada From Coast To Coast

Brandram-Henderson, Limited, "English" Paint is 70% Pure White Lead—30% Pure White Zinc—mixed ready for use, with Pure Linseed Oil, Pure Turpentine and Dryer, and nothing else.

There is a B.-H. "English" Paint for every color you **wish to paint.** Ask for a sample card. 86

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The Advertisers in The Maritime Farmer are worthy your confidence.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

A Wasted Day.

A wasted day! no song of praise
Wells up from depths of grateful heart,
Yet others long to hear our lays,
The souls that dwell in gloom apart.

A wasted day! no kindly deed,
No cup of water, cool and sweet,
We bear to other souls in need,
Nor lead some pilgrim's straying feet.

A wasted day! no victory won,
The sword lies idle in its sheath.
If deeds of valor be undone,
How can we wear the conqueror's wreath?

A wasted day! Forbid it, Lord!
Glad service would we render Thee,
To mourners speak a cheering word.
Bless Thou the deed, though small it be.

Time is too short for wasted days,
Then let us leave no task undone,
Nor fail to lift to Thee our praise,
For by Thy help the goal is won.—
C. Louise Bell, in "Christian Work."

Shifty Shift.

It was New Year's Eve. Helmstaedter, the baker man, stepped out toward the curb; and turned and gazed with undisguised satisfaction at the sign which graced his window. It was modest in its way, done in an artistic, irregular, uphill fashion, and bordered with a neat edge of canton flannel, red as flame, stitched on. This is what it said:

! PRIZE FOR NEW YEAR.

In all of these beautiful loaves of bread, caraway seeds. In one of them, a silver dollar.

Helmstaedter nodded with approval. "Every year for fifteen years," he said to a customer who had just moved into the neighborhood, "every year for fifteen years have I done it. Every year somebody gets the silver dollar. And such a dollar, fresh from the subtreasury, and just as good as any dollar on the market. Better, mebbe. Yes, sir; fifteen years and fifteen dollars."

The customer handed out a nickel. "Gimme a loaf," he remarked, "and if you don't mind, I'd just as soon have the one with the dollar in her. I ain't particular; anything is good enough for me." He snickered at this sally, and poked the baker in the ribs. The smiling baker wrapped up a loaf and shook his head. "Ah", he said, "you make fun. You don't get no dollar. I bet you don't." The buyer did not. He took home the loaf and commanded his family to eat it up at once, in order to bring forth to light that dollar if perchance it might be inside. But the dollar was not there.

Now Helmstaedter, the baker man, from the standpoint of his neighbors, was extremely generous. He was a popular man, was Helmstaedter. Much more popular, for instance, than Tortoni, the banker, the usurer, the vulture, whose dingy, little counting house was just round the corner, and who held chattel mortages on half the neighborhood. Helmstaedter, he put bread into your mouth; Tortoni, he took bread out of your mouth—that was the way. Even on this day he had told pretty Mollie Middleditch that he must have $2.95 she owed him, or out her things must go tomorrow. And tomorrow was New Year's Day. Molly was the pride of the neighborhood, a pretty girl, who lived all alone, and she worked hard all day. She had buried her father with Tortoni's money, and her payments came too slow for Tortoni, the banker. But then Tortoni was pushing everybody at the end of the year; he wanted to count his cash after the first, and pat himself on the back for having made so much.

And when Tortoni locked up his safe at 6 o'clock and went home on the last day of the year he felt at peace with all the world, for of all the days in the year this day had been the biggest.

"Good year, John," said Tortoni to himself, after the manner of his countrymen. But Tortoni was not the only man who was well aware of his immediate prosperity. The heart of at least one other man was gladdened. This man was a young gentleman of the name of Shifty Shift. That was his real name—he had others.

Shifty Shift's hours began when Tortoni's hours were over; when Tortoni locked up, Shifty Shift opened up. And he did it in a very simple manner. For he had a key to the boarding house of John Tortoni; a key which had been made for Shifty Shift and for no one else. And after Tortoni had gone, Shifty, while the crowd passed and repassed in the evening, inserted his key in the lock of the outer door, and entered. It is simple enough when you know how. Once inside he knew well what to do and how to do it.

Half an hour later he was through, with the exception of stepping outside. Now this was a more ticklish proceeding than stepping in. For when he stepped in he could see who was outside; but when he was about to step out he was at a disadvantage. For all he knew a cordon of police might be at the next corner. However, he pulled himself together and took a deep breath. As he closed the door behind him he heard a shout.

"Hi, there!" exclaimed a stentorian voice. Shifty Shift took one look, and then ran. So did the owner of the voice.

It was a famous race. Shifty held the lead. But he and his pursuer had to contend with the crowded streets. And Shifty had to contend with the possibilities of being cut off in front, as well as being overtaken in the rear. At last he found himself confronted by two coppers on ahead, while three assailed his rear; and then he did what only Shifty Shift could do—he disappeared completely, mysteriously, uncompromisingly. They looked high and low for him, but he could not be found.

Helmstaedter, the baker man, had not yet put up his sign when all this occurred. Helmstaedter's dollar sale did not begin until 6 o'clock on New Year's Eve. Down below the bread was waiting for the psychological moment to arrive when it was ready for the oven. In the meantime the bakery force had adjourned next door to the saloon to wet its whistle against the hot and heavy baking which was imminent. Helmstaedter was puttering over his beautiful sign, when suddenly a man dashed up to his shop and almost threw himself down the basement stairs. This man had been telling himself that he was a goner; that it wouldn't do to be caught with the goods on, and had been making divers other remarks to himself which indicated that he was hard pressed. He dashed precipitately down Helmstaedter's steps. He saw instantly that he had made a mistake. There was no way out, apparently.

He heard the sound of footsteps descending to the room in which he stood. He looked about. There was no hiding place. He was surrounded on all sides by huge pans of bread. He thrust his hand into a pocket and pulled it out.

He dashed the contents of his hand across the room, and dived for another handful. Then he paused, for the man upon the steps was not a policeman. He was Helmstaedter, the baker man.

"What are you doing here?" exclaimed Helmstaedter, suspiciously.

Shifty Shift, for it was he, was relieved. "I was looking," he explained confidently to the baker, "for a man of the name of Mickey Sullivan—blind in one eye. He used to work down this cellar."

"You got in the wrong place," said Helmstaedter, "there ain't no Mickey Sullivan—not here—never was."

"Gee," said Shifty, "I got on the wrong street. Mickey works right back of here. I'm a guy f'r fair."

Casting a remorseful glance over to one side, he slowly and with becoming humility ascended the stone steps to the street. He looked up and down for a policeman. He saw none.

"Much obliged to you," he said to the baker man, as he trotted around the corner to find the imaginary Sullivan.

Molly Middleditch was sitting in her room, making over, for the fifth time, a dress which had worn out months ago, when she heard a knock on the door. She leaped to her feet, ran and opened it.

"Jimmy," she exclaimed, "Jimmy Burke." Then she stepped back a foot or two. "Jimmy," she exclaimed. "How tired you look. And how cold." Jimmy slid over to the sofa and half reclined upon it.

"Tired," he answered. "Cold! Well I guess yes. What do you think? I walked fourteen miles this day if I walked a step, and not a job; not a job anywheres. And, by George, Molly I'm up against it and no mistake. Any news?"

Molly Middleditch nodded her pretty head. "What do you think, Jimmy," she said, "Tortoni wants his $2.95, and says he'll take every stick I've got tomorrow."

Jimmy Burke gave vent to a long, low, discouraged whistle. "Gee," he exclaimed, "here is you and me, encaitched now, goin' on four year, and you with your old father knocked clean off his pins, and me without a cent and without a job, and no chance to get one. Well, what d'ye think of it, Molly girl?"

Molly smiled. "It might be worse, Jimmy," she said. "What if you didn't have me and I didn't have you?"

Jimmy Burke brightened up. "I 'spose it'll all come right some day. I wonder now if it'll ever be that you and me can get together enough of the stuff so that we can walk down to th' alderman's and get gived away in marriage, an' set up housekeepin' and have enough to eat. "Gee," said Jimmy Burke "but that reminds me. If I ain't hungry. Fourteen miles on an empty stummick ain't much in my line."

"Oh, Jimmy, Jimmy," wailed the girl, "didn't you get nothin' to eat." She fumbled about in a small purse.

"Come on out, Jimmy," she said, "and I'll blow you." Jimmy when he was sufficiently warm and sufficiently rested, accompanied her. She led him to the establishment of Helmstaedter, the baker man.

"Could you eat a loaf of bread, Jimmy?" asked the girl.

"I could eat two of 'em," said Jimmy, voraciously. The girl smiled.

"I'll lend you a nickel," she said, "and I'll buy a loaf and you buy a loaf, and we'll see who gets the dollar; and you can eat the bread."

Jimmy felt better. He took the proffered nickel. "Now no humbug Helmstaedter," he remarked, "here's Miss Middleditch, my lady friend, and me, and we're after that dollar loaf. We're goin' to buy two loaves and you'd better give me the dollar one, for I owe her a nickel, and than I can pay it back. Say, sport, can we pick out our own loaves?"

"If you have clean hands," said Helmstaedter, "you can pick out any one you please. If you have the other kind, you can pick out only one, and that one must be yours."

"Gee," said Jimmy Burke, looking reproachfully at his hands, "it's up to you, Molly. Here's wishin' that we get the dollar."

Molly picked out one. "Here's mine," she said. Then she picked out another. "And here's yours, Jimmy," she added. Jimmy's mouth watered, for he knew, even though the dollar was absent, he would have bread and caraway seeds. And the baker made good bread.

"If you get that there dollar now," said Jimmy, "we'll go to the show tomorrow night. That is, if I get it. I'll stay around all day and I'll show Tortoni and his men out if they turn up. And in the evening we'll have some fun. Might just as well. It's New Year's."

They reached the girl's room once more. Jimmy surreptitiously took a large bite out of his loaf. He could not wait. It tasted good.

THE BLESSING OF MOTHERHOOD

Healthy Mothers and Children Make Happy Homes

Motherhood is woman's highest sphere in life. It is the fruition of her dearest hopes and greatest desires; yet thousands of noble women through some derangement have been denied this blessing.

In many homes once childless there are now children because of the fact that Lydia E. Pinkham's Vegetable Compound makes women normal, healthy and strong. This is evidenced by the following letters which are genuine and truthful:

London, Ont.—"I wish to thank you for the benefit I received by taking your famous medicine, Lydia E. Pinkham's Vegetable Compound. Before my baby was born I was so ill I could not stand long or walk any distance. I had to lie down nearly all the time. After I took your medicine I felt like a new woman. I could work from morning till night and was happy and well. I certainly think it relieves pain at childbirth and recommend it to every woman who is pregnant. You may use this testimonial if you like. It may help some other woman."—Mrs. FRANK CORRIN, 132 Adelaide St., London, Ont.

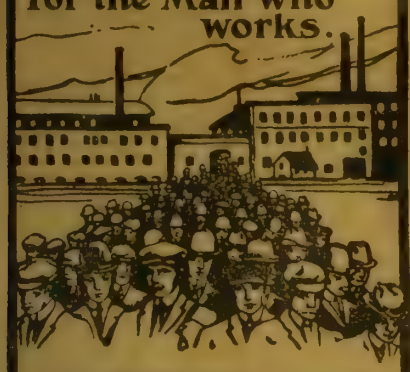
Brooklyn, N.Y.—"I was ailing all the time and did not know what the matter was. I wanted a baby but my health would not permit it. I was nervous, my side ached and I was all run down. I heard that Lydia E. Pinkham's Vegetable Compound was good and took the medicine. I have now a beautiful baby and your Compound has helped me in every way."—Mrs. J. J. STEWART, 299 Humboldt St., Brooklyn, N.Y.

CHALLENGE BRAND WATERPROOF COLLARS

Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

For the Man who works.



The Arlington Company of Canada Limited TORONTO 2

There are Great Opportunities in store for the young man or woman who completes a course of training at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

Your name and address on a post card will bring to you a catalogue giving full particulars. Address W. J. OSBORNE, Fredericton, N. B.

TAMLIN'S ENGLISH NONPAREIL

Hot Water Incubator, holder of Worlds championship in hatching. Awarded 53 Gold Medals. Used by the Royal Families of England, and 95 per cent of the Governments of the World. Twenty years ahead of every other make. Thermometer registers on outside of Egg drawer. Lamp burns thirty days with one filling, self-regulating. Finished like a piano. Will last forty years. Made in London, England. Different from common makes. Canadian customers joyful with results. If you send 5c. in postage for mailing, we will send you FREE our beautiful Illustrated Catalogue 1912 as well as a neat little book on Poultry diseases and their cure.

Freight prepaid on Incubators to any station east of B. C. SEND TODAY TO

Fletcher Bradley's Poultry Supply House. 104 Waverly St., Ottawa, Ont

During the summer months mothers of young children should watch for any unnatural looseness of the bowels. When given prompt attention at this time serious trouble may be avoided. Chamberlain's Cholic, Cholera and Diarrhoea Remedy can always be depended upon. For sale by all dealers.

"Go on," he said to the girl, pausing in his meal, "tear up your loaf first and see what luck you've got."

The girl obeyed. Piece after piece she tore from the fresh aromatic loaf. But no dollar made its appearance.

"Well," said Simmy, "if you ain't got no luck, I ain't. But here goes."

With a sudden dig he tore the entire inside of his loaf of bread. Then he shouted aloud with glee.

"Gee," he yelled, "I got it! I got it, Molly!"

"Jimmy," cried the girl, "that isn't a silver dollar. Its gold—gold, Jimmy!"

With frantic haste Jimmy crumbled the bread in his hand. And then with sudden ecstacy he caught the girl by the wrist and waltzed with her around the room.

In place of the silver dollar that he thought was there, there was something else. And that something else was not a silver dollar; it was not a five dollar piece—that is, not one five-dollar gold piece, but six of them, a round half dozen, nothing more and nothing less.

Sprains and Strains.

Sprains and strains are the result of the forcible over-stretching of the muscles, tendons and tissues. This very commonly occurs in the neighborhood of a joint, such as the ankle or wrist, from the effect of a wrench or twist. Great pain is then felt at the moment, sufficient to produce temporary faintness or sickness, and the part becomes rapidly swollen and hot. In a few days the swelling gradually subsides, and usually some discoloration appears under the skin, the colour changing after a time from red to various shades of greenish-blue and black. In many cases in which the swelling and pain have subsided there is still left a stiff feeling in the joint, and a long time may elapse before the parts move freely. Treatment.—It is advisable when there is great swelling in a joint, such as the wrist, knee, ankle, or shoulder, to send for a doctor. Often a bone may be broken when the blow has been a very severe one; this may be hidden by the swelling. For a simple sprain or strain, bathing first with very hot water, then with cold, alternately, helps to prevent great swelling, also allays the pain. The affected part should then be put to complete rest, with a cloth wrung out of some evaporating lotion over it. A simple and cooling lotion can be made of three parts methylated spirits and one part water. If the pain continues, a hot fomentation may be applied. In some cases heat gives relief, in others cold. It is advisable to use just what is the most comfortable. A bandage applied with moderate pressure will sometimes prevent excessive swelling. This cannot always be done, as the part is too painful. A bandage should be worn for some time after the joint has begun to be reset. This gives it support until the muscles are strong again.

He Was A Gentleman.

A few days ago I was passing through a pretty, shady street, where some boys were playing at baseball. Among their number was a little lame fellow, seemingly about twelve years old—a pale, sickly looking child, supported on two crutches, and who evidently found much difficulty in walking, even with such assistance.

The lame boy wished to join the game for he did not seem to see how much his infirmity would be in his own way, and how much it would hinder the progress of such an active sport as base ball.

His companions, very good-naturedly, tried to persuade him to stand at one side and let another take his place; and I was glad to notice that none of them hinted that he would be in the way, but that they all objected for fear he would hurt himself.

"Why, Jimmy," said one of them at last, "you can't run you know."

"Oh hush!" said another—the tallest in the party; "never mind, I'll run for him," and he took his place by Jimmy's side, prepared to act. "If you were like him," he said, aside to the other boys, "you wouldn't want to be told of it all the time."

As I passed on I thought to myself, "that boy is a true gentleman."

Look at the label

when you buy a varnish. The can with the "Cover the Earth" label contains a varnish made from the purest materials properly selected and aged to give long and satisfactory service. There is a special Sherwin-Williams Varnish for every use.

SHERWIN-WILLIAMS PAINTS & VARNISHES

THE SHERWIN-WILLIAMS CO. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhœa or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar to our sex.

I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to think for herself. Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all woman's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 WINDSOR, Ont.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you want from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition.
It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

Mercantile Assurance Association
P. O. Box 317
Halifax, Nova Scotia.

Dysentery is always serious and often a dangerous disease, but it can be cured. Chamberlain's Colic, Cholera and Diarrhoea Remedy has cured it even when malignant and epidemic. For sale by all dealers.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

The First Big Ben Cost $12.85

Big Ben is the result of 26 years of fine clock making. The first Big Ben cost $12.85 to make. The first hundred cost $6.50 each. But the great demand has brought the price down to everyone's pocketbook.

Buy Him Now for $3.00

Big Ben the national sleep-meter, is arousing thousands of farmers on time. Everywhere, everyday, the gentle, insistent voice of Big Ben taps the "sleepy heads" to joyous action. This "minute-man" starts the day with a smile. Big Ben never fails—he's on the job always. He rings 5 minutes straight, or at intervals of 30 seconds for 10 minutes. He tells the truth and gets you and the farm hands up "on the dot."

Big Ben is hand-built, like a fine, thin-model watch, and "time checked" for 140 hours for accuracy. 1,055 skilled watchmakers build Big Ben—the clock that's the pride of the famous Westclox Community of La Salle, Illinois.

2,500 Big Bens now leave the factory every 10 hours and the demand gets bigger daily. Big Ben has ticked himself into popular favor because he is built right, runs right and is priced right.

Big Ben is sold by 5,000 Canadian dealers. If you cannot find him at yours send us $3.00 today and we will send him by return express, duty charges prepaid.

Big Ben

WESTCLOX, La Salle, Illinois

To The Public

We beg to announce that we have purchased the good will and interest of the EMPIR LINIMENT CO. Ltd. and will supply the trade for this excellent Liniment from our factory at Middleton, where all orders should be addressed.

C. GATES SON & CO.

What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism saw

EMPIRE LINIMENT

advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

If you are a housewife you cannot reasonably hope to behealthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunlight. If you do this every day and keep your stomach and bowels in good order by taking Chamberlain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

Flour and Breadmaking.

Although flour is one of the most common materials used in the preparation of our foods, very few people have a clear idea of the wide difference between the flour-producing properties of the various varieties of wheat grown in different localities, of the effect of climate, soil, etc., and of the different grades of flour on the market. To many people flour is simply flour, and they know no grades, unless it is simply two kinds —bread and pastry flour. As a matter of fact, there are a great many grades of flour; and, while the millers, particularly those in the larger milling concerns, strive to keep the different grades of flour uniform from year to year, there are wide differences in the quality of the wheat, which is their raw material, that renders this problem a very difficult one, if not impossible. Consequently, the flour got under any one grade is very likely to vary somewhat in strength, or in some of the conditions which would affect the baking. By blending wheats of different grades and varieties of different qualities the miller may be able to produce a uniform sample of flour, but in certain seasons this may be a very difficult problem. Very often the millers are blamed for producing poor flour when the circumstances that effect this are beyond their control.

CIRCUMSTANCES INFLUENCING THE QUALITY OF WHEAT.

There is abundance of evidence to prove that the composition of wheat is influenced by its environment. Millers are quite familiar with the fact that some districts in Ontario will produce a better quality of wheat than others, and that the spring wheat of the Western Provinces is superior to the best Ontario can produce. Possibly climate (including variations due to season) and soil, or, rather, the condition of the soil, have the greatest influence on the composition of the wheat. To obtain a good quality of wheat for milling purposes we require bright, warm days, with an abundance of sunshine and an absence of an excess of moisture; or, in other words, the conditions which would cause rapid, though normal, ripening of the grain. Wheat that has ripened slowly, or that is over-ripe, is usually somewhat low in protein, and, consequently, in gluten, and rich in starch. Chemical investigations seem to show that at the time of blossoming the plant has taken up nearly all the nitrogen and ash constituents that it will have in the matured plant, while it continues to keep up carbon as long as the plant is green. This means that the longer the time from blossoming to maturity the greater the opportunity for the plant to take up carbon and convert it into starch and store it in the grain. Consequently, slowly matured grain will be plump. The amount of protein, or gluten, is determined by the amount of nitrogen taken into the plant in the early stages of growth, and the completeness with which this is transferred to the seed.

A comparatively high temperature, long, bright days, an absence of an excess of moisture, are the conditions which prevail throughout our Western Provinces, and these are, doubtless, some of the conditions that account for the high quality of wheat produced there.

The researches of Laws and Gilbert at the Rothamsted Institution, in England, and of the Central Experimental Farm at Ottawa, show that manures have very little influence on the composition of the wheat. Recent investigations by F. T. Shutt, Central Experimental Farm, Ottawa, show that the amount of moisture in the soil is a greater factor than the amount of nitrogen available to the plant. These investigations indicate that when wheat is grown on two different soils, one of which contains more moisture than the other, the moist soil will produce grain with low glutten and high starch content. This is probably due to the fact that in this case maturity is retarded. It will thus be seen that the wheat from the same localities and of the same variety may be quite different in composition and in milling qualities. Furthermore, it is well known that the wheat from some localities in our Province is very much superior to the same variety of wheat grown in another locality. Thus, without going too deeply into this point, it will be seen that wheat is not of a constant composition, but that it varies from season to season and in different localities. The composition also varies very widely with different varieties.

VARIETIES OF WHEAT.

Wheats are commonly divided into two great classes—those sown in the autumn and harvested the next summer, known as fall or winter wheats, and those sown in the spring and reaped the same season, known as spring wheats. As a rule, the spring wheats are harder, and make a superior flour for breadmaking purposes. There are a great number of varieties of these two different classes of wheats, which vary very much, not only in the yield of grain and straw per acre, but also in milling and baking qualities.

Some of these varieties are very soft, and yield a poor quality of flour. Unfortunately, these soft wheats usually produce more bushels per acre than the harder, better wheats; and, as the buyer makes very little difference in the price, it naturally follows that the softer, heavy-yielding varieties are grown in largest quantity. We have milled and baked over sixty varieties of fall wheats grown on the college experimental plots in each of the seasons of 1907, 1908, and 1909, and also over forty varieties of spring wheats, grown the same seasons. The results of these tests are too voluminous to incorporate here, but they may be found in the Ontario Agricultural reports for 1908 and 1909

To the Ontario miller the question of the varieties grown in his own district is a very important one, for the greater part of this wheat will probably be delivered at his own mill; and, if the varieties are poor ones, his difficulties in manufacturing a strong flour are increased. Fortunately, there are not a great number of varieties grown in the Western Provinces, and the mixing in transit makes the wheat of more uniform grades than could possibly be done in this Province. —R. Harcourt and Miss M. A. Purdy.

(to be continued.)

Swat the Fly.

Begin war early on the housefly. Why? Because that apparently helpless little fly is one of the greatest distributers of death known at the present time. If you begin war on this pest early enough there will be less sickness this summer. Clean up the rubbish. Arrange for the removal at once of manure, and keep it in a dark place until you can remove it. In planning farm buildings do not build the stable too near the house.

The fly lives on dirt, rubbish and filth. then enters the house and spreads bacteria and disease all over your Sunday dinner. It doesn't confine itself to the Sunday dinner, but spreads disease over all the other meals in the other six days of the week. In fact there is no limit to the wanderings of the housefly. Swat the fly every chance you get. If you don't the fly may swat you with disease, and possibly death.

LITTLE BOY WAS SUDDENLY TAKEN

WITH

DIARRHŒA

and VOMITING

If you are suddenly taken with Diarrhœa, Dysentery, Colic, Cramps, or Pains in the Stomach, Cholera Morbus, Summer Complaint, or any Looseness of the Bowels, do not waste any time, but immediately procure a bottle of Dr. Fowler's Extract of Wild Strawberry, and it will cure you in no time. Mrs. H. L. Steadman, Pleasant River, N.S., writes: "A year ago this fall, my little boy was suddenly taken ill with diarrhœa and vomiting, and as our doctor is ten miles distant, it seemed as if I could not get help soon enough, but on going to the country store I purchased a bottle of Dr. Fowler's Extract of Wild Strawberry, and after the first dose could notice an improvement, and the next day the child was better and regained health. Since that time I always keep it on hand."

Insist on being given "Dr. Fowler's" when you ask for it. Price 35 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

For Sale

One of the fastest and handsomest 5 year old black geldings in the province for sale or exchange for an express horse. He is sound and kind and is not afraid of anything.

Also a 500 lb. Cream Separator (new) for sale. Apply to

A. M. WILSON,

92 Lawrence St. Halifax, N. S.

ANNAPOLIS VALLEY FRUIT FARM

96 acres; near neighbors, schools, churches and depot; everything is here to make farming an ideal occupation; borders salt water; splendid 2-story, 12-room house; 2 barns, one 40x60; apple orchard picking 1000 bbls. in season; cuts 75 tons hay; abundant supply wood and timber; accident to aged owner induces him to throw in horse, cows, pigs and farm machinery; the low price for this splendid profit producer is only $7300, part cash; for traveling instructions to see this and a 228-acre Annapolis Valley fruit farm for only $1,900, write THE MARITIME FARMER, St. John, N. B.

Thoroughness and Progressiveness are the ideas which have always dominated the management of this college; showiness and superficiality the rocks to be avoided.

Our reward has been ample and satisfying, our last year being by far the best in our history of 45 years.

No summer vacation. Students can enter at any time.

Send for Catalogue.

THE ST. JOHN Business COLLEGE

S. KERR
Principal.

Children Should Not be Nuicenses.

We as mothers want our children loved by others, but we cannot have them loved unless we give them careful training from infancy. There is a vast difference in the dispositions of children; this is true even in brothers and sisters, but all can be trained by patience and firmness and curbed in any unlovely trait of character by proper care.

There is no use in loud-voiced scoldings and wrangles from the mother. Children soon come to recognize this as unmeaning, and, while it jars on a sensitive child's better nature, they become accustomed and indifferent to this kind of teaching, and worse still, will indulge in the same kind of discord among themselves. Some mothers seem to think that their children are so near perfection that they need no correction, and that everything they do should be accepted by outsiders as altogether lovely.

Not long since a lady with several small children called to see me. The Marechal Neil rose, the pride of my possessions, was in all the glory of its first spring blooms. Those children jumped on that rose and pulled every bud and blossom that they could reach, without one word of reproval from "mamma." The afternoon was spoiled for me, and I could almost have it in my heart to say I never want them to come again.

Years ago, when I was teaching school, I boarded in a house where there were several children, and while I have loved children all my life, I do not believe it was in human nature to have loved those children. As soon as I would reach the house in the afternoon they would flock around me, climb over my lap, bring their primer for me to hear their lessons, question me to their heart's content, and torture me in other cute ways, all with the full knowledge and consent of their mother. They were allowed to sleep with me, and, when I found it unbearable and quit boarding there, the father tried to take the school away from me.

This is certainly a children's age, but I shudder to think of what the next age will be, unless parents wake up to the present situation and take the reins of government in their hands instead of turning them completely over to the youngsters. I love children, but I do not love nuisances, nor does anyone else.—J. H. Rust, in Grain Growers Guide.

"Bad Luck" With Bread.

There are several causes for "poor luck" in bread-making. It may be due to poor flour or yeast, temperature before or during baking, or to improper care.

Ifthe wheat has been allowed to sprout or mildew before being made into flour, the bread will not be good. Flour from sprouted wheat does not contain enough gluten. This causes the bread to have a coarse look, with large airspaces. Good bread should have many small, even air spaces. If the flour is from mildewed wheat, the bread soon becomes musty. Good flour is shown by its creamy-yellow color. Or take a handful of flour and squeeze it. If the flour retains the print of the fingers, it is good bread flour.

Sour bread is caused by weak yeast or by foreign bacteria in the yeast.

Bread dough should be kept at a temperature between 75 and 80 degrees F., while rising, to obtain the best results, When double its bulk, it should be put in the oven. If the oven is not hot enough, the bread rises too much. When too hot, a crust forms on the bread too soon. This frequently prevents the centre of the loaf from being well baked. The yeast-plants, not being destroyed, produce fermentation here.

The oven should be about 280 degrees F. when the bread is put in. The bread should remain in the oven from forty-five to sixty minutes when in single pans.

After baking, the bread should be laid on a rack until thoroughly cooled. Keep in a dry, tin box.

Where two or more loaves are baked in one pan, the loaves do not have a good crust. They dry out much more quickly.—Kansas Industrialist.

Will you be one of the 108 farmers who will receive our Prize Contest checks?

THERE will be twelve cash prizes in each of the nine provinces (108 in all) in the 1912 Prize Contest for Canadian Farmers. The 1911 Contest was so successful in awakening interest in the use of Concrete on the farm, that a second contest, in which three times as many prizes are offered, was decided upon for this year.

The Contest this year is divided into three classes, "A," "B" and "C," and there will be four prizes in each class—First prize, $50; Second prize, $25; Third prize, $15; Fourth prize, $10.

Thus there are three $50 Prizes, three $25 Prizes, three $15 prizes, and three $10 Prizes, *for each province.*

DESCRIPTION OF CLASSES

In Each Class there will be First, Second, Third and Fourth Prizes ($50, $25, $15, and $10) for Each Province.

CLASS "A"—Prizes to be awarded to the four farmers in each province who use most "Canada" Cement on their farms in the year 1912.

CLASS "B"—Prizes to be awarded to the four farmers in each province who send photographs of the *best concrete work* done with "Canada" Cement on their farms in 1912.

CLASS "C"—Prizes to be awarded to the four farmers in each province who send in the best *description*, telling how any piece of concrete work was done with "Canada" Cement. (Entries for this prize must be accompanied by photographs of the work.)

Don't think that you must use a large quantity of cement in order to win a prize. The quantity of cement used does not count in Classes "B" and "C." Many of last year's prize winners used very little cement.

When you enter the Contest, you have a chance to win a cash prize of $50 as well as the certainty that you will add a *permanent improvement* to your farm. If you haven't a copy, be sure and ask for our book, "What the Farmer Can Do With Concrete." It will not only suggest many improvements that you can use in entering the Contest, but will tell you all about the use of concrete on the farm.

Just write your name and address on the attached coupon, or use a postal card, and we will send full particulars of the Prize Contest and a copy of "What the Farmer Can Do With Concrete" to you absolutely free.

COUPON

CANADA CEMENT COMPANY LIMITED
Herald Building, Montreal

Please send me full particulars of the 1912 Farmers' Prize Contest, and a free copy of your book "What the Farmer Can Do With Concrete."

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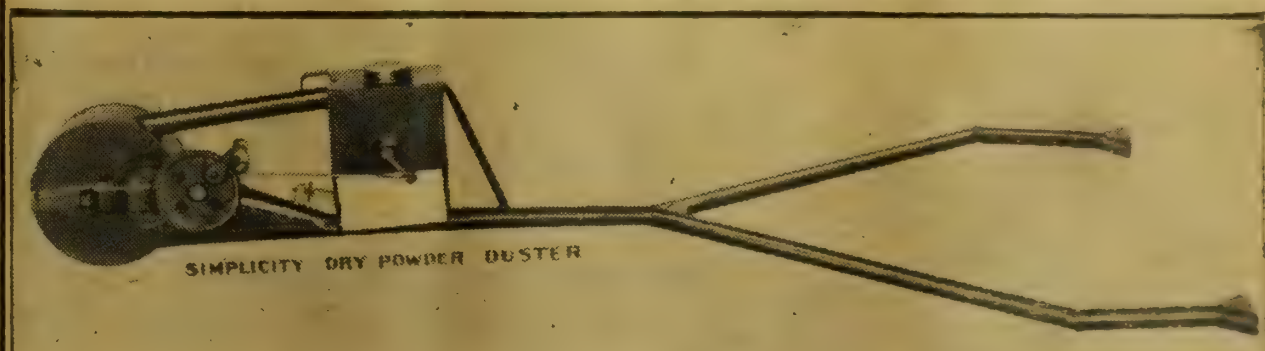

Is the Delight of the Potato Grower

FOR KILLING POTATO BUGS

will do 2 Rows at a time as fast as a man can walk. Paris Green can be used clear or mixed with plaster or lime.

AGENTS WANTED SEND FOR CIRCULARS

ILLSLEY & HARVEY COMPANY, LIMITED
Port williams, Nova Scotia.

The Farm Homestead Water Supply.

(Continued from page 675.)

sincerely think that a better day has dawned and that those who may write on this subject ten years hence will have a brighter story to tell than that which I can bring before you to-day. But to secure this the work of education must continue. Indeed, there is no better time than the present to carry on a campaign for purer water on the farm; much of the preparatory work has been done and there is an ever increasing number of intelligent, thinking men going on to the land who will be willing to receive and act upon advice from those who are qualified to give it. In this good and very important work this Association may render most valuable assistance and I trust that we, who are practically interested in this problem, may have your hearty co-operation and assistance. When we rememeber that 61 per cent. or over of our population are upon farms, that the water supply on these farms stand greatly in need of improvement, we shall realize there is a great field for useful, educational work—much of which I believe can very well be done by and through this Association.

Twenty-four years ago when I entered upon my present work, having then had some experience in the examination of water supplies, I became interested in the farmer's well and at once determined to make the investigation of the farm water supply one of the features of our work. Our authorities being agreeable, I was able to offer a free analysis and report on waters from farm homesteads, from creameries and cheese factories, provided the samples were collected and shipped in accordance with our instructions, that express charges on the sample were prepaid and that full information resecting the well and its environment were furnished. To ensure our receiving the particulars required for the proper interpretation of the analytical data, a form containing a number of questions is sent to each applicant, with the request that it be filled in and returned when shipping the sample. The result of this privilege extended by the Dominion Government has been the reception and analysis in the farm laboratories of several hundreds of samples each year. At first there was but little response, the farmers did not realize the importance of the information we could give them and the larger number of those who wrote for our directions did not send forward a sample thinking, I suppose, that the game was not worth the candle, that the trouble and expense in connection with the collection and shipment of the water exceeded the value of a knowledge respecting the real character of the water they were using. But as the years went by and our propagandic work on the subject became more widely appreciated and the number of samples increased, so that now scarcely a week goes by without our receiving several farm waters for analysis. This I take it is very encouraging.

Our practice is to submit each sample that is forwarded according to directions to a complete sanitary analysis. A bacteriological examination is unfortunately out of the question, owing to the length of time that must necessarily elapse between the collection of the sample and our reception of it, for these waters may and do come from as far east as Prince Edward Island, and as far west as British Columbia. In our report to the sender we give the full analytical data followed by what is of more importance to the farmer, a fairly detailed discussion of the character of the water and the nature of its impurities, if such have been detected. It would, of course, be far more satisfactory if the water analyst could personally visit the farm and inspect the source of the supply, but that of course, is impossible in this work. We must bring experience to the task and carefully consider the data in the light of the information furnished. My opinion is that in very much the larger number of cases we arrive at the truth, but I confess we occasionally obtain results incapable of decisive interpretation.

Any detailed account of our analytical results and their interpretation is impossible in this paper, which, of necessity, is ,imited to a brief survey of the work. As, however, this material is to be found in the annual report of the Chemical Division of the Experimental Farms—the omission here is not a serious one. Reviewing the results obtained since 1887, we find that of the waters so examined 30 per cent. have been classified as safe and wholesome, 25 per cent. as suspicious and probably contaminated, 36 per cent. as seriously polluted, and 9 per cent. as non-potable through high salinity. From year to year these percentages will varysomewhat, thus of waters ranking first class, the lowest percentage in any one season was 22 and the highest 40. In 24 years the proportion of good waters exceeded 30 per cent. in eight seasons only. We do not claim that these results represent the condition of the farm supply in general throughout the Dominion. It might be urged that only those who have reason to suspect their supply, either through illness in the family or strong objectionable features in the water itself, are forwardind samples for analysis. It mibht be pointed out, however, on the other hand, that there is a very large class which appears to be totally indifferent as to the quality of water they use and who do not think it worth while to have their well water examined. Of these waters, we may well suppose there is a large proportion positively unsafe for use. As we must be all aware, the farmer has been accustomed to judge of the suitability of a water for drinking purposes by its temperature, appearance and odor or absence of odor, and we know how very fallacious such signs or qualities may be at times. In the absence of features that make the water objectionable to the senses, the source by the larger number of consumers is considered satisfactory, and there is no effort made towards learning its true condition. Many such waters—clear, brilliant and odorless drawn from far wells and hitherto quite unsuspected of impurity, have been shown by analysis to be most seriously contaminated.

If the proportion of wholesome, safe-for-drinking waters used on the Canadian farm does not exceed one-third of the whole we have certainly a sufficiently serious condition to warrant a strong effort being made towards improvement. In this matter I believe we have been very conservative, under rather than over estimating the proportion of dangerous waters in use.

And now we must briefly enquire as to the nature of these supplies and the cause of their contamination. On the larger number of farm homesteads we find these supplies are shallow wells— wells dug to a depth of from 5 to 30 feet. These are located in the barnyard, where there is unavoidably more or less accumulation of manure, or under the barn or stable, or in more or less close proximity to one or other of the farm buildings containing stock, or at no great distance from the privy—frequently a mere hole in the ground—or lastly, close to the back door, out of which the household slops are thrown and near which only too fre-

GREATER ST. JOHN EXHIBITION!

Boom City's Show This Year To Eclipse All Others

PRIZE LISTS

SECRETARY H. A. PORTER WILL SEND YOU a Prize List upon application. This valuable piece of literature contains everything you may want to know about the big Show.

AGRICULTURISTS AND STOCK BREEDERS will find the list fully explanatory of the various classes of exhibits in their departments and the prize monies to be given in each.

RULES AND REGULATIONS GOVERNING THE SHOW, the matter of Entrance Fees, the days for Judging, Applications for space, the care of Cattle, and the showing of the Live Stock are also explained.

SEND FOR THIS BOOK AT ONCE if you intend to be an exhibitor —whether it be Live Stock or even in the Fancy Work department, we will send it to your address immediately.

AUGUST *SEPTEMBER*

31st TO 7th

Comprehensive Exposition of Canada's Resources.
Fruits of the Factories. A show in themselves.
A Rounding-up of Eastern Canada's Fancy Cattle.
Agricultural, Horticultural and Dairy Fair.
Food Show, Motor Show, Vehicles and Implements.
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ACRES OF BUILDINGS

AMUSEMENTS

AEROPLANES FLIGHTS TWICE DAILY—A perfect demonstration of the mastery of the air by propelled heavier-than-air craft. A thrilling sight, free to all visitors.

FAMOUS JAPANESE TROUPE of acrobats and wonder-gymnasts. Six people under the great Takewaza himself. Hair-raising feats of daring. Six different acts in one.

ONE LONG SCREAM OF MERRIMENT in the world-renowned Ernst Trio of rough-and-tumble fun-makers. Dressed up in the most ludicrous get-ups. These people put on a free open-air platform performance twice a day.

AMUSEMENT HALL SHOWS twice a day, a Bigger and Better Pike than ever. The interesting side-shows, the freaks, the ballyhoo fellows, etc.

Something Doing Every Hour Of The 7 Days!

Usual Excursions on all lines of Travel

quently vegetable and animal refuse are allowed to accumulate and decompose. Thus, health is jeopardized for convenience. For a few years after the homestead is established the water of such wells so located may remain good; but sooner or later the soil surrounding the well becomes saturated with organic filth and, unable longer to perform its useful work of filtration and purification, allows the water percolating through it to carry its load of manurial matter to the well. Inevitably these wells become polluted; we have yet to find one on a farm ten years in operation furnishing a pure, first-class drinking water. Some farmers take pains to protect the mouth of the well against surface wash, and the entrance of rats, mice and frogs, which so frequently find a watery grave in the farm well, and, again, others line the well to a depth of 5 or 10 feet with puddled clay or concrete. Both plans are to be recommended as safeguards, but they will not remove the objection to shallow wells placed in proximity to sources of contamination. These precautions are altogether insufficient in the larger number of instances to prevent the infiltra- of organic filth, as we have often been able to prove. Many suppose, because these barnyard, back-door wells never go dry, that they have a spring, but such is very seldom the case; undoubtedly the great majority of such we merely receive soakage and are supplied from the rain and snow falling on the immediate surroundings. Such, briefly, is the condition of affairs; can it be remedied?

There is probably no better watered country in the world and we can unhesitatingly affirm that our natural waters, of lakes, streams and springs are of the purest. If time permitted I could present ample proof of this statement. These sources might be used to a greater extent than at present. Our deep seated waters also for the most part are organically pure and this is the source that the larger number of our farmers must look to for their supply of good water. The driven or drilled well, so located as to be beyond the possibility of local contamination, is the solution of the problem for many; it is the well that experience has shown to yield the safest water. A careful survey of the farm should be made with the special object of locating the well, having in mind the practicability of piping the water to the house and buildings. But this is a phase of the subject which I cannot here enter upon. My principal object in writing this paper was to call your attention to the quality, the character, of the water as found today on our farms, in order that we might, by a more active campaign, bring about a better condition of affairs. We want to urge the abandonment of the shallow well located in the barnyard or in the neighborhood of the farm buildings. We want our people to know the danger to health that lurks in the water containing putrescible, excrementious matter. They should be told of the ease with which such wells become infected with the germs of disease, how frequently the waters of such wells are the means not only of causing diarrhoea and and other forms of intestinal derangement, but of disseminating that fearful scourge of country and city alike, typhoid fever, the disease that stands out as the most serious and fatal of water-borne diseases in this country. May I not venture to hope that in assisting towards the establishment of a good water supply on the Canadian farm homestead, the Canadian Public Health Association may find a fruitful field for work. By a vigorous propaganda, by the collection and tabulation of statistics, by the personal influence of its members and in many other ways, the Canadian Public Health Association can, and I have no doubt will, take a very active and important part in our crusade against the impure water supply on the farm homestead.

FLORICULTURE.

H. P. O. N. S. writes:—Is it an easy matter to grow Stocks from seed? I have had poor success for several years. I sow the seed in boxes, in the kitchen, about the first of April. They usually come up all right but about the time you think you are going to have a fine lot of plants they fade away, almost simultaneously, as it were in a night. I have also had somewhat the same experience in my Aster hot beds. What do I do that is wrong? What is the best shrub for a low compact hedge?

Every one has the same trouble with Stocks unless the ventilation is good. The florist calls this trouble damping off and ascribe it to surplus investure and stagnant atmosphere; the latter is the especial cause. These plants will not fail if there be a current of air blowing over them, therefore keep the boxes of seedlings as near the light as possible and during their critical period when between the first and second leaf give all the fresh air that the temperature will permit. The same treatment would of course apply to the Aster. The best shrub for a low campact hedge is the Berburis Thumbergie a Japanese Berbery. It is absolutely hardy, very pretty and so close and thorny that a dog will not go through it.

Inquirer, of St. John, writes:—When shall I plant seed of Scarlet Runner Bean next year as I want to cover a fence? What would you think of planting a row of Castor Oil Beans with the idea of making a mass of foliage to cover the high foundation of a house? What sort of a plant is the Golden Elder, is it a good border plant?

Plant the Scarlet Runner Seeds about the first week in May. You will find the Castor Oil Plant a disappointment for covering purposes unless we have a very warm summer. The cool nights in St. John check the rank growth that prevails further south. Hardy Larkspur is more permanent and better adapted for covering unsightly places.

The Golden Elder is a yellow beaned shrub of somewhat rank growth. One would infer from your remarks as to ordering that you mean the Golden Feather (Pyrethum), an annual easily grown from seed and which grows to a height of six inches and should be kept clipped. Repot house plants, that are pot bound' and cut back straggling winter growth on Geraniums, Fuchsias, Heliotropes and plants of this class.

Potash From Seaweed.

Relative to the extraction of potash from kelp or seaweed in the United States, the British Vice-Consul at Ensenada, Mexico (Mr. W. D. Madden) has forwarded a newspaper extract from which it appears that the kelp growths already exploited along North Pacific coast of America can be made to yield from two to three times as much potash as is now imported into the United States.

These huge seaweeds, the article states, form "groves" exceedingly dense, some of these along the Pacific coast being five miles long and two miles wide. ihey are rooted at the bottom among rocks, their stems being sometimes as much as 300 feet long, and bearing at their tops great air-filled bulbs with which serve as floats supporting enormous fronds of steamer-like leaves. From the ocean water they take up large quantities of potash salts, the dried plants containing from 25 to 35 per cent. of their weight of potassium chloride, which is easily extracted. They also contain iodine, and it is thought that this and other by-products would pay the cost of extracting potassium chloride. All the groves are within the three-mile limit. If properly protected, they will yield indifinitely, renewing themselves by fresh growth each spring. The "heaviest" growths are south of Point Sur, but large ones extend as far north as Seattle.

The available output of potassium chloride from this source is estimated by the United States Department of Agriculture as equivalent to the value of $40,000,000 (about £8,222,000) per annum.

World Protection of Fertilizers.

By a glance at the enormous quantities of artificial fertilizers employed in the world one can get a good idea of the general process of agriculture. The figures cannot be more than approximate, but they serve to show how dependent agriculture has become upon the fertilizer industry.

1. PHOSPHATE OF LIME.—The total production is estimated at about 10,000,000 tons, of which 8,000,000 may be attributed to superphosphate, and 2,000,000 to basic slag. This does not include the large quantities contained in guano, bones, &c.

2. POTASH SALT-.—The Stassfurt mines deliver potash salts in different forms equal to about 500,000 tons of our potash.

3. NITRATE OF SODA.—The shipments of this commodity from Chili amount to about 2,000,000 tons a year, of which it is roughly estimated that three-fourths are for agricultural and one-fourth for chemical industries.

4. SULPHATE OF AMMONIA.—The total production approaches 1,000,000 tons a year, which is employed for agricultural purposes.

All of this fertilizing material is transformed by process of cultivation and nature into supplies of food for mankind and stock; yet experts tell us that, as time goes on and cultivation becomes generally more intensive, it will be necessary to employ far larger quantities of fertilizers. Will the supply equal the demand? There are already indications that prices are moving up, because the supplies are not keeping pace with the inquiries.

In a very carefully written article appearing in one of the late bulletins from the Central Experimental farm, Ottawa, Prof. J. H. Grisdale gives several rations which he has tried out with splendid success in the matter of ensilage feeding.

He states that corn silage and straw or chaff, while together making up a most excellent foundation or base, do not alone constitute a well-balanced or suitable ration for any class of livestock. For feeding heifers or young stock some bran and clover hay should be added. A suitable ration would be as follows:

For yearling heifers—Corn silage, 25 to 35 pounds; straw or chaff, 4 to 6 pounds; clover hay, 4 pounds; bran, 2 pounds.

For dry cow—Corn silage, 50 to 60 pounds; straw, 8 to 10 pounds; clover hay, 4 pounds; bran, 1 to 2 pounds.

For cow in milk—Corn silage, 45 pounds; straw, 6 pounds; clover hay, 4 to 6 pounds.

Meal mixture—Bran, oats, gluten or oil-cake meal, or cotton-seed meal, equal parts. One pound meal to three or four pounds milk produced per day.

For steers running over winter 1,000 pounds weight—Corn silage, 60 to 75 pounds, straw 8 to 12 pounds; clover hay, 2 to 4 pounds.

For fattening steers (1,000 pounds)—Corn silage, 50 to 60 pounds; straw, 6 to 10 pounds; hay, 3 to 6 pounds. Meal—Starting at one pound go up to 10 pounds per diem.

A good meal mixture would be corn, bran, barley and oil-cake meal, gluten meal or cotton-seed meal. Take bran and corn, bran and barley, equal parts, or bran, corn and barley, equal parts, to which add an amount of any one of the last three equal to ene-quarter of the total weight of the meal mixture when ready to feed.

APPLE BOXES!

SHIP YOUR FRUIT IN ATTRACTIVE PACKAGES

AND REALIZE GREATER PROFITS

Write us for Prices

WILSON BOX CO., LTD. - St. John, N. B.

GAVE UP ALL HOPES OF EVER GETTING WELL

Mr. Jacob E. Herr, 111 Grange St., Stratford, Ont., writes:—"Ten years ago I suffered with a very peculiar disease. I would go to bed feeling as well as could be, and after sleeping for five hours I would wake with a severe pain in my back, then moving into my side and breast. The pain was so terrible I could not lie in my bed, and usually had to sit until mo. .ing with a pillow propped up behind my back. With all my pain I would go to work, and after working up to about 10 o'clock the pain would leave me entirely. The same thing would happen the next night, and every night for two years. I tried four different doctors, but none of them did me any good. I tried a great many patent medicines, but all of no avail. I gave up all hopes of ever getting well. A friend persuaded me to try Milburn's Heart and Nerve Pills. I bought four boxes, and after using the first one I felt a change for the better, and after using three boxes I could sleep all night. The pains were gone, and I was completely cured.

Milburn's Heart and Nerve Pills are 50 cents per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Put T-A Wheels On Your Wagons---

These Wide-Tire Steel Wheels are so constructed that they roll smoothly over the roughest roads, without tiring your horses. And they are absolutely accident-proof—yet cheaper than ordinary wooden wheels.

T-A Wide-Tire Steel Wheels and Handy Farm Wagons

Our Handy Farm Wagons are built low making them easy to load and unload—and are especially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm.

Let us send your catalogue. It will give you complete information.

Tudhope-Anderson Co., Limited,
ORILLIA, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

A Guide to Agriculture.

By direction of the Hon. Martin Burrell, Minister of Agriculture, a timely bulletin on bee-keeping has been issued by the Federal Department of Agriculture. According to a statement of the author, Dr. C. Gordon Hewitt, Dominion Entomologist, this work has been prepared to meet a very persistent demand for information by persons who wish to learn how to begin and to continue the industry of agriculture. It was the further object of the author to increase the number of bee-keepers in Canada by indicating the advantages of bee-keeping, It is pointed out that bee-keeping returns the direct profit of a honey crop and the indirect one of improvement to yields of cloverseed and fruit. It is observed that a bullock after fed and cared for during an entire winter will not realize much more than the produce of a colony of bees in a single season.

Beginners are recommended to start on a small scale with one or two hives increasing the number annually as experience is gained. This covers, in plain language, the whole field of Agriculture, including equipment, management, the production of honey and wax, diseases, legislation of the various provinces against bee diseases, etc. It is designated "The Honey Bee," Bulletin No. 2, Division of Entomology and No. 69, Experimental Farms. Copies may be had free by applying to the Publications Branch Department of Agriculture, Ottawa.

Importation To Great Britain Of Canadian Horses.

The Department of Agriculture at Ottawa is in receipt of a new Order by the Board of Agriculture at London, England, entitled "The Horses, (Importation and Transit,) Order of 1912."

In Chapter 1 of this Order provision is made for the detention and testing with mallein, on and after January 1st, 1913, of all horses, asses and mules landed in Great Britain from abroad, except such as may be exempted for special reasons under licences issued by the Board. It also contains provisions designed to prevent the introduction of various equine diseases, as well as glanders, such as Dourine, Mange, Straugles, Ringworm, etc.

Chapter 2 of the Order deals with the carriage of horses, asses and mules by water, and lays down requirements as to fittings, etc., of vessels on which such animals are carried to or from any port of Great Britain, and Chapter 4 relates, inter alia, to the cleansing and disinfecting of such vessels,

The Order, except Chapter 1, will come into operation on July 18, 1912.

Can You Invent a Beet Puller and Topper?

The Great Western Sugar Company, of Denver, Colorado, has offered a prize of $10,000.00 to be awarded for the complete solution of a practical Sugar Beet Puller and Topper under certain conditions outlined in a circular which they will forward to anyone who may be interested enough in the proposition to send for it. The contest is open to the general public and the offer will be in force until the first day of March, 1915.

The machine must conform to and meet the following specifications:

1. The motive power required for different soil and weather conditions must not be excessive, that is, not to exceed four horses per beet row if the animal power is used.
2. The device must pull and top all the beets and separate beets and tops and leave beets and tops convenient to load. It is especially understood that the work may be done by two machines of which one does the topping, the other one the pulling, or vice versa, although a combined machine is preferred. The pulling and topping must be done in a satisfactory manner.
3. The steering and turning of the machine or machines must be easy and practical. The Beet Puller and Topper must be adjustable for rows spaced 16 to 20 inches apart.
4. The operation must be such that damage to the beets or tops will be avoided as much as possible.
5. The machines must fulfil the above conditions regardless of the size of either beets or foliage, and be practical in the varying types of beet lands.
6. The machines must be durable and reasonably simple, and the different parts easily replaced.
7. The selling price of the machine or machines to the public by the local dealer, whether combined or otherwise, shall not exceed $300.00 if the motive power is animal power, and shall not exceed $500.00 if self-propelled.
8. The Committee of Judges shall have the right to alter, modify, or set aside the above specifications at their discretion.

When to Feed Bran.

Bran is rich in phosphates when compared with many other foods fed to poultry, and as phosphates account for the formation of bone, growing poultry, may with advantage be allowed a certain proportion of it. It is also useful for laying hens and if used occasionally as a change and to add bulk to the morning mash the fowls will be greatly benefited by it.

In using bran, however, it should never be mixed with other meals in a dry state as such a mixture is liable to set up a derangement of the digestive organs owing to its irritating nature. Bran before being used should be scalded with boiling water and left for an hour at least to cook and swell. A little may then be added to the soft food of growing chickens, or it may be used for laying hens in conjunction with meal, using equal parts of each and driving off by the aid of shorts. A mash thus made is suited for use in summer.—W. R. Gilbert.

We have received a copy of the Calendar of the Collegiate and Business Academy,, (formerly Horton Collegiate Academy) of Wolfville, N. S. It is an exceedingly well printed book, attractive inappearance and containing much valuable information for parents who contemplate sending their boy to a high class residential school.

From the contents we note that four regular Diploma Courses are given, viz: (1) College Preparatory, (2) General, (3) Manual Training, (4) Business, including Stenography and Typewriting.

The Collegiate course prepares for University Matriculation in Arts, Sciences, Engineering, Dentistry, Medicine, etc. All work is carried on under experienced teachers according to the best methods. The expenses are very moderate considering all the advantages offered. The enrollment last year was 189. This institution is now entering upon its EIGHTY FOURTH YEAR of successful work in the education of boys and young men.

A copy of the illustrated Calendar will be mailed free on request. Apply to W. L. Archibald, Principal.

"HUNDREDS OF FARMERS, WHO HAVE USED

MOLASSINE MEAL

and are at the present time using it, can tell you that it is all that we recommend it to be. YOU may be one of the few who are not using it. If not, buy a bag now. For Horses, Cattle, Pigs, Sheep and Poultry, it is now acknowledged to be the best Feed obtainable."

L. C. PRIME CO., Ltd,.
Distributers
SAINT JOHN, - New Brunswick.

Ripening Honey.

The proper ripening of honey, that is to say, bringing it into that condition before putting it on the market that there shall be no risk of its fermenting afterward, is now recognized by every commercial bee keeper as of the very highest importance, both to the individual and to the industry generally. All who have paid any attention to the matter know that honey, whether what is termed ripe or not, contains a certain percentage of water, which may range from 12 to 25 or 26 per cent. At anywhere near the lowest percentage it would be quite ripe, and while unexposed to a moist atmosphere would remain undeteriorated for any length of time; but honey with the highest percentage of moisture in it would ferment in a very short time in a closed vessel.

Honey, when first gathered, usually contains a high percentage of moisture, and it is believed that the bees on their way to the hive do in some manner get rid of some of the excess. Much, of course, depends upon the weather at the time the honey is gathered; in dry weather there is much less moisture in it than in damp or wet weather. In all cases the cells in which honey is stored remain unsealed until by the heat of the hive the excess of moisture evaporates and is driven out of the hive; they are then sealed and the honey is deemed ripe. Seeing how difficult it is for a human being to decide when this stage is reached, and the appliances necessary to guide him, it has always been a puzzle how the bee so unerringly decides this question so vitally important to its economy.

The beginner will, no doubt, find it greatly to his advantage, until he has gained sufficient experience to enable him to grasp all the preciseness of the various phases of bee--keeping, to ripen his honey inside the hive; that is, to allow the bees to do so.

Farm Paper is Valuable Literature for Broadening Influence.

A minister of the gospel has given forth the opinion that all preachers should know something about farming, and goes on to say that every pastor should read a good farm journal for its broadening influence. Now what do you people who think farm life narrow and uninteresting think of that? Of course some of us have always considered a good farm paper broadening and uplifting, and we are rejoiced that other people, ministers and professional men and such, are beginning to get inti line with really good and uplifting literature, such as is found in a first-class farm paper. At the present time farm papers have to be first-class and broadening and progressive in order to satisfy the demand of farm people for good agricultural literature. They have to be clean for the reading of the boys and girls in the farm home, and they have to be free from the yellow "atmosphere" found in so many big city dailies, and they have to furnish the information and the inspiration and the intellectual stimulus that the times demand. That is why farm papers are beginning to take first place in the ranks of good reading; and that is why they are being read by ministers, lawyers and doctors and all classes and conditions of men and women in public places, and why they are being recognized everywhere as the very best of high-class reading.—Maine Farmer.

The N. S. A. C. Animal Husbandmen.

Mr. E. S. Archibald, who for the past few years has held the position of Professor of Animal Husbandry and Farm Superintendent at the Agricultural College, Truro, Nova Scotia, leaves during the first week of July to assume his new duties of Dominion Animal Husbandman, with head quarters at Ottawa. He is being succeeded at Truro by Mr. L. S. Stevenson, B. S. A., a graduate of the Ontario Agricultural College in 1912. Mr. Stevenson is a son of Mr. R. S. Stevenson, of Ancaster, well known to many of our readers as one of the foremost breeders of Holstein cattle in Ontario. For fifteen (15) years prior to entering the Agricultural College at Guelph Mr. Stevenson Jr., was in practical management of his father's farm at Ancaster and has, therefore, in addition to his scholastic training, a splendid practical equipment in farm management.

The Agricultural College at Truro seems to be particularly fortunate in the men who have held the position of Animal Husbandry. The very fact that Mr Archibald was chosen for his new position is a sufficient indication of the success he has made of his position at Truro and we have every reason to expect that Mr Stevenson will be able to keep up the splendid traditions of the position which he has now assumed.

The Best Judge of a Thresher Is the Man Who Has Used It

It is not the purpose of this advertisement to tell in detail the merits of the Little Giant Thresher. This is simply an expression of the opinion of a man who has used it, which is, perhaps, better evidence of its superiority than anything we can say. Any reader who is thinking of purchasing a Thresher, will get our descriptive catalogue on application.

Four Horse Thresher.

Description of Four Horse Size

Dimensions of Cylinder - -	17x30
Size of cylinder shaft,	1 1-2 inch
Speed of Cylinder,	900 to 1000 Rev.
Size of Sieve - - -	31x36
Weight not mounted,	1700 lbs.
Weight with wheels etc.,	2200 lbs.

Woodstock, Dec. 12th, 1911.

THE SUSSEX MANUFACTURING CO.
Sussex, N. B.

Dear Sirs:—I can say in regard to your Four Horse Threshing Machines, that I have used many makes of machines, but will say that the Sussex Little Giant is the best I ever used, it runs easy and cleans good and without any waste of grain.

Yours truly,
F. D. BURPEE.

This is just one of hundreds of similar testimonials we have.

We make the Little Giant Thresher in four different sizes: one horse, two horse, four horse and ten horse power.

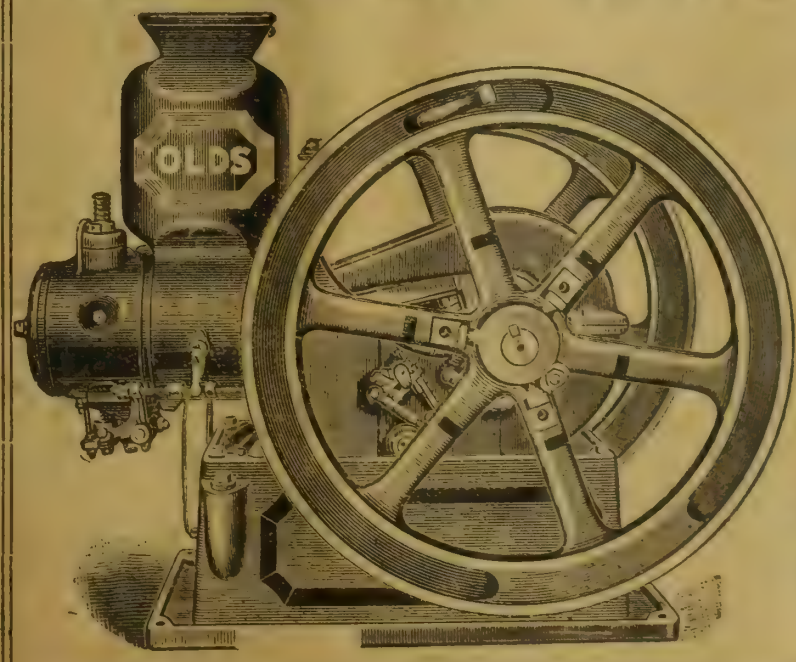
Threshers can be supplied with or without tailings elevator and bagger. Every machine is guaranteed for one year against all defects in workmanship and material. We carry a large stock of Thresher Teeth and other repairs.

All enquiries will receive prompt attention.

THE SUSSEX MANUFACTURING COMPANY, LTD.

SUSSEX, - - New Brunswick.

IMPORTANT ANNOUNCEMENT



We are pleased to announce that we have completed arrangements whereby we become the sole Sale Representatives for the well known OLDS GASOLINE ENGINES throughout the Dominion. These engines are manufactured by the Seager Engine Works---which Company, under the name of the Olds Gas Power Company, was one of the pioneers in the manufacture of Gasoline Engines, and the Olds Engines have come to be recognized as the standard of efficiency among the large number of Gasoline Engines now on the market.

The uses to which the Gosoline Engine can be put to are many, and it has come to be recognized as a very necessary item in the equipment of an up-to-date farm. This latest addition to the Massey-Harris Line is in accordance with our policy of supplying the very best of everything needed by the farmer. More information will be given later---but in the meantime if interested in the Gasoline Engine subject we shall be pleased to hear from you.

Massey-Harris Co., Limited

Moncton, New Brunswick.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

FOR SALE AT A BARGAIN—A Farm of 102 acres. Full particulars given on application to C. W. PHINNEY, Bear River, Annapolis Co., Nova Scotia.

JERSEY BULL FOR SALE—Three years old. Register No. 1254, Dam, Pedro's Sweet Alice; Sire Pogis 40th of Hood Farm. Write EDGAR SHAMPER, Kingston, N. B.

FOR SALE—Pure bred Shropshire ram, lamb's choice stock, prices right, order now for October delivery. LESLIE WALKER, Lower Millstream, N. B.

SINGLE MAN and YOUTH FOR FARM, arrangement by month, or by the year to a good man. State experience and wages expected. R. G. MURRAY, 50 Princess Street, St. John, N. B.

GUERNSEY BULL FOR SALE With great pedigree, direct line through Dam. From Cassiopia, prize cow at the Pan American Model Dairy. WILLIAM COX & SON, Dyke Farm, Canard, Kings Co., N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

MAN WANTED—I want a smart, capable man for general farm work, used to horses and a good milker. Will pay twenty-five dollars per month and board for summer months and would engage good man by year. CHAS. PETERS, Elmhurst, N. B.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shddiac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, St. John, N. B. We are also in receipt of letter from Summerside enclosing eighty cents, and asking for premium Ben Hur or Handy Andy. This letter is also without signature. Kindly notify The MARITIME FARMER office. St, John, N. B.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.
Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No. 1, N. S.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

What the St. John's Newfoundland Agricultural Society is Doing.

A good attendance of farmers greeted the Executive of the Society at the quarterly meeting held recently in the British Hall at 11 a.m., when the quarterly reports of the various Committees—on Live Stock, Machinery, Lime, Milk, Feeds, Fertilizers, Seeds, Literature, etc., were read by the Secretary.

LIVE STOCK.

Fourteen more sheep have been distributed in St. John's East, but only three more in St. John's West owing to the small number of applications received from this district and the difficulty of getttng dogs and sheep to agree together. In St. John's East the majority of the people have signed the petition sent out for the encouragement of Sheep Raising. An effort has been made to encourage the Raising of Ponies. The Board of Agriculture has promised to supply more Agricultural Live Stock including twelve more sheep during the coming quarter, in addition to those to be provided by the Society.

MACHINERY.

More labour saving machinery, such as Potato Diggers and Cultivators, and another Threshing machine or two, will be needed, because the Reapers, Binders, Distributors and Threshers already supplied have given great satisfaction and encouragement. More oats have been grown and threshed during the past season than ever before and greater preparations made for further advancement in this direction.

SEED OATS AND THRESHING.

Five hundred bushels of White Scotch Banner Seed Oats due from Glasgow by the "Mongolian" next week will be supplied to members at cost for ripening and threshing.

FERTILIZERS.

Forty tons of Nitrate of Soda (ten tons more than last year), and the usual quantity of Superphosphate, Dissolved Bone, Sulphate of Potash, Raw Bone Meal and Basic Slag will also arrive by the same steamer. No Sulphate of Ammonia has been imported this year as Mr. Rennie of the Gas Company has informed the Secretary that his Company are manufacturing Sulphate of Ammonia here in the city and would be prepared to take orders for it, and deliver same some time in May. Several members who bought some of Mr. Clouston's fish fertilizer last year found it of good value. The same was said of the fertilizers supplied by Mr. Colin Campbell. The Society is disposed to favour the manufacture of local fertilizers; and there is so much lime stone phosphate rocks silica, magnesia, manganese, potash, etc., the industry should prove a profitable one. Mr. Howley, the Geographical Surveyor, has given good report of these.

LITERATURE.

Over five hundred reports and magazines received from various Agricultural Departments and Boards, including those of our own Board of Agriculture, were distributed to those interested with the hope that those receiving them would speak on the different subjects mentioned, and disseminate some of the valuable information contained in them at the next quarterly meeting. Several members subscribed to the "Maritime Farmer."

The Society also decided to purchase and send out books of instruction on the management of sheep etc., for the use of their Live Stock Keepers.

DISTRIBUTION NOTICE.

It was noted that the Fertilizers and Seeds, including two hundred barrels of "Green Mountain" Potatoes "Irish Cobblers," "Dakota Reds," "New Early Rose," etc., would be delivered at Mr. George Neal's where members should leave their orders for these and the fertilizers; while the orders for small seeds should be left at the office of the Agricultural Board. All the Canadian Field Peas ("white marrow fat,") Timothy Hayseed, Red Clover and Six Rowed Barley, just imported by the Society, have already been engaged. Members would do well to get their orders in to Mr. Neal and the Board during the coming week.

In consequence of the large demand on the continent of Europe for Nitrate of Soda this year, the price has advanced considerably, though the society was fortunate in purchasing early, anticipating this increase.

A suitable quantity of Buckwheat, Barley, Alfalfa and Hayseed, for distribution to members has been received at the office of the Agricultural Board and the Society has twelve bushels of Buckwheat to distribute in May, for the purpose of experimenting in this valuable crop before recommending it generally.

POULTRY AND MILK RULES.

The question of Poultry has been left entirely in the hands of the Poultry Association; and the question of Milk Rules to the Board of Health, the committee appointed on this subject having an assurance from the Government that no laws will be passed making it compulsory on the society to submit to any rules without consultation with the Society and their hearty co-operation.

LIME.

Last, but not least, the question of Lime was considered. The report showed that a committee of the Executive had waited upon the Board of Agriculture on the matter and requested fifteen hundred dollars for the establishment of a Lime-Klin for the Society, and had secured for the farmers, entirely free, a deposit of lime stone, through the efforts of the Executive. The Board had promised to do their best in the matter of a lime-klin and already had under consideraiion the securing of lime at a greatly reduced rate, in the meantime, from the new Lime-Kiln of the D. I. & S. Co., at Port-au-Port.

ABLE SPEECHES.

Mr. S. Bowcock, who had just returnfrom England was asked to address the meeting, which he did briefly and well, and he advised the procuring of some ground limestone, a half ton of whch, he claimed, was as good as two tons of burnt lime, and he presented specimens of it to the executive. He also referred to the fact that the Agricultural Board of England refused to recommend the Tuberculin test for live stock as it was not considered sufficiently reliable.

Mr. Bowcock was heartily welcomed to his post of Honorary President.

Able speeches were also made by Mr. S. Ruby, Mr. P. J. Merner, Mr. H. R. Cook, Mr. E. J. Snow, Mr. Rush and other members, also by the Premier and Mr. Kent, M.H.A.

President Cowan replied thanking the Premier, Mr. Kent, and the members, for their interest in the work, and expressed a wish that more would attend the meetings of the society and help to advance agriculture in this country.

Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

Before After will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle delivered. Describe your case for special instructions and Book 8 E free.

ABSORBINE, J.R., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

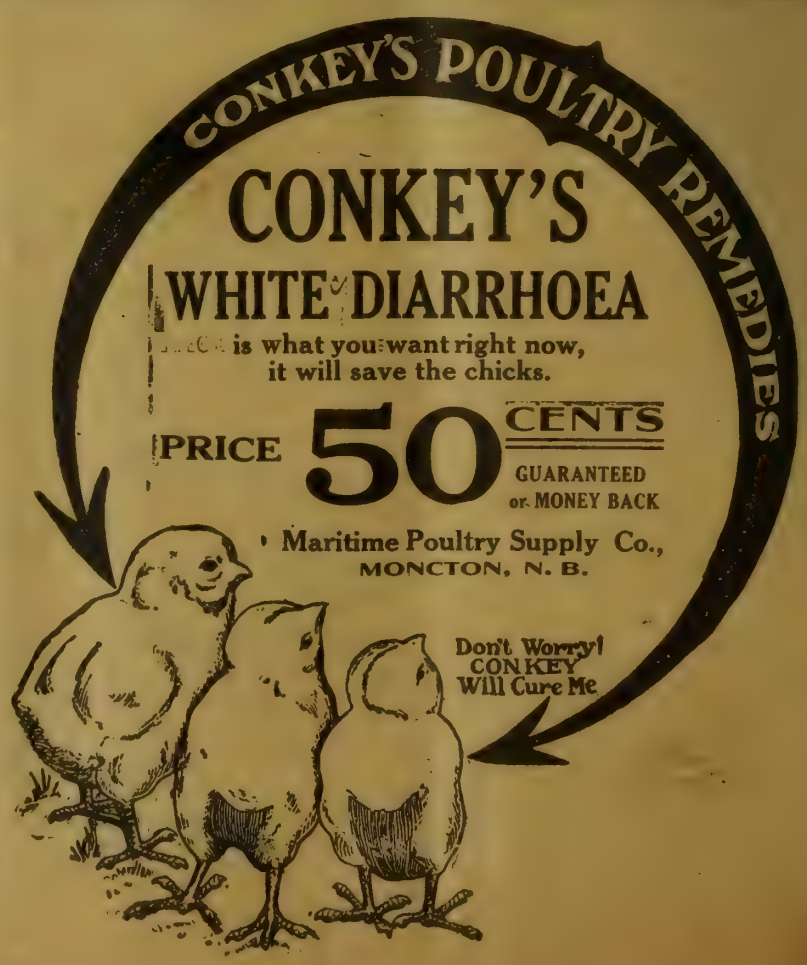
TO RENT

Three farms in Northern New Brunswick, within two and three miles of a thriving town, near cheese factory, churches, schools and a popular Summer resort. Land in good state of fertility, free of stumps and boulders, well drained. Dwellings and all needful out-buildings for dairying, one having a steam creamery plant. Owner removing to a university city. Apply to

B. HARRIS,
Bathurst, N. B.

For soreness of the muscles, whether induced by violent exercise or injury, there is nothing better than Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

When writing advertisers please mention the Farmer.


CONKEY'S POULTRY REMEDIES
CONKEY'S
WHITE DIARRHOEA
is what you want right now, it will save the chicks.
PRICE 50 CENTS
GUARANTEED or MONEY BACK
Maritime Poultry Supply Co.,
MONCTON, N. B.
Don't Worry! CONKEY Will Cure Me

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

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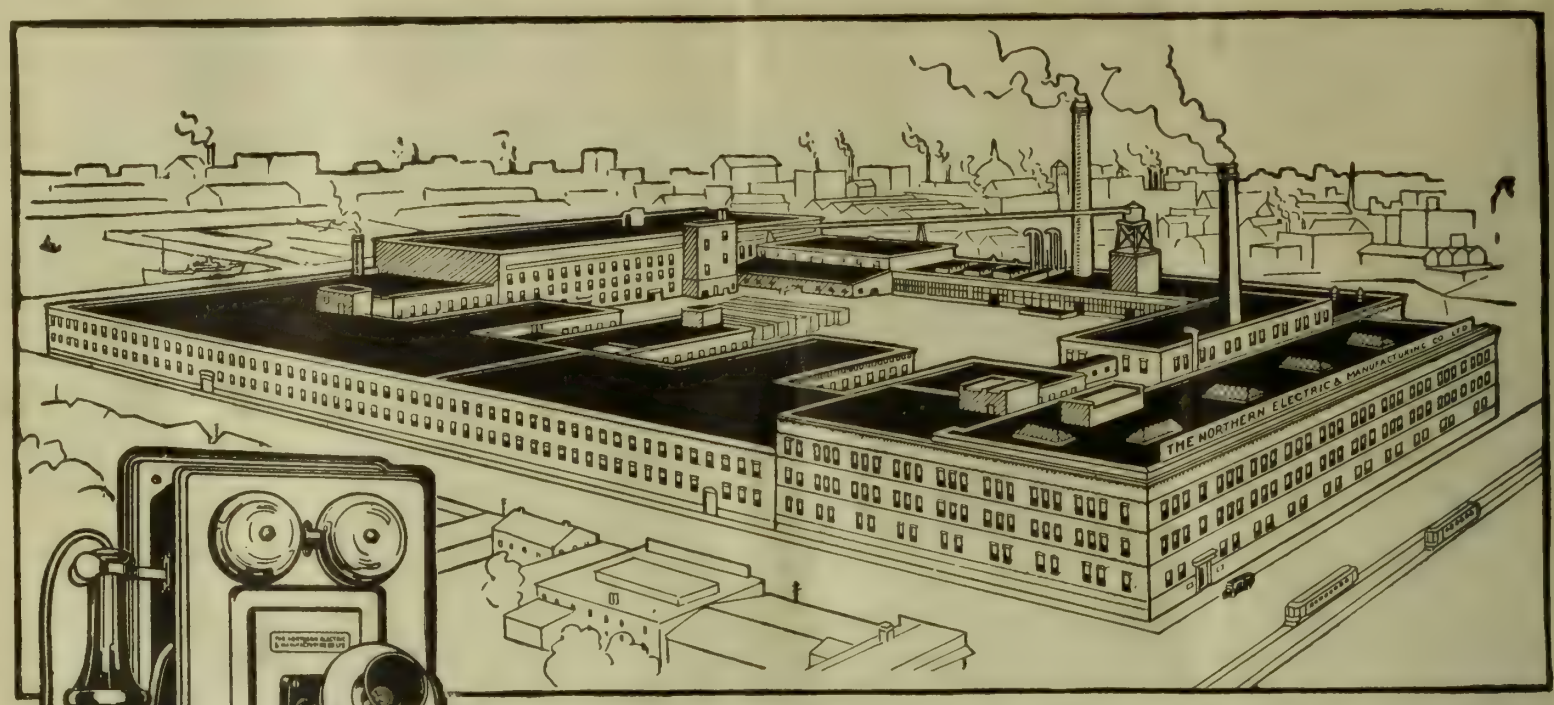

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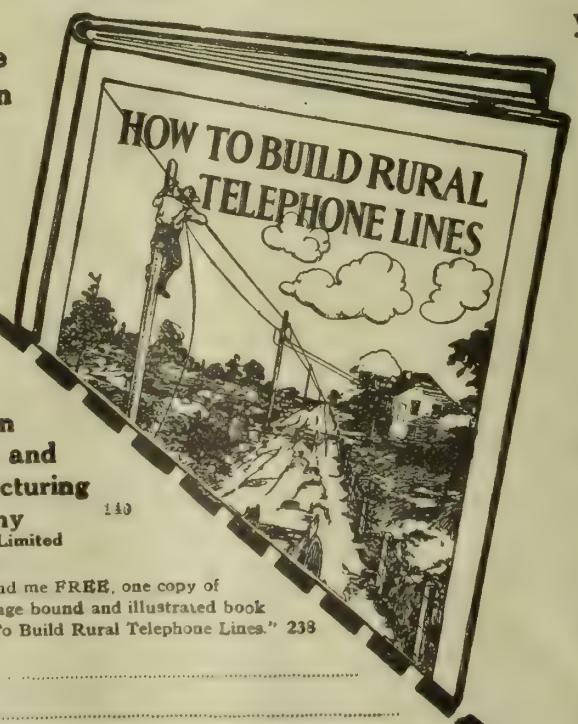

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. ST. JOHN, N. B., JULY 23, 1912 No. 20

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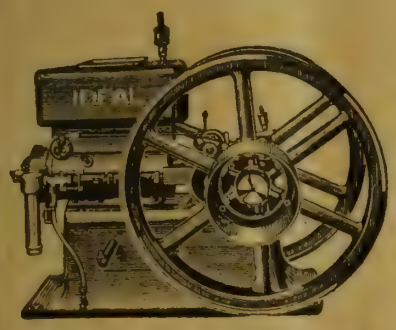

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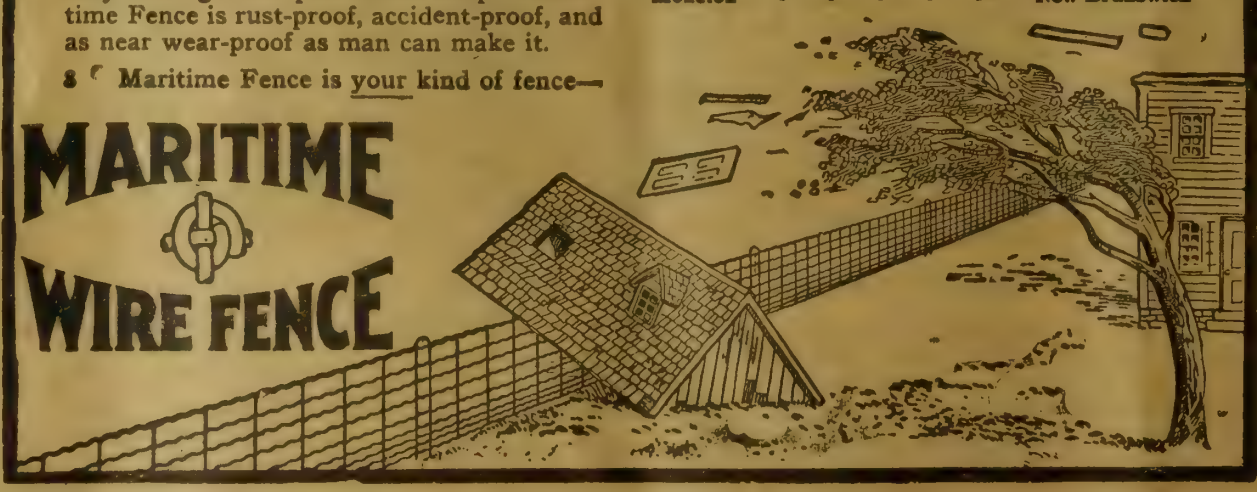

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. ST. JOHN, NEW BRUNSWICK, JULY 23, 1912. Number 20.

Gombating Early and Late Potato Vine Blights.

Spraying an Insurance Against Crop Reducing Fungi and Insect Pests.

IN our last issue we discussed the question of poisoning the Potato Beetle. Reports from various sections of the Maritime Provinces state that potato beetles are quite prevalent this season and in order to save the crop from their ravages it is very necessary that the instructions given in our last issue be closely followed. A great many of our readers have followed a systematic system of spraying for years and to these we would say: follow whatever system you have found, by practical experience, to give you the best results. On the other hand there are many farmers who have never sprayed. Some of them are spraying this year and are undoubtedly more or less guided by what they read of the experiences of other growers.

In this article we deal with spraying as an insurance against early and late blights.

Potato blight is the dying of the leaves and vines before the crop is mature, and as the leaves of the plant constitute the plant's stomach, as referred to in our last issue, as soon as the tops die the tubers cease to grow and there is a tendency for rot spores to begin their ravages on the immature tubers.

Experience has shown that proper attention to spraying is one of the most important factors in successful potato culture. Spraying is, in reality, a form of insurance, and should be so regarded by the grower. There are seasons in which the financial returns from the practice are not large, but in some seasons thorough spraying at the proper time may, and usually does, insure a full and profitable crop where otherwise only failure would result. One writer records on one farm an average gain of over 41 barrels per acre from spraying during 16 consecutive years. Another reports an average net profit of $22.79 per acre during three years on several different farms growing together from 60 to 180 acres. Experiment Stations have repeatedly secured equally good results in tests under average farm conditions.

Vinegar Factory, Bridgetown, N. S.

A Bank of Apples for the Vinegar Mill.

At present our spraying is entirely directed towards the control of the early and late blight and certain insects which feed upon the porato. It is important that the grower should learn to recognize and distinguish these diseases from each other.

Early blight (sometimes improperly called rust) is more common on light, dry soil and in dry seasons. It may appear on the plant at any time after it is about six inches high, and is more likely to attack it at, or about blossoming time. It is a weakling parasite and any condition which places an extra strain upon the growing plant predisposes it to the attacks of the fungus. It appears first as small, dark brown spots scattered over the older leaves. These slowly enlarge and become somewhat angular in shape on account of the fact that they stop on reaching a leaf vein. There is usually a sharp boundary line between the healthy green of the leaf and the spot, although a badly spotted leaf will have a decidedly yellow appearance over the entire surface. Close examination of early blight spots will usually show concentric lines or "target board" markings. Early blight seldom, in any one year, produces so much damage as does the late blight. It is slow but sure and one year with another does a large amonnt of injury to the crop by killing off the foliage before the tubers are mature. Early blight is not known to cause rot of the tubers.

Late blight frequently, appears suddenly and works with lightning rapidity. A field which is apparently healthy today may have nothing remaining but the bare stalks in a week's time. This disease not only kills the foliage but is also responsible for most of the rot of the tubers. Contrasted with early blight it is more of a leaf blotch than a spot disease. The diseased areas are of a lighter brown, there is a gradual fading off from the healthy to the lighter green around the diseased areas. The affected portions are larger and increase in size much more rapidly. No concentric rings are to be seen. The underside of the leaf presents a very characteristic appearance, for the margin of each diseased area has a faint, powdery white appearance due to the formation of the spores of the fungus. This is especially true on the more shaded leaves, or in the early morning or on a cloudy day. Warm, moist, "muggy" weather with frequent showers produces ideal conditions for the development of the leaf blight.

Arsenical or paris green poisoning, sometimes mistaken for blight, produces spots somewhat like those of the early blight, but they are not so sharply marked on the under side and are of

a lighter color, more like those of the late blight. These spots are almost invariably associated with flea-beetle punctures. They are caused by improper use of paris green and may be prevented by applying paris green with Bordeaux mixture or by the addition of two or three pounds of lime (not air slaked) to a barrel of the poison solution.

Spraying apparatus.—There are various types of sprayers but those which appear to find the greatest favor with our growers are the automatic type. These are provided with a pump run by a sprocket chain from the wheel of the cart, and spray from four to six rows at a time. The perfect spraying apparatus has not yet made its appearance. The best that we have today leaves considerable to be desired with regard to adjustment. The manufacturer should send a first-class mechanic into the potato field to study the needs of the grower and then alter his machine to meet them.

The first essential for the effective sprayer is a pump sufficiently powerful to develop a pressure of 60 or more pounds to the square inch and to furnish a constant supply for from four to six double nozzles. The nozzles should be of a type which gives a fine spray or mist which covers all of the leaves evenly with a thin film. Otherwise the material deposited in drops, will tend to run together and fall off. The nozzles should not be attached to a solid iron pipe but should should be so arranged as to admit of considerable vertical and lateral adjustment, being connected with the pump by flexible tubing.

Every machine should be equipped with double nozzles for each row (single nozzles may be used on small plants) and the vertical adjustment should be such that by rising the nozzles sufficiently the bases of the spray cones would cover the entire row. Much of the loss on sprayed fields can be charged to the lack of this adjustment and the use of single nozzles. Field after field was sprayed with this type of a machine and only about one-third of the foliage was protected. Such spraying is worse than useless, for it tends to discredit an efficient remedy.

There should be some provision for keeping the mixture constantly agitated. The working parts of the pump should be of brass and the intake should have a brass strainer. Some of the best machines have a brush attached to the agitator which moves back and forth over the strainer of the intake, keeping it constantly clean.

Bordeaux mixture.—Standard Bordeaux mixture consists of 5 pounds copper sulphate, 5 pounds of lime and 50 gallons of water

The copper sulphate should be dissolved and the lime slaked in separate vessels. The most satisfactory and effective Bordeaux is made by diluting each solution with half of the water to be used and then quickly uniting and mixing the cold, dilute solutions together. Where running water is available an excellent plan is to build an elevated platform, each with a rubber hose attached to the bottom with the open ends suspended above the tops of the barrels. By quickly lowering and placing the free ends of the hose together in the top of the spray tank it is rapidly and easily filled and the solutions are properly mixed at the same time. Where water is taken from a stream the platform can also be used by placing a cheap iron pump on a framework just above the tops of the barrels and having a connecting pipe running down into the stream.

It is more convenient to prepare stock solutions of copper sulphate and lime. For this use two 50-gallon oil barrels. Fill one with water, place 50 pounds of copper sulphate in a clean sack and suspend near the top. The sulphate will then dissolve in a short time. Only wooden or earthen vessels should be used for copper sulphate. In the other barrel place 50 pounds of fresh stone lime, slake as in making whitewash and then dilute in 50 gallons. Each gallon of stock solution will now contain one pound of material. For each tank of mixture stir the stock solutions thoroughly and then dip out five gallons each (equivalent to five pounds of solid material) and make up to fifty gallons as already described.

Do not substitute guess work for weights and measures and do not vary the proportions. If you wish to do more thorough work increase the amount of mixture applied per acre but do not use over 5 or 6 pounds of copper sulphate to 50 gallons of mixture.

To avoid clogging the nozzles it is necessary to strain either the milk of lime solution or the resulting mixture. For this use a brass wire strainer of about 30 meshes to the inch (No. 50). This strainer will work much better if the wire bottom is so arranged as to stand at a considerable angle instead of parallel with the top. In this way the solid particles are washed to one side and clogging is avoided.

When and how to spray.—It should be remembered that spraying is a preventative and not a cure. The object is to kill the spores of the fungus before they have time to germinate and enter the leaf tissue. The writer has seen a number of failures with spraying this season where enough Bordeaux was used but it was not used at the right time. Such spraying is about as effective as applying a fire hose to the outside of a house where the fire is located in the interior partitions.

It is best to begin spraying when the plants are six or eight inches high and repeat every ten days or two weeks, making six applications. The potato growers should observe what weather conditions favor or retard blight and act accordingly. In very wet weather like the present season spraying once a week may be necessary. Do not stop for rainy weather. This is just the time that spraying is most needed. If the mixture has sufficient time to once dry on the leaves it does not wash off very readily. If it does wash off, apply some more, for one spraying at this time may be more effective than several sprayings later. Do not apply a certain number of gallons per acre and feel that your responsibility ends there. Make sure that every leaf is reached and protected by the mixture at each spraying. If your machine does not do this, remodel it till it does, whether it requires 50, 100 or 150 gallons per acre at each application.

Insects.—While the intention of this article is to discuss spraying for fungous diseases, insects are so intimately associated with the question at hand that they cannot be entirely overlooked. By wounding the leaf tissue they increase the avenues for entrance of fungi and lower the vitality and resistance of the plant. They doubtless have much to do with the transference of the spores of fungi from leaf to leaf and from plant to plant. In addition to the Colorada beetle, small flea-beetles often riddle the leaves and make them resemble the cover of a pepper-box. Certain green plant-lice frequently cause much damage by sucking out the plant juices, and grasshoppers may, at times, do considerable injury to the leaves and stems, especially near the edges of the fields. Bordeaux mixture thoroughly applied, is an effective repellent for the chewing insects, especially the flea-beetles and the mature beetles which are not so readily combatted with paris green as are the young "bugs" of the latter species. Paris green should always be added to Bordeaux mixture as long as there is any danger from insects, using from one to two pounds per acre. There is no danger of burning the foliage if the paris green is applied in this way. A good method is to thoroughly mix the proper amount of paris green with the thick lime whitewash and allow it to stand for a time before diluting to make the milk of lime solution. In this way all the free acid which causes the burning is neutralized and the trouble of adding paris green to each tank of mixture is obviated. Some growers claim that to do effective work a little more paris green is required if used with Bordeaux mixture than without.

FIVE YEARS OF POTATO SPRAYING IN NEW YORK STATE.

From a New York State Bulletin we glean the following accounts of spraying tests:

For five consecutive years of testing, potato spraying has proven, each year, a useful and profitable practice. The past season, that of 1906, was in most parts of the State the least favorable of any of the five for the development of the principal potato disease, late blight and rot; yet in nearly all of the eighty tests reported spraying gave good returns for the money expended and labor applied.

Early blight was somewhat more destructive than usual and a few fields suffered quite severely from this disease; but this trouble rarely causes such havoc as is often wrought by late blight and the rot that follows it. Against early blight, however, spraying is not considered a specific, as it is against late blight; but in fields where this blight prevailed and where sprayed and unsprayed rows both showed signs of infection, its severity was decreased by spraying; so that digging time showed distinct gains from the application of bordeaux mixture.

Another unknown trouble was also a cause of injury in several localities. While the cause of this brown, curled appearance of the leaf margin was not determined, it much resembles tip-burn. Though probably a physiological trouble due to the hot dry weather in August, it was to some extent controlled by spraying since treated rows showed less signs of injury from this cause than those unsprayed.

Flea beetles were present in many of the fields; and these were quite well controlled by the bordeaux and poison. In one or two instances a larger flea beetle threatened damage but was held in check by the spraying.

Late blight began its attack early, —in late June on Long Island and about the middle of July up the State. It seemed liable to be very destructive; but a period of hot, dry weather in August checked its inroads; so that, as already stated, the damage from this blight was less than at any time during the five years of the tests. Consequent upon this checking of the blight there appeared to be a greatly lessened power to produce rot, for very little of this trouble appeared, even where the later weather conditions were favorable. There were very few rotten potatoes anywhere in the State.

Though the season as a whole was, therefore, a poor one for showing the advantage of spraying in its strongest point, protection against late blight, it did bring out the advisability of spraying to control other troubles; for two only out of eighty tests failed to show increased yields and only four or five failed to show financial profit.

STATION TEN-YEAR TESTS.

The ten-year tests were continued by the Station, as in 1902, 1903, 1904 and 1905, in two localities, Geneva and Riverhead. The same plan was followed, of single-row treatments (not sprayed, sprayed three times and sprayed every two weeks) repeated in series throughout the plat so that the area devoted to each method of treatment was one-tenth of an acre. The spraying was done with a knapsack sprayer, very thoroughly. 'Bugs" (Colorada potato beetles) were kept in check by the use of poison with bordeaux mixture on sprayed rows and by poison in lime water on "unsprayed" rows.

The yields were fair at both Geneva and Riverhead but, for reasons already given, only moderate gains were secured from the spraying. At Geneva, the "unsprayed" rows (sprayed with poison, only, to protect from "bugs") yielded at the rate of 195 2-3 bu. of marketable potatoes per acre; those sprayed with bordeaux mixture three times during the season, at the rate of 227½ bu.; and those sprayed five times, at the rate of 258 2-3 bu. That is, three sprayings with bordeaux mixture gave a gain of 32 bu. per acre and five sprayings a gain of 63 bu. The two additional sprayings, which practically doubled the gain, were equivalent to one double spraying, since the bordeaux applied August 20 was washed off by a heavy rain before it dried and a second application was made the next day.

At Riverhead the unsprayed rows yielded at the rate of 150⅔ bu. per acre, those sprayed three times 172 bu., and those sprayed five times 203⅔ bu. It will be noticed here also, that the two additional sprayings were of decided advantage, since three sprayings gave a gain of only 21⅓bu., while five sprayings more than doubled this gain,—53⅓bu. per acre: There was no rot either at Geneva or Riverhead.

The following table shows the results obtained in the ten-year experiments during the first five years:

TABLE I.—SUMMARY OF THE TEN-YEAR EXPERIMENTS FOR FIVE YEARS.

	At Geneva.		At Riverhead.	
YEAR	Gain per A. due to spraying every two weeks.	Gain per A. due to spraying three times.	Gain per A. due to spraying every two weeks.	Gain per A. due to spraying three times.
	Bu.	Bu.	Bu.	Bu.
1902	123½	28½	45	27⅔
1903	118	88	56	39½
1904	223	191	96	56½
1905	119	107	82	31½
1906	63	32	53	21½
Average	123	103½	66⅓	35⅓

FARMERS' BUSINESS EXPERIMENTS.

The farmers' business experiments carried out in 1903, 1904 and 1905 and reported in Bulletins Nos. 241, 264 279 proved very helpful. The good results secured in most of these tests proved, not only to the neighbors of those making the tests, but to hundreds of others who read the reports, that potato-spraying is simple, not requiring the services of an expert but well within the ability of the average farmer, is effective and is likely to be profitable.

It was thought best, therefore, for the Station to arrange for similar tests in 1906. Fifteen growers who were intending to spray co-operated

with the Statian in such work, and carried out the tests. The growers furnished apparatus and materials and did the work as best suited their own plans. Each experimenter was required to leave a few rows unsprayed in a representative portion of the field. The Station merely gave advice when asked to do so and supervised the harvesting sufficiently to obtain an accurate measure of the effect of the spraying. A row or more in the unsprayed strip was compared with a similar row or rows in the sprayed section. Usually the yield of the center one of the three unsprayed rows was taken as the measure of the yield of unsprayed potatoes; and the average of two sprayed rows (the second sprayed row on each side) as the measure of the yield of sprayed potatoes.

The profit in each case, in this table and the next one, is based upon the actual market price of potatoes at digging time in the nearest or customary market of the grower.

As will be seen from the table, these tests were all on a large scale, 5 acres being the smallest area sprayed. The fact that there was an increase in yield from spraying in each experiment shows clearly the widespread occurance of potato troubles preventable by spraying; but the smaller average gain, 42½ bushels per acre, and the increased cost of spraying both tend to lessen the profit. Yet in every case there was some gain.

NEW REASON FOR SPRAYING.

The eating qualities of spraying, their flavor and meanliness, are largely due to the amount of the starch present in the potatoes. The more starch the potato contains, the better seem to be all its qualities, keeping as well as edible. The Maine station has shown as the result of many experiments, that potato plants sprayed to prevent being weakened by bugs and blight are considerably richer in starch than the unsprayed. Even more striking results were obtained in Norway. Potatoes of ordinarily good quality contain 12 to 20 per cent. of pure starch. "Starch accumulates most rapidly when the plant is maturing. Theoretically, anything which prolongs the growing season ought to increase the amount of starch which will be stired up in the potato; hence, if vines sprayed. . . live longer than those not treated, not only should the yield of potatoes be larger, but the percentage of starch should be higher."

As the Maine station says, if the increased quantity of starch "found in the sprayed over unsprayed potatoes was due to the treatment of the vines (and no other explanation suggests itself), this alone is a strong argument in favor of spraying."

NORTH WALES EXPERIMENTS.

As a result of four years' experiments carried out by University College of North Wales, Bangor (Agricultural Department), the following directions for spraying potatoes have been drawn up:—A dressing sufficient for 1 acre is 24 lb. sulphate of copper (98 per cent pure), 30 lb. pure washing soda, 120 gallons of water. Washing soda is recommended in preference to lime. To meet the difficulty of dissolving the above quantity at one operation, the mixture should be prepared in a wooden vessel which will hold 25 gallons of water. First wash out this vessel thoroughly, and pour into it 15 gallons of clean water;(then take 4 lb. of sulphate of copper broken to a fine powder; place it in a canvas bag, and stir it about in the water until the sulphate of copper is all dissolved. Next dissolve 5 lb. of washing soda in 5 gallons of water in a separate tub; then pour the washing soda solution into the sulphate of copper solution and stir well. The mixture should then be tested with blue litmus paper; If the litmus is turned red more washing soda should be dissolved and steadily added until fresh litmus paper put into the solution remains blue. The quantity of material thus prepared is sufficient for one-sixth of an acre. As the nozzles of spraying machines are easily choked, the mixture should be poured into the machine thtough a canvas cloth. Spraying should be done about the end of June or beginning of July, and again in about three weeks.

Plots sprayed with the above mixture showed in all cases a marked increase in the quantity in marketable potatoes raised, as will be seen from the annexed table:—

YEAR	CENTRES	Average weight of marketable potatoes.											
		Unsprayed			Sprayed once (early)			Sprayed twice			Sprayed once (late)		
		T.	C.	LB.	T.	C.	LB.	T.	C.	LB.	T.	C.	LB.
1908	5	7	19	94	9	8	75	10	1	10	8	18	108
1909	7	10	4	57	10	19	43	12	17	12	12	10	94
1910	9	7	17	77	9	8	106	10	5	20	9	4	108
1911	11	12	2	88	12	14	89	13	7	16	13	7	97

DIRECTIONS FOR SPRAYING.

In general, commence spraying when the plants are six to eight inches high and repeat the treatment at intervals of 10 to 14 days in order to keep the plants well covered with bordeaux throughout the season. During epidemics of blight it may be necessary to spray as often as once a week. Usually six applications will be required. The bordeaux should contain four pounds of copper sulphate to each 50 gallons in the first two sprayings and six pounds to 50 gallons in subsequent sprayings. Whenever bugs or flea beetles are plentiful add one to two pounds of paris green or two quarts of arsenite of soda stock solution to the quantity of bordeaux required to spray an acre.

Thoroughness of application is to be desired at all times, but is especially important when flea beetles are numerous or the weather favorable to blight. Using the same quantity of bordeaux, frequent light applications are likely to be more effective than heavier applications made at long intervals; e. g., when a horse sprayer carrying but one nozzle per row is used, it is better to go over the plants once a week than to make a double spraying once in two weeks. A good plan is to use one nozzle per row in the early sprayings and two nozzles per row in the later ones.

Those who wish to get along with three sprayings should postpone the first one until there is danger of injury from bugs or flea beetles and then spray thoroughly with bordeaux and poison. The other two sprayings should likewise be thorough and applied at such times as to keep the foliage protected as much as possible during the remainder of the season. Very satisfactory results may be obtained from three thorough sprayings.

A single spraying is better than none and will usually be profitable, but more are better. Spraying may prove highly profitable even though the blight is only partially prevented. It is unsafe to postpone spraying until blight appears. Except, perhaps, on small areas, it does not pay to apply poison alone for bugs. When it is necessary to fight insects use bordeaux mixture and poison together.

TABLE II.—SHOWING RESULTS OF BUSINESS EXPERIMENTS IN 1906.

EXPERIMENT.	Area sprayed	Number of times sprayed	Increase in yield per acre	Total cost of spraying per acre	Cost per acre for each spraying	Net profit per acre
	A.		Bu.			
Chafee	10.4	5	49.8	$4 70	$0 94	$15 23
Silver Springs	22	6	80.1	5 67	94	22 35
Batavia	18	6	19.6	5 52	92	3 28
Avoca	13	5	29.1	4 74	95	6 92
Odessa	7.5	5-6	47.5	6 90	1 15	12 10
Nichols	17	9	60.	8 47	94	18 51
Cortland	8	5	18.3	5 10	1 02	4 05
Memphis	9.5	4	19.4	2 85	71	4 92
Ogdensburg	6.5	5	41.7	6 00	1 20	14 87
Chateaugay	25	4	42.3	3 24	81	13 68
Peru		4-5	31.5	3 34	73	9 26
Hebron	5	3	75.6	4 24	1 41	26 02
Woodbury	8.7	3	36.3	3 84	1 28	19 76
Riverhead	45	4-5	7.5	3 44	82	66
Sagaponack	21	10	80.8	9 62	96	36 87

Total area sprayed in fifteen experiments, 225.6 acres.
Average increase in yield per acre, 42.6 bushels.
Average total cost of spraying per acre, $5.18.
Average cost per acre for each spraying, 98.5 cents.
Average net profit per acre, $13.89.

The following table shows the results of the farmers' business experiments for four years, 1903 to 1906 inclusive.

TABLE III.—SHOWING RESULTS OF BUSINESS EXPERIMENTS, 1903-1906.

YEAR.	Number of experiments.	Total area Sprayed	Average incaease in yield per acre.	Average total cost of spraying per acre.	Average cost per acre for each spraying.	Average net profit per acre.
		A.	Bu.			
1903		61.2	57	$4.98	$1.07	$23.47
1904	14	180	62.2	4.98	.93	24.86
1905	13	160.7	46.5	4.25	.98	20.04
1906	15	225.6	42.6	5.18	.985	13.89

Average net profit for four years, $20.51 per acre.

Supplement the Pasture.

There is no better ration for milch cows than pasture grass in sufficient quantities; but during the late summer and fall, before the cattle are housed for the winter, it is apt to fall short of furnishing the needed amount of nutrition for maximum results; especially if it happens to be a dry season. Pasture grass is nearly a balanced ration of itself when grown under favorable conditions and it is a waste of money to supplement it with other feeds; but during the latter part of the summer and fall, I believe it has a far different composition from what it has during the spring and early summer.

As the season progresses it naturally becomes more mature and then I believe the composition also changes, due to the more unfavorable conditions. Favorable growing conditions certainly improve the composition, at least as far as the feeding value is concerned. The same variety of potatoes or any crop may be planted on different soils yet one be of excellent quality while the other is not fit to eat. Then it is a well known fact that feeds greatly influence the quality of beef and pork. On some feeds the beef will be of the very best quality, while on other feeds the same meat would be tough and of a far different quality. It is somewhat the same with pasture grass. During the spring and early summer the favorable growing conditions produce it in a tenderness, palatability and amount of nourishment that the same grass does not possess in the late summer.

Then at this time cattle seldom eat sufficient quantities of it to constitute a well-balanced ration. Often it is short and dry and they will eat only enough to satisfy their hunger. As a necessary result, the milk flow falls off nearly one-half. It is no simple matter to maintain a normal milk yield during this period and the cause, I believe, is largely due to the food supply and of the cattle not eating enough to supply the needs of normal milk production.

If one can maintain the milk flow by supplementing the pasture, and the extra milk produced leaves a profit over the cost of the added expense, it is a wise idea to add to the pasture ration. Green sweet or field corn helps wonderfully. The cows like it and will eat all they can hold of it, if it is given to them. There may be more profit in feeding part of it to them to help out the pasture when it is short than later in the winter. One must begin the feeding of it gradually and not overfeed at first, as an overfeed when they are not used to it may cause serious trouble.

One objection to the feeding of a green feed to supplement the pasture is that the cattle become inclined to depend too much on the green feed and graze but little in the pasture. While green pasture grass is a balanced ration, corn in the same stage is not, and needs a little grain ration to furnish the part of the ration in which it is deficient.

It is a mistake to let cows fall off in yield if it can be avoided, as it is hard to get them back again. When grass gets stunted in midsummer and then the change to dry feeding with grain soon comes, it has a tendency to keep the yield down, unless the animal has been prepared for the change by a liberal ration. Many careful feeders, who make a study of winter feeding and who know that pasture grass is a balanced ration are apt to abuse the knowledge, taking it for granted that it continues to be so throughout the season. For maximum profit, no one part of the milking period can be neglected, and when pasture needs a supplementary feed in the late summer and fall it should be furnished to the cows.—Lynford J. Haynes.

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JULY 23, 1912.

DATES OF ISSUE.

August 13-27
September 10-24

BRAIN BETTER THAN MUSCLE.

Dynamite is one of the new discoveries for reducing labor on the farm. Instead of digging out stumps, as was once necessary, this hard work is easily and quickly done with dynamite. But this is not all; impervious subsoils are opened up, soils with whiterock near the surface are deepened and made suitable for growing larger crops. Instead of digging deep holes for fruit trees with the spade, where there are boulders, this may be done with dynamite.

The objection to farm life upon the ground that there is too much drudgery is disappearing. With improvements in labor-saving machinery, the use of better teams, automobiles, dynamite, stump pullers, gasoline engines, and dozens of other late inventions farm life has been elevated to a pleasant occupation where brains are more essential than muscle.

SUCCESSFUL EEFORT.

A good farmer has great influence in his community for better methods of farm management. His methods will be adopted, his plans followed and his views become common sentiment. Even those who denounce his methods as impractical and unworthy of consideration are moved to relent when it is seen that this man makes a success on his farm. Perhaps many of his plans are copied unconsciously, or at least slightly modified, so that the originator will not be credited with giving them. But this in no way reduces the value of the successful man's influence. His work bears fruit, not alone on his farm, but alike on the farms of his neighbors, for successful effort will convince the most obstinate.

TAKING UP FARMS.

The last issue of the Royal Gazette contains a list of thirty five applications for homesteads on crown lands in New Brunswick, showing that the forward movement includes an increase in the number of people turning their attention to agriculture.

CUT TIMOTHY HAY EARLY.

Cut timothy when the first bloom begins to fall if you want the most palatable forage. Where the greatest tonnage per acre is desired it may be permitted to remain a few days longer, The early cut timothy, however, is more palatable than that cut late. Horses will eat it up completely, and a larger proportion of it is utilized. There is nothing new to be told about cutting timothy hay except to call attention to the fact already noted. That is don't let it become too ripe. Ordinarily it is possible to start the mower early in the morning. By 2 o'clock on small fields it is possible to rake it up in windrows and have it in shocks by nightfall. Here let it remain for a day or two unless there is danger of damage from storms. Then it can be baled or stacked or put in the barn. Where large areas are harvested, the large loaders and hayforks are employed. In no other way can the crop be properly handled.

It must not be forgotten that timothy hay is not in good standing with the scientific agriculturists. This hay has been "knocked" for so many years that the man who wants to be known as an up-to-date farmer will scarcely admit he he has timothy on his place. It contains little protein, according to the experiment station men. It isn't a balanced ration. It is a poor yielder, and has committed many other sins; but in spite of this, timothy cut at the right time and cured in the proper manner is a mighty good horse feed, as anyone who has had large experience in horse raising is ready to testify.

THE HIRED MAN-

Help is easier to get on farms where conveniences are most plentiful. Men do not like to use awkward implements or do walking when it can be avoided. Farm hands like to work on farms are progressive. Wages are not all that the hired man cares for, He likes a good home as well as the rest of us and thrift, comfort, convenience and a peaceful family all are inducements to the man you want.

These things should all be carefully considered and brought to the highest state of perfection. It pays to take a permanent hand into partnership to some extent. He will then feel like a partner and not altogether a drudge. This scheme makes wages less and still the hand is better paid and better satisfied. The partnership need not be extensive but a small interest in stock, poultry or crops gives the hired man a big interest in everything.

SIR WILLIAM'S ADVICE.

Sir William Van Horne has joined the New Brunswick boosters' Club. At least that is inferred from the fact that Dr. L. P, Jacks of Oxford, England after looking over Canada for a suitable location for a large fruit farm, has come to New Brunswick having been recommended by Sir William to do so. Dr. Jacks has fixed upon a six hundred farm at Hampstead, Queens County as a desirable location, It is his intention to settle his five sons upon the farm. New Brunswick as a fruit growing province is attracting more and more attention. A. G. Turney, provincial horticulturist, set out recently to select sifes for the commercial orchards which are to be established under his direction by the Boards of Trade of St. John, Moncton and other towns in the province.

SUMMER CULTIVATION.

The theory of the dust mulch made by shallow cultivation is that as plants approach maturity they need a great quantity of water, and as at that particular time rainfall is generally deficient, it is necessary to conserve or save the water in the soil and evaporates unless the surface is broken by cultivation. As plant roots by this time are filling the upper few inches of the soil, it is necessary to cultivate as shallow as possible, so as not to injure the root system.

Keep the cultivator going so as to maintain a dust mulch, especially after a heavy rain that has packed the soil. Weeds of course, should be kept down, but cultivate whether fields are clean or not, if necessary to break a crust after a beating rain.

EDITORIAL NOTES.

Faults in a herd can be eliminated most quickly by careful breeding and selection.

A concrete tank will not spring a leak and at the same time it will always be ready for use.

The consumer is looking for the kind of eggs that he will not be affraid to eat with his eyes shut.

A showyard cow which is a great producer of milk and butter is the easiest animal in the world to sell. Why not breed for her.

Some people think that the dry cow needs no care but those that make the best records have the best care during their period of rest.

The farmer who can tell just what it costs to produce and market a crop is not so very common but when you do find such a man you find one who is a success.

How much is it worth to you, brother farmer to be your own boss? Did you ever set it down among your assets? Think about it, whenever you become a little discouraged over your prospects.

Your wife is entitled to a fair share of the labor-saving equipment. Her work is more important than yours because she maintains the home and trains the children for society. The success of the home depends on the way it is kept.

The boy's place on the farm should be bigger than merely following the plow, the harrow and the binder if he is to be kept on the farm. He should have a voice in the planning for the season's work and be allowed some blooded stock to raise for his own.

It is the young men who have gone through college and have returned to the farms who are changing conditions, They have the benefit of contact with business activity, together with the training to think quickly that promises well for the improvement of the farms.—Country Gentleman.

Every dollar spent in buying needed equipment for the farm is an investment that the farmer should be glad to make. It is the duty of every farmer to keep posted upon new implements and whenever one is found that saves labor and brings returns buy it for his farm. A man progressive enough to look for needed equipment seldom finds any difficulty in finding cash to buy it.

Wage an increasing war against flies. As a precautionary measure, keep the stables clean. This means that the stalls must be cleaned out often and some kind of disinfectant used. If you can not for any reason spread the manure over the land promptly, the pile should be screened to prevent flies from breeding in it. Keep the premises free from garbage accumulation and exercise caution in making hog pens sanitary.

Farm life is often spoken of as monotonous but is there any reason why it should be? The environment of farming is far more varied, more interesting and more attractive than city life. Those who must sit at a desk in a shower of dust and endure heat during summer and dreary weather in winter for from 8 to 12 hours a day may find life monotonous, not the farmer surrounded by nature in all her charm.

Keep Pace With Prosperity.

Editor the Maritime Farmer:

The rotation and variety of crops is a most important subject for discussion amongst farmers, and we continually hear of some new system being advocated.

In our Island Province a six or seven year rotation has, until the last few years, been followed by a large majority. This did not include very much roots and corn as there was only a limited quantity of manure being made. The foregoing system was an easy one to follow and did not require much labour in applying large quantities of manure or harvesting heavy producing crops. An independent farmer has often practiced such for years, and as it required little labour and expense he could have a comparatively easy life and often save considerable money.

Now, we are all agreed that a special line of live stock farming, that will yearly increase the producing and earning power of the farm, and give employment to a greater number of people must be better for the Country, and a better paying line for the farmer, rightly operated; but it is much more complicated, as more capital is invested and it certainly requires greater skill to operate successfully.

A fairly large farm, althohgh in a rather poor state of fertility, is often operated so as to earn more clear money for the owner than a smaller, more fertile and more intensely cultivated farm. The reason is this: the smaller farm, handling a variety of heavy producing crops, invariab,y has more machinery and and a much heavier expense in upkeep in proportion to its earning powers than has the large farm. It has always been my opinion since giving the subject much thought, that the farms of the future must grow larger instead of smaller. When we have once gathered together the machinery necessary to work a 100 acre farm, and the necessary farm buildings and fencing for same, we will find that we could work a 300 acre farm without the addition of any cost excepting labour.

It requires, and it pays us to buy a great variety of machines for our different kinds of work even if the same machines are only used a few days in the year. They are a great expense, but the manual labour they save is still more expensive, so we must make arrangements so these machines can do a greater service.

An account was published lately in one of our Canadian fari papers of a census conducted in Tompkins County in the U. S. to determine which system of farming was paying the operators the greatest clear amount for their work. Many comparisons were made and much valuable information secured, and in almost every instance the larger farm earned more than the smaller farm, even when the smaller one was better managed. So it would seem that the greatest profit can only be made where large farms are brought under one manager and by having the necessary help to work the farms. When handy to a good home market small farms can certainly be most profitably worked growing vegetables, fruit, poultry and other products. Vegetables are very costly to carry any distance, and only when the prices are high can they be carried far. But vegetable growing at present prices must be a splendid paying line of farming and it has always been a wonder to the Islander why Nova Scotia farmers who can secure much better prices do not grow sufficient to supply their own home markets.

With the price of almost every product grown or raised upon the farm steadiiy going up in value it is surprising to see such an indifference, such a lack of enterprise shown by so many farmers in not rising to meet the demand, and is preparing to enlarge their production, as a manufacturer would who found his business growing. How many men do we see year after year content to keep the old farm growing about the same yield of crops anh carrying about the same slim number of cattle indifferent to the fact the land they occupy could be made to double its production, at least, every ten years, for many years to come, that if they were living up to their opportunities each season would see them with a larger standard of stock of whatever kind they specialized in, and would find the farm increased in value.

However, many such men living carefully and making the most of the little they are producing are prospering and saving a little money, and do not see the need of any greater effort in their particular case. But the trouble is many others whose circumstances are not prosperous and are forced to make large yearly revenues are held down by following their example. Thus we must always remember, no line of farming that reduces the fertility of the farm is as good for the farmer as it looks to be, and any line that increases the fertility of the soil is always better than it looks to be. We cannot easily estimate the difference between a really fertile and a moderately fertile larm. There is a wealth of satisfaction in an abundant crop, in watching its development, in assitting its growth.

What man, women or child does not take delight in caring for fine looking animals in live stock of all kinds? The keeping of superior stock often keeps superior boys on the place and always makes far more intelligent farmers. This does not necessarily mean pure bred stock, because they are often beyond the means of many farmers, but everyone can have high-class grades. Grading up with pure blooded sires through the co-operation of farmers associations is a remarkably cheap way of getting into good stock, the equal often (for commercial purposes) of pure breds. It seems discouraging the indifferent ways many farmers are going about this work. There are so few instances where any breed is persistently followed in graded up long enough to establish a type or character in the herd, and for this reason very few farmers are sharing in the high prices offered for good grades of the different lines of live stock. Some improvment in this respert is being made but much too slow to keep pace with the prosperous times we are at the present experiencing.—W. M. Lea, Victoria, P. E. I.

The Conditions Essential for the Most Successful and Profitable Growth of the Clovers.

The following paragraphs we have taken from Bulletin No. 134 of the Massachusetts Experiment Station:

1. Soil conditions.—Successful clover growing is impossible unless the plants will thrive upon a considerable variety of soils as regards texture and composition, but for the best results a deep, mellow and fairly retentive soil which is well drained is essential. Clovers will absolutely fail if there is any considerable portion of free acid in the soil, or in farmer's language, if the soil be "sour." If blue litmus paper in contact with moderately moist soil turns red as it absorbs the moisture, this is an indication that the soil is sour; but the farmer will be wise if, before incuring any considerable expense for the correction of acidity, he makes a careful test for himself. One of the best farmer's tests can be carried out as follows: Take two small plots of land in a field supposed to possess "sour" soil, and plow them both. Plots containing about one square rod each will be sufficient. They should, of course, be located in a representative portion of the field. After plowing, spread about twenty pounds of builders' lime or R. R. agr cultural lime on one of the plots. Work this lime in deeply with the wheel harrow, then manure or fertilize both plots alike and heavily, and plant table beets. If the soil is sour, these beets will grow much better on the plot to which the lime has been applied than on the other, and it is safe to conclude that a heavy application of lime will be essential before clovers will flourish. If the experiment indicates that lime is essential, it will probably be needed at about the rate of one ton to the acre; the weight referred to to be taken before slacking. If air-slacked lime is used, 1½ ton to the acre will not be too much. The best season for applying lime is autumn or early spring. As a rule, it should be spread upon the plowed land and deeply worked in with the disc harrow.

2. The Use of Much Manure Inexpedient.—The writer is aware that splendid clover is often grown where the land is heavily dreesed with manure. He is not disposed to deny the possibilities of producing fine crops of clover on manure alone. He would, nevertheless, urge that manure alone be not depended upon as a means of enriching clover land. The leading and most valuable element of plant food in manures is nitrogen. The application of this for clovers in any considerable amounts is unnecessary. If clovers are grown on manures, they will feed upon the nitrogen in the manure; they will not draw from the air for that element.

Growing clover upon manure, therefore, is not the best economy. Moreover, it is important to point out that the grasses with which clover is most generally sown are greatly invigorated by heavy dressings of manure. A strong, rank growth of the timothy and redtop will tend to crowd out the clover. Fine crops of hay may be produced, but it will not be clover hay, nor rich in clover. The writer would not be understood as urging that manure should never be used on land which is being prepared for clover, although he would strongly advise against topdressing clover with manure. On soil which is naturally poor in nitrogen, manure may wisely be used in moderate amounts for crops preceeding clover. Heavy dressings would be a mistake. It is far better to use the manure in only moderate or small amounts, and to use it in connection with materials which will supply lime, phosphates and potash.

3. The Supply of the Mineral Element of Plant Food should be Liberal.—We should not forget, in considering the best means of growing clover, that the stock of nitrogen in the air, from which it is capable of drawing, is practically unlimited. The more of this nitrogen we can gather in the crop and in its roots and stubble, the better. In a certain sense, this trapped atmospheric notrogen is so much clear gain. In considering this point, it must be remembered that the clover plant, like other plants, must take the different food elements in a certain balanced proportion. Though the nitrogen the clovers need is practically unlimited in amount, they cannot make a heavy growth unless provided with a great abundance of the elements which they must take from the soil.

It is clearly unwise to lessen our chances for gathering the valuable element nitrogen from the air through failure to supply the soil elements in adequate amounts. The rule, then, in preparing for clover or in topdressing lor clover should be to supply the phosphates, potash salts, lime and possibly magnesia in great abundance. With these present in abundance, and with a soil of such a character that it will furnish suitable conditions and supply the needed moisture at critical times, enormous crops of clover may be produced.

4. The Co-operation of Bacteria is Essential.—One of the most important discoveries of recent times is the now generally known fact that the presence of certain bacteria, living in symbiotic relations with the clovers and other members of the clover family and found in nodules on their roots, is essential in order that these plants may draw upon the air for nitrogen. The nodules, which in the case of clovers, indicate the presence case of clovers, indicate the presence of suitable bacteria, are whitish, more or les elliptical bodies, of about the size of the head of a small pin. These grow singly or in small clusters, mainly on the smaller roots. They can be readily found by taking up clover plants, grown under proper conditions, with care not to break off too many of the small roots.

Bacteria, as is generally understood, are plants. They are very minute. The bacteria themselves are the veriest dust of the dust. As might be supposed, therefore, they appear to be very widely and freely disseminated, and probably through the air. The slightest currents of air must carry them. The dust from a freshly turned clover sod must contain countless millions of them. In certain quarters it has been urged that failures to produce good clover are frequently due to the absence of suitable bacteria, or to their presence in insufficient numbers. Certain experiments with sterilized soils in Amherst indicate to the writer that clover bacteria are everywhere; and it is not his belief that failures to produce satisfactory crops of clover in this state can often, if indeed they can ever, be attributed to the cause under consideration.

The writer has never seen a case where, if a soil be brought into proper condition as to drainage and freedom from acidity, and well stocked with phosphates and potash, clovers have failed to grow; and he has never observed clover plants in any locality and failed to find an abundance of nodules on their roots. It is, however, of course a possibility that there may be localities where it will pay to inoculate the soil designed for clover with suitable bacteria. This inoculation may be carried out in either of two ways. First, soil from a locality where clover thrives and where the nodules are known to be abundant may be scattered over the field where the clover is to be sown, and immediately harrowed in. Five or six hundred pounds of such soil per acre will be sufficient. Second, a culture of the proper species of bacteria may be used in accordance with directions which will be furnished with it. Such cultures may now be procured from the Agricultural College Laboratories.

These cultures are known by the name of nitro culture; but, as each species of the clover family must have its own species of bacteria, it is necessary in ordering to name the plant for which the nitro-culture is needed, as well as the area.

The Department of Agriculture first first sent out cultures in dry form, in small packages containing dry cotton and chemicals, to be dissolved in the water in which the culture is to be started. In very many cases the use of these cultures resulted in absolute failures. The dessication to which the bacteria had been subjected appeared to have destroyed their vitality. So far as the writer knows, all private companies which are now offering commercial nitro-cultures prepare them in accordance with the system first used by the government, and the presumption is that in many cases these cultures will be found valueless, and for the reason above indicated. The Agricultural Laboratories at the present time are preparing cultures in semi-fluid form. They are sent out in sealed glass vials. They have not been sufficient-

*Continued on page 718.)

HORTICULTURE.

Breeding New Apple Varieties.

Maine needs a perfectly hardy apple producing fruit of large size, good flavor and bright red color, with good keeping qualities, firm flesh and skin to stand shipping well. One or another of the standard varieties has some of these qualities. A combination of them all in a single apple is a thing much to be desired. With an open fertilized plant, such as the apple, there is little hope of being able to obtain this combination of desirable qualities by selection alone. It would indeed be impracticable to attempt it this way. Resort must be had to the other chief method of the plant breeder, namely hybridization or crossing.

Work along this line with the apple has been undertaken by the Maine Agricultural Experiment Station at Highmoor farm. A wide series of crosses are being made between different standard varieties of apples, with the idea of first finding out how the different desirable qualities of apples are inherited. Then in the light of this knowledge it will be possible to proceed to build up synthetically a type of apple which meets the orchardist's needs.

Three years is about the shortest time in which one can hope to get even a single fruit resulting from a particular cross which he may have made. The fact that apples may be so easily propagated by grafting and budding makes it possible, when once a desirable type has been found to propagate it quickly to an indefinite extent. A study is also being made of apple seedlings. Since the apple is naturally cross-fertilized to a very large degree there is a considerable chance than by a systematic study of seedling apples desirable combinations of qualities may be found. Indeed, it is in this way that some of the most valuable of the standard varieties of apples have been originated in the past.—Charles D. Woods, Director Experiment Station. Maine.

Luncheon to Prof. Blair.

On Friday evening July 12th. at the Aberdeen Hotel Kentville, N. S. a complementary luncheon was given to Professor W. Saxby Blair, who has resigned as Professor of Horticulture at McDonald College, Montreal, to take up the position of Superintendent of the Horticultural Farm at Kentville.

President Ralph Eaton occupied the head of one of the tables and at his right sat the guest of the evening. Mrs.Blair was unable to be present. There were two tables well filled with members of the Board, including Mr. I. B. Solomon of the Canning Board of Trade.

After luncheon had been served and toast to the King presented, the Chairman gave an excellent introductory address stating the important positions that Mr. Blair had occupied, the pleasure it gave the Kentville Board of Trade and others that Prof. Blair had decided to take the position here and the important work which can be done on the Horticultural farm under such competent management. Mr. Eaton also gave many items of interest on the prospective fruit crop of the Valley in future years.

The toast to the Mayor and Town Council was responded to in neat addresses by Mayor Yould, Recorder Webster and Councillor Mc Bride. For the learned profess ons responses were made by Rev. T. C. Mellor, Judge Chipman, Dr. W. B. Moore, W. P. Shaffner, A. V. Pineo, Chas. W. Webster, and the mercantile and business professions by Mr. Lombard, J. W. Ryan, E. B. Newcombe, T. P. Calkin, G. E. Calkin, A. L. Hardy etc.

Mr. Blair when called upon to speak was received most enthusiastically. He said he had some misgivings in leaving such an important position as he did at McDonald College the best equipped Horticultural College in America and he had been identified with the work there from its inception. There was something drawing him back to Nova Scotia which he now found was the hearty good will of the people there assembled and others. Both Director Grisdale and Prof. Macoun had thought that he might be of more use here as the head of the Horticultural Station at Kentville. He has imbibed the desire to be a horticulturist while at Wolfville under Professor Faville and the enthusiastic fruit growers he came in contact with while there. He considered the outlook for this station very bright, it should be made the most important horticultural station in the most important fruit growing district in the world. He would do everything possible to work out some policy here which would be of benefit to the fruit growers. He planned on pushing the work forward here for all he was worth, to make the station, if possible, one of the best in the world. This would cost money but it would be money well invested. He must of necessity make experiments here to obtain methods best suited to the requirements of the fruit district and to bring about the better care and better working of orchards. In a very few years we can accomplish much here, and make the farm one of profit to all and the ravine in connection one of the beauty spots of the earth.

Great pleasure was expressed by all that Nova Scotia was bringing back to reside here one of her most talented sons.—The Advertiser, Kentville.

The St. John Board of Trade Orchard.

At a meeting held in St. John on July 17th., it was decided to buy a farm of about fifty acres located within sixteen miles of the city and a short distance below Brown's Flats. The land is said to be ideal for the growing of apples and other smaller fruits. The land is at present under crops but it will be taken over early in the fall and preparations will be made for planting trees next spring.

The plan of providing these model fruit farms has been taken up by several boards of trade in the Province and these farms will be under the direction of the government experts for six years and accurate accounts of the expenditure and income will be kept so that it can be shown just how successfully this kind of a farm can be operated in New Brunswick.

The Moncton Board of Trade has the matter under consideration also and it is expected that in a few days the Moncton board will also have acquired a site for a farm.

Members of the St. John company seem very enthusiastic over the land secured by them and it is believed that the farm will be successful from the start.

More Apples Imported Last Year by Barbadoes.

During each year a small number of apples reaches this market from Canada and the United States and some from England. It appears that last fall and winter the quantity imported was somewhat above the average, and as the fruit in most cases arrived in good condition, better prices were obtained than formerly. All apples coming into Barbadoes are on consignment, and if in good condition, find ready sale. A small quantity comes direct from Canada by the Pickford & Black steamers, the largest part is received through New York, with which port there is a more rapid service. It is stated, however, that some at least of the apples received through New York are Canadian. The varieties which seem to stand the voyage best and find readiest sale are Baldwins, Spies and Russets. If shipped in moderate quantities, and not allowed to chill before leaving Canada, the fruit reaches here in fairly good condition, and with a little more effort a slightly extended trade might be developed. —E. H. S. Flood, Trade Commissioner, Barbadoes, B. W. I.

United Fruit Companies Meet and Organize.

The meeting of the United Fruit Companies of this Valley, called to meet in the Court House July 12th. called out such a small attendance that it was adjourned to Monday. On Monday morning the adjourned meeting was held in the Y. M. C. A. hall and after preliminary proceedings for organization, the following list of officers were elected for the ensuing year:—

President, John Donaldson, Port Williams.

Secretary, M. B. Davis, Bridgetown.

Directors from fruit companies;

Canard, Lewis Halburton.
Cornwallis, A. S. Banks.
Middleton, F. M. Chipman.
Starr Fruit Co. of Paradise, J. E. Morse.
Kingston, F. W. Foster.
Roundhill, F. E. Mason.
Aylesford, A. E. McMahon.
Waterville, F. M. Chute.
Central, A. P. Rumseyi
Kentville, C. O. Allen.
Mayflower, E. I. Loomer.
Maple Leaf, C. W. McKeen.
New Minas, E. H. Johnson.
Grand Pre, A. H. Westcott.
Paradise, F. W. Bishop.
Bridgetown, S. L. Marshall.
Enterprise, H. Messenger.
Granville, H. Miller.
Port Williams, M. K. Ells.
Kingsport, H. R. Kinsman.
Pleasant Valley, T. H. Morse.
Sheffield Mills, J. E. Taylor.
Berwick, J. N. Chute.

The organization will be known as the "Central Association" of the United Fruit Companies. Twenty four out of twenty seven fruit companies in the Valley, were represented by seventy eight delegates. A very full discussion of all subjects connected with the business, was had and the intention expressed of so developing the work of the association along the lines of similar organizations in Great Britain, as will make it more fully co-operative in its scope. A meeting of the directors was held at the close of the general meeting, and initial arrangements made for the business of the coming season.

Summary of July Fruit Crop Report.

WEATHER CONDITIONS.—Not unfavorable for tree fruits. Somewhat hot and dry for small fruits during July.

APPLES—Prospects have depreciated since last month. Nova Scotia expects only 52 per cent. of a full crop, Ontario a medium crop, and British Columbia has still prospects for a record yield.

PEARS.—Eastern Canada medium crop only, British Columbia good.

PLUMS—Below medium in Eastern Canada, good in British Columbia.

PEACHES—Notwithstanding the injuries resulting from the severe weather of last winter, a fair crop will be harvested in the chief commercial orchards.

CHERRIES.—A fair crop of early cherries has been harvested; sweet cherries decidedly short.

GRAPES.—Good crop everywhere.

SMALL FRUITS.—Strawberries short in Eastern Canada and prices correspondingly high. Raspberries shortened by dry weather. Currants and gooseberries good, blackberries decidedly short. In British Columbia, small fruits have been a heavy crop.

TOMATOES.—Medium crop.

Insects and Fungous Diseases.—The ravages of the Tent Caterpillar caused much damage in New Brunswick, Western and Southern Quebec and Eastern Ontario, many of the orchards being completely defoliated. Apple scab is showing in District 6. Blight has done more than the usual injury in pears this season. —J. A. Ruddick, Commissioner. and A. McNeil, Chief, Fruit Division.

The Vegetable Garden.

When Parliament was in session a number of very useful papers on Agricultural topics were read by prominent authorities before the Standing Committee of the Senate on Agriculture and Forestry. One of these by W. Saxby Blair, Professor of Horticulture, Macdonald College, Quebec, deals with the growing of garden vegetables. After pointing out certain important details more or less common in their application to all vegetable crops, the author follows with more specific information relative to the growing of many of the principal vegetable crops grown in this country. Among other important points taken up are the construction and management of hot beds and colo frames, kinds and application of manures, tillage, successful sowings, etc. Among the crops dealt with are tomatoes, onions, cauliflower, celery, melons, parsnips, beets, salsify, egg plants, spinach, sweet herbs, asparagus, etc. Of all these and others desirable varieties are named. This paper is issued as apamphlet of seventeen pages and is being distributed free by the Publications Branch of the Department of Agriculture at Ottawa.

Complaint Regarding Apples.

Local produce dealers are not satisfied with the apple trade the last few years. They seem to think that the Dominion standard law defining quality only applies to apples exported to England, and that as a consequence only an article of inferior quality is exported to this market.—W. B. Nickolson, Trade Commissioner St. John's Nfld.

After-Culture of Vegetables.

During tne long spring drought vegetables made little progress, but now that the weather has broken growth is active and the market gardener finds work on every hand. Some of the seeds sown during the dry time remained almost dormant in the soil, but the seedlings are all appearing at once now, and thinning is urgently called for. This is the first requirement of most vegetable crops, and it ought to be done as soon as the seedlings are large enough to handle, which is generally when they have made one leaf in addition to the two seed leaves, for overcrowding is to be avoided at all

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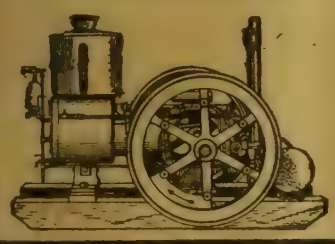

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times. The amount of thinning to do is sometimes a puzzle to the inexperienced. The best plan for them is not to thin in one operation, but merely to single the seedlings at first, and leave the final thinning until later. There may be losses from insect pests and other causes before then. With some crops, notably onions and carrots, there is no need to give the final thinning before the roots removed are large enough for sale. If good seed is sown on soil in a high state of cultivation the preliminary thinning can practically be avoided.

HOEING

In directions for growing vegetables we generally find the phrase, "Hoe to keep down weeds." But hoeing does far more than that. It is almost equal to a dressing of manure, particularly in a dry time. The only point in favor of weeds is that they force growers to hoe more often than they would otherwise. The stirring of the soil is of the greatest value. The first hoeing ought to be given as soon as the seedlings show in the rows, and the operation can hardly be repeated too often for the benefit of the crop. The most important time to hoe is as soon as the surface is dry enough after rain. The effort then is to break up the cap and form a layer of loose soil on the surface, which has a marked effect in preserving moisture down below among the roots; and you never know how long it will be before another shower will fall. Wherever possible horse-hoeing should be practised between the rows, for economical reasons, but hand hoeing is necessary in the rows and close to them. Avoid drawing soil away from the plants. Rather do the opposite with crops that seem to want a little support, such as dwarf peas and beans.

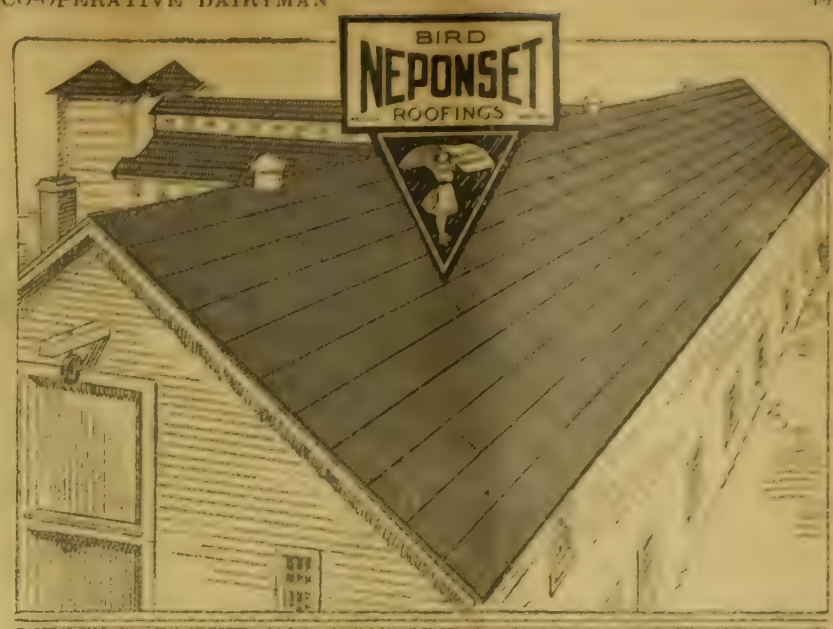
Where there are many weeds the ordinary draw-hoe is the best implement to use, but on light land in fairly loose condition, the Dutch hoe makes good and rapid work. A tool that is proving very useful this season is the Canterbury hoe, which deserves to be more widely used. It is particularly helpful on heavy land that has capped hard or is cloddy. A large area can be got over very rapidly, and stirred deeply, too; but it is of little use for weeds. To stir the surface in preparation for planting out it is capital. Any big clods that are pulled up can be broken down with a blow with the back of the hoe, treatment often needed this season on heavy land.

FEEDING THE GROPS

Closely connected with hoeing is the application of top-dressings or of liquid manure. These are called for by practically all green crops and roots. There is nothing to beat well diluted liquid manure, but the labor of its preparation and application is generally prohibitive on the market garden. But quite as good results can be had from the use of nitrate of soda or nitrate of lime. The secret is to give little and often. Such gradual feeding has a wonderful effect on green crops, such as cabbages. Just a dusting along the rows close to the plants is the most economical plan, or even round each plant. Shortly before or after a shower is the best time. It is during the early stages of a crop's growth that such help is most needed. Over-stimulation has to be avoided, but the benefit of judicious top-dressing must be seen to be believed. Early-sown turnips call for the treatment now, for they are badly troubled with the "fly" in many cases, and this helps them to grow away from the pests.

EARTHING UP POTATOES

Do not be in a hurry to earth up potatoes. They are a sun-loving crop, and like to be near the surface. On the other hand, do not delay until the tops hang over in the rows. Horse-hoe between as soon as the tops are visible. This loosens the soil about the tubers and is very beneficial. With very early potatoes the case is different. These run a risk of injury from frost, and can be protected to a considerable extent by earthing up little and often from the first.—E. Mayhew.



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Dries in a Few Hours and Hardens Over Night

Make the floors ready for summer. You can easily finish one room every night with "Floorlustre". It will be a pleasure—not work—and then the floors will be fresh and bright when carpets and rugs are laid away.

"FLOORLUSTRE"

IS THE PERFECT FLOOR ENAMEL. It will not show scratches—can be washed with soap and water.

One gallon covers 500 square feet. All colors for floors, verandahs, porches and steps.

BRANDRAM-HENDERSON LIMITED on the can is your best guarantee of quality.

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BRANDRAM HENDERSON LIMITED
MONTREAL, HALIFAX, ST. JOHN, TORONTO, WINNIPEG.

DAIRYING.

Individual Stalls for Cows.

We hear so much now about the individual drinking cup. How about the cow's individual stall? Each cow obtains her food by means of her tongue, and licks her manger clean daily. It is much better for her to lick her own manger than it is for a different cow to do the operation every day and possibly spread disease. Cows soon learn to take a stall and be orderly.

As a rule a man's dairy is not confined all to winter cows that receive a heavy grain ration, and sometimes he wishes to fatten a cow. In such a case, the neighbor of a heavy grain-fed cow is robbing that cow of a portion of the grain she should have, and gaining on her own amount which has been assigned to her. Many times cows in the center of a row where there are no dividing manger partitions have no hay because they have shoved theirs to one side to lick up a choice morsel. The next cow has done the same, and thus the center ones have none and the end cows have a surplus, or vice versa as the case may be.

Give the cow a manger and it is more easy to feed the amount of hay or fodder she may need. No two cows eat the same amount any more than two persons. The cows then get what they require and if a cow fails to clean up her hay or grain it will be seen more readily and the cow will not go "off her feed" as she might otherwise do if she did not feel ,ike eating her own ration and the cow on each side helped her out.—L. L. Nichols, Chenango Co, N.Y.

Keeping Cream Sweet.

As the warm season comes on, the difficulty of keeping cream sweet on the farm becomes greater. The farmer is busy looking after his crop and is liable to neglect taking his cream to market as often as he should, consequently the cream is not in good condition when it reaches the creamery or ice cream factory. Many times the farmer is also negligent in the care of the cream when he is busy in the field.

Then, too, the cream requires extra good care in the warm season. High temperature promotes the growth of germs in the cream which in turn causes the souring. There are two main factors to consider in keeping cream sweet. The first is cleanliness, and the other is low temperature. To these might be added a third, which also plays some part in the souring, namely, the per cent. of butter-fat in the cream.

When filth gets into milk or cream, there are innumerable germs introduced, which if left to develop at proper temperature multiply very rapidly. The less filth in the cream, the longer it will remain sweet. This emphasizes the need of absolute cleanliness in the handling of milk and cream.

Low temperatures tend to check the development of the germs and thus retard the souring of the cream. It is important that the cream be cooled down at once after it comes from the separator. At any rate, the morning cream should always be cooled before being added to the cream of the evening previous.

The richness of the cream has an effect upon the souring. Cream with a high per cent. of butter-fat does not sour so quickly as thin cream. The souring of cream is caused by the action of germs on the milk sugar. Where there is a high per cent. of fat, there is necessarily a lower per cent. of other constituents. The action of the germs is that of changing the milk sugar to lactic acid. Where there is less milk sugar, there will be a less amount of acid developed and thus the souring is checked for a lack of milk sugar. The separator should be set to separate a cream containing about 35 per cent. of butterfat. In some cases it is possible to have as high as 50 per cent. of butter-fat in the cream. However, such cream is usually difficult to pour from the can. This is especially true however, in the winter.—G. E. Frevert, Idaho Experiment Station.

Creamery Egg Collecting.

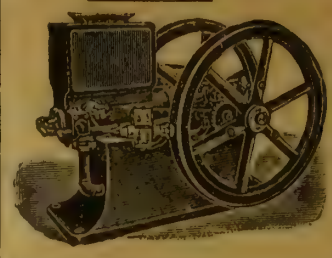
Albert Lowenfels of New York, writes in the Dairy Record (Vol. 12, No. 50, page 10) urging the creameries to collect and ship eggs, and I ought perhaps to hail him as a confederate because I have been among the first to point out this plan—not so much as a profit to the creamery, but as of great advantage to the farmers. But I notice that while we agree in the desirability of the plan, we are far apart as to the manner in which it should be carried out. He urges that "If they are gathered from three to six times a week, as they would be under the creamery system (he should have said whole milk system) then they would not have the chance to spoil and would not need candling at the creamery.'j

This is a fundamental mistake and would do away with the greatest advantage of the system, which is to prevent the often erroneous loss in shipping and paying freight for bad eggs. The candling at the collecting point is absolutely necessary for the success of the plan as is a designating number on the egg to enable the tracing of its origin if desired. I shall leave the dating out of this discussion. What security has the creamery that the eggs collected today were laid the day before and not the previous week when 5 or 6 eggs are found in a stolen nest, not to speak of the full dozen? No, not only must the eggs be candled at the creamery but the number must enable the buyer—be it a private consumer, retailer or merchant—to report eggs which though candling are good enough to ship are not really fresh laid eggs and hence rot too soon. The very knowledge of the farmer that the eggs delivered by him may be identified, even when taken out of cold storage six months later, will be an incentive for him to see that they are not only collected every day but kept clean and in as cool a place as possible.

A. L. also declares the system where farmers box the eggs in cartons of 1 dozen each and seal these with his number (which system might make the handling superfious) to be a splendid one provided the creamery can sell them directly and he correctly says that this will not be practical for all. But why could not he and other merchants receive and sell boxes with 24 to 36 cartons of eggs sealed with the creamery mark say A in a circle or triangle or what not, with the eggs numbered with the producers number? Unless eggs so collected can secure a premium over the eggs collected under the present haphazard system there is no cause for the creameries or for the producers to bother about it and the latter may as well trade them for groceries at the local stores

But there is no need for the individual cartons when each egg is numbered and candled at the creamery. Nor is there need of using the creameries if the local storekeepers will candle and handle the eggs as they ought to, hence in my opinion, it is up to the farmers to insist on this or to organize co-operative egg collecting stations eventually in connection with their creamery.

A New Name For The Best Farm Engine



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We have changed the name of our famous "CANADIAN" air-cooled and water-cooled engines to a name that also signifies quality.

Hereafter, these engines will be known as the "MONARCH."

It is a Monarch among farm engines. No engine runs better, is more compact, easier started, surer and steadier than this. Always remember the 'MONARCH.'

Every part is true to 1-500 in. or less. Experts work on each part. Material is the best money can buy. Bearings are big and wide, The design is compact, and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name, too :—

THE CANADIAN ENGINES LIMITED

Formerly CANADIAN-AMERICAN GAS & GASOLINE ENGINE CO. Limited.

DUNNVILLE, Ont.

FROST & WOOD Limited, Smith's Falls, Sole selling agents for Eastern Ontario, Quebec and Maritime Provinces.

Rid Your Cattle of the Fly Pest

With the warm summer days come the yearly torture of domestic animals by flies and other insects—prevent this useless suffering by buying

COW COMFORT

an inoffensive yet powerful liquid preparation that will rid your animals of the flies that swarm about them; destroys lice, ticks, fleas; cures skin diseases, scabs, tetters etc.; cleans, disinfects and removes offensive odors.

You know that animals cannot be healthy when devoured by insects—you know how quickly hogs decline in weight when they are troubled with vermin—by preventing suffering to your cattle you not only perform an act of humanitarism, but assure perfect health to your animals and profit by it in the end.

Sold in gallon cans at $2.00 each, but as the contents of a can is to be diluted in four gallons of water, it makes the price really 40cts a gallon.

Descriptive circular sent free upon request

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AGENTS WANTED EVERYWHERE

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586 Henri Julien Ave. (Formerly Sanguinet St.) **MONTREAL**

Cow Feeding Experiments.

The North Carolina experiment station recently concluded a number of experiments to determine the relative efficiency of narrow and medium wide ration for milk production.

Eight cows from three to six weeks in lactation were fed three periods of 28 days each. In the first and third periods the feed consisted of five parts cottonseed meal, four parts wheat bran, three parts corn meal, and 50 pounds of corn silage. The nutritive ratio of this ration was about 14. During the second period the ration was the same as the above except that 2.5 pounds of cottonseed meal was replaced by 2.5 pounds of corn meal, giving this ration a nutritive ratio of about 1.5.7 The results of this test indicate that the narrow ration produced 7.5 per cent. more milk fat and increased the fat test 0.24 per cent., and the live weight 30 pounds. The milk yield was practically the same. This trial was duplicated with five cows, except that the narrow ration was fed during the first and third periods, and the medium ration during the second period. The narrow ration produced 7.6 per cent. more milk fat, increased the fat test 0.17 per cent. and the amount of milk 93.4 pounds, the live weight remaining the same.

In an experiment to test the relafeeding value of cottonseed meal and linseed meal for milk production, it was found that the former gave only slightly more returns than linseed meal. Notwithstanding the greater cost of linseed meal the station officials advise the use of small quantities on account of its tonic effect.

Making Dried Milk.

In the manufacture of this milk powder the milk, either whole milk or that from which the cream has been removed by the separator, is first filtered through a cotton medium whereby all foreign substances held in suspension are removed. It is then cooled by means of refrigerating apparatus to a point just above freezing and kept at this temperature until ready for the "exsiccator" or milk-drier apparatus. This device consists of a large cylindrical drum which is caused to revolve. The internal surface of the drum is nickel. The milk flows through flexible tubes into the exsiccators by gravity. A high vacuum is maintained in the drum and as it revolves the dry solids of the milk accumulate on the inner surface of the drum. An evaporative effect of 160 to 180 kilograms per hour per square meter (295 to 330 pounds per square yard), is said to be obtained by the Ekenborg apparatus. German silver knives scrape off the dry milk deposit on the nickel surfaces of the drum and deposit it in a special receptacle close to the drum. After removal the dry milk is

Better Butter And Better Prices

These are the two big reasons why you should use Windsor Dairy Salt.

If you make your living out of the butter you sell, then anything that will make the butter better will make more money for you.

WINDSOR DAIRY SALT

has proved its quality and superiority in thousands of dairies and in hundreds of contests.

Successful creamery men have used and are still using Windsor Dairy Salt—because it gives them the best results always.

Are YOU using it? 71D

Cow-Ease

Prevents Ticks.

KEEPS FLIES OFF

Cattle and Horses

and allows cows to feed in peace, making **More Milk** and **More Money** for you. A clean, harmless liquid preparation, applied with a sprayer. Keeps cows in good condition, and saves five times its cost in extra milk.

TRIAL OFFER

If your dealer cannot supply you, send us his name and $1.25, and we will deliver prepaid to your address a half-gallon can of COW-EASE and SPRAYER for applying. For West of Missouri River and for Canada, above Trial Offer, $1.50.

Satisfaction or Money Back.

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Annapolis Valley Fruit Farm.

$3050 Income Last Year.

220 acres on salt water; splendid boating, fishing and bathing; 5 minutes' walk to P. O. and boat landing; 8-room painted house, running water, large barn; orchard producing 400 bbls. apples in season; cuts 30 tons hay, besides large acreage used for crops; wood and timber valued at more than $1000; pasture for 40 head; extreme age of owner necessitates immediate sale; price only $3200, part cash, easy terms; a splendid opportunity for one to get located in this famous fruit section where values will double and treble; for set of pictures, full details and travelling instructions for this and other Nova Scotia farms, write The MARITIME FARMER, St. John, N. B.

During the summer months mothers of young children should watch for any unnatural looseness of the bowels. When given prompt attention at this time serious trouble may be avoided. Chamberlain's Cholic, Cholera and Diarrhoea Remedy can always be depended upon. For sale by all dealers.

subjected to a crystallyzing process at a temperature of 80 to 100 degrees F. until the sugar of milk is perfectly crystallyzed. The dry milk, it is stated, will then keep in any climate indefiinitely, without any special precaution. The evaporation in the drum is aided by heat from exhaust steam, although, it is stated, the temperature of the milk being dried is at no stage of the operations much higher than lukewarm.

To Prevent Milk Fever.

A correspondent writes: In an experience covering a good many years, I never had a case of milk fever. Some of my neighbors have, and I have learned a little something from their experience and my own practice. In the first place, I never feed a cow meal for three or four weeks before she is due to calve. I substitute for meal wheat bran in fairly liberal rations. This is cooling to the system, keeps the bowels regular, and, on the whole, is a fine article of diet in the spring. Then, after the cow has passed the crisis, I do not permit her to drink for two or three days of cold water. I see to it that she is furnished plenty of cool water, carrying down warm water enough to take the chill off what is given her to drink.

Importance of Testing.

There is a common opinion among creamery inspectors that testing does not occupy the promonent place it should in creamery practice, indicating that few are familiar with the disastrous results of careless testing and practices of sampling which may lead to an inaccurate determination of butter fat. If the test applied to creamery weights is to be used as a basis for payment, then it bears the same relation to that industry that a system of weights and measures does to any commercial business.

Few realize that the creamery overrun will, on a 40 per cent. cream basis, be increased or decreased three per cent. by introducing an error of one per cent. in testing. This means, in a plant averaging 700 pounds of butter daily, a loss or gain of 21 pounds of butter, worth about $6—salary of two good men. Thus it becomes evident that any practice resulting in a test uniformly high is a source of constant drain to the plant. Should the error fall in the opposite direction, the plant must sooner or later suffer from a list of dissatisfied patrons.—Illinois Bulletin.

Why I Shall Milk.

1. I need fresh milk, cream and butter on my table.
2. It means a steady income every month.
3. It means enough equal division of labor throughout the year.
4. To ensure profitable crops I must practice clover or alfalfa rotation and must find a profitable market for these crops.
5. Dairy cows furnish the most profitable market for these crops, returning about two dollars of products for every dollar's worth of feeh fed at average prices.
6. Dairy builds up rather than depletes soil fertility.
7. Dairy products remove less plant food from the farm than any other crop.
8. The dairy cow is the most economical producer of humane food.
9. There is an increasing demand for high-grade dairy products.
10. Maritime soil, water and climates are especially adapted to the production of an abundance of dairy products of the highest quality.

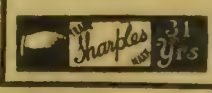
GOVERNMENT EXPERT

Chooses SHARPLES Tubular Cream Separators for His Three Farms

Like other shrewd farmers, Mr. Anson Groh, widely known agricultural lecturer employed by the Government, knows the money to be made in dairying. He has succeeded because he knows profit is of far greater importance than first cost. Mr. Groh is seen sitting in this picture, with his family and assistants, before his country home. Like others making most money from dairying, Mr. Groh selected the Tubular in preference to all others because the Dairy Tubular contains no disks or other contraptions, has twice the skimming force of other separators, skims faster and twice as clean, and pays a profit no other can pay. Mr. Groh says:

"Preston, Ontario, May 28, 1912.—Some years ago we selected the Sharples Tubular. After a few years' use we found it necessary to get another separator for another farm and selected a No. 6. After several years' service of these two machines, we would not think of introducing anything else on our third farm, recently purchased. ANSON GROH."

Now you understand why owners of other separators are discarding their machines by carloads for Tubulars. Follow the example of Mr. Groh and the many others who have succeeded. Buy a Tubular for the sake of double skimming force, easy cleaning, and all the profits.



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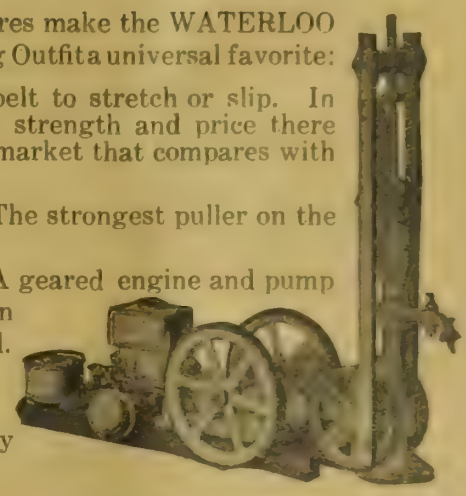
Everybody's Favorite

These strong features make the WATERLOO BOY Beltless Pumping Outfit a universal favorite:

First--Simplicity, no belt to stretch or slip. In point of simplicity, strength and price there is nothing on the market that compares with this outfit.

Second---Strength. The strongest puller on the market.

Third---Low Price. A geared engine and pump Jack. Lower than ever before offered.



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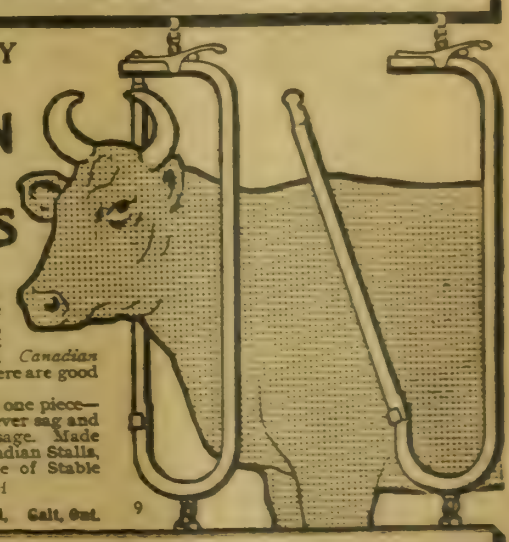
O.K. CANADIAN U-BAR STEEL STANCHIONS



When big stables like the Central Experimental Farm at Ottawa — the new barn at Silver Spring Dairy Farm, Ottawa—the Erindale Farm at Toronto — are equipped with *O.K. Canadian U-Bar* Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue 11

Canadian Potato Machinery Co., Limited, Galt, Ont. 9

LIVE STOCK.

The Digestive Process in Cattle.

The first changes in the food are effected in the mouth, where it is mixed with saliva, a fluid essential to preparing it for the further alteration it has to undergo in the process of digestion in its passage along the alimentary canal.

In the ruminant the food receives but very little chewing or mastication when first taken into the mouth, this being reserved for the subsequent process known as "cudding." There is not the regular grinding between the molar teeth to which the horse subjects its food before swallowing it, but only a few hasty movements of the jaws, and a slight admixture of saliva, after which it is carried by the action of certain muscles into the opening of the oesophagus.

THE USES OF SALIVA

in relation to digestion are partly mechanical and partly chemical. It moistens dry foods by adapting them for deglutition, and tends to separate the particles, and so allows them to be acted on more freely by other digestive fluids. The great chemical use is to convert the amylaceous or starchy portion of the food into sugar.

Saliva is a fluid secreted by glands which occur in three distinct pairs, and its action on starch, described as the amylolyic action, is due to the presence of a principle called ptyolin, which acts the part of a ferment.

These glands are known as the parotids, sub-maxilliary and sub-lingual. Few have any idea of the quantity of saliva that is secreted during twenty-four hours. The parotids secrete constantly, but most markedly during feeding. Sub-maxilliary saliva is also constantly produced, but is more abundant during mastication. The three salivas have different physical properties, but mixed saliva is an opalescent or slightly-turbid fluid which has an alkaline reaction. With reference to the total quantity of mixed saliva produced, Colin places the daily secretion of saliva in the ox at 112 lb., but the amount depends on the dryness of the food consumed.

After the food has been roughly chewed and mixed with saliva it is pressed by the tongue against the palate, and so squeezed back into the funnel shaped receptacle called

THE PHARYNX.

The pharynx is not only to pass the food onward into the oesophagus or gullet, but to guard against its entering the larynx, and so getting into the tracea or windpipe—or, in popular phraeeology, to prevent its "going the wrong way."

During unconsciousness, or when being hurriedly drenched, and the animal coughs, there is sometimes an escape into the long passage owing to this guard being relaxed. When the food gets into the grasp of the pharyngeal muscles, it is pushed into the oesophagus, and is carried down this tube by a continuous wave of contraction, which starts at the pharynx and ends at the rumen, into which pouch it opens.

THE ŒSOPHAGUS

is a canal which differs somewhat in different animals, but in the ox is composed of red muscle throughout, and lined with a mucous membrane. It has only a loose connection with the parts through which it runs to the rumen—a beautiful provision of nature to reduce the risk of impaction or choking. In addition to its loose attachment, its elastic structure and thin distensible walls permit the passage of very bulky material, the advantage of which is obvious.

What the ox and dog can swallow with ease, and neither does much preliminary chewing, would certainly "choke" the horse.

In our opening remarks it was said that every farmer knows that the stomach of the ruminant is divided into several compartments or pouches, but it is not every stock-owner and feeder who knows their names and uses, for there is frequent confusion of terms, and, therefore, mistakes in describing the part of the gastric mass supposed to be obstructed or diseased.

The four compartments into which

THE STOMACH OF THE OX

is divided gives to it an entirely different appearance, apart from its bulk, to the organ of single-stomached animals, which is only a pouch-like dilatation of the alimentary canal, in which the food makes a comparatively short stay.

The largest cavity, and that into which the food is carried direct from the mouth, through the oesophagus, with very little preparation, is the rumen, or first stomach—called also the "paunch" or "maw."

It occupies three-fourths of the abdomen, and is situated on the left side. It is the seat of the common trouble known as "hoven" or "blown," and it is essential to be acquainted with its position, because it sometimes has to be hurriedly punctured to let out the gas with which it becomes distended in acute cases of "hoven."

It must be understood that this reference to its size and position applies to the adult animal only, and that in the juvenile the abomasum, or true digestive stomach, has the largest capacity while milk is the food, and until it becomes developed by feeding on hay and grass. The organ has three coats: the external peritoneal coat, the middle or muscular coat, and the inner or mucous coat.

The layers of the muscular coat are composed of fibres lying in different lines, so that the stomach can be contracted in several directions, and by successive contractions the food is made to revolve in the stomach, like milk in a churn.

The muscular coat, too, is arranged to form bands in certain situations, and thus the cavity of the rumen is divided into four compartments, of which the left is the largest.

THE SECOND STOMACH,

technically the reticulum, hangs below the termination of the gullet, between the rumen and the diaphragm or midriff, It is popularly known as the "honeycomb," from its mucous surface being dimpled with hexagonal depressions or pits. In these cells are often found stones, nails, wire, &c., and the reticulum is frequently the seat of foreign bodies that occasion indigestion. The contents are always fluid.

THE THIRD STOMACH.

or omasum—called also the "fardel," "farthing," "manyplies," and "manifold"—has its mucous membrane arranged in thick longitudinal folds, so that a large surface is packed into a small compass. The contents of this stomach are always dry, due to the fluid portion being squeezed out by the powerful pressure of the muscular "leaves," and flowing into the fourth stomach by the action of gravity.

THE FOURTH STOMACH

or abomasum, is the true digestive stomach, popularly known as the "reed" or "rennet." It is a narrow, elongated pouch, with a much more vascular mucus membrane than the others, secretes gastric digestion that takes place in the single organ of animals that are not ruminants.

The action of its secretion in coagulating milk, of which use is made in the manufacture of cheese, is well known.

Castrating the Young Pig.

The castrating of young pigs is too often neglected and deferred longer than it should. To wait until the pigs are well along, not only makes the operation more difficult, but it is also harder on the young pigs. There is also more danger from infection by flies during warm weather. The best time for castrating is when the pigs are from three to six weeks old, or if possible during cool weather. At that age the pigs are strong enough so that the operation will not give them much of a setback. At that time they are usually with the dam and in good and thrifty

The New Perfection Toaster

Anyone, even a little girl, can make toast on the

New Perfection WICK BLUE FLAME Oil Cook-stove

She will not burn the toast, and she will not burn her fingers either, if she uses the New Perfection Toaster.

For toast or roast
For boil or broil
For fry or bake

there is no other stove that is as quick and as handy as the New Perfection Oil Cook-stove — the convenient stove for all purposes, all the year round.

Every dealer has it. Handsomely finished in nickel, with cabinet top, drop shelves, towel racks, etc. Long chimneys, enameled turquoise-blue. Made with 1, 2 and 3 burners. Free Cook-Book with every stove. Cook-Book also given to anyone sending 5 cents to cover mailing cost.

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Every Eddy Match Is a Sure-Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

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HULL, CANADA.

Makers also of Wooden Pails, Tubs, etc.

Given Away Free

A First Class Kit of Barbers Tools, Consisting of

Two first class razors
Two white linen coats
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One Barbers mug
One Hair Brush
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THE ENTIRE SET GIVEN AWAY FREE TO EVERY MAN or WOMAN Learning the Barber Trade at

The PATTERSON SYSTEM OF COLLEGES
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"INTERNATIONAL FLY WAY"
Prevents the Tremendous Loss from Flies

Flies cost the farmers of Canada millions of dollars annually by retarding the growth or fattening of animals and by greatly reducing the production of milk by constantly annoying the animals all summer. Every farmer or stockraiser knows this statement to be true from his own experience.

Flies also cause a great loss of life by Spreading Diseases from farm to farm. "International Fly Way" will keep flies off your animals and give them perfect rest from these pestilentious insects, which will make you more money in a larger production of milk or much quicker growth of all animals.

SAVE YOUR STOCK
By Using
"INTERNATIONAL FLY WAY"

It is positively guaranteed to be effective in Driving Away Flies, Mosquitos, and other insects which worry stock and reduce their earning capacity. It is harmless to the hair and skin and will be found perfectly satisfactory when used according to directions.

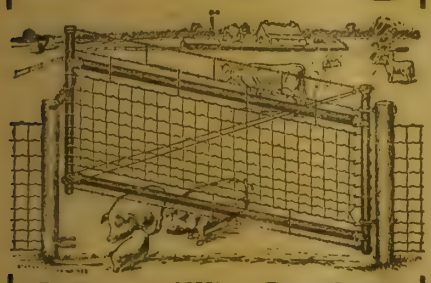
We place our twenty years of reputation back of "International Fly Way," and ask you to test it on our positive guarantee.

FOR SALE AT ALL DEALERS.

INTERNATIONAL STOCK FOOD CO. Limited, TORONTO

No. 74

Everlasting



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CANADIAN GATE CO. Limited
54 Morris Street, Guelph, Ont.

Thoroughness and Progressiveness
are the ideas which have always dominated the management of this college; showiness and superficiality the rocks to be avoided.

Our reward has been ample and satisfying, our last year being by far the best in our history of 45 years.

No summer vacation. Students can enter at any time.

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Principal.

For soreness of the muscles, whether induced by violent exercise or injury, there is nothing better than Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

condition, or at least more so than immediately following weaning time. Castrating before weaning also means that there will be nothing to disturb the growth of the pig after weaning.

In castrating an incision is made through the skin of the scrotum aud the inner membrane that encloses the testicle. Make the cut low, so that the fluid may drain out of the opening, and in a line parallel to the midline. By cutting through the membrane, it is allowed to drop back, the testicle drawn out and the cord drawn out and cut. In severing the cord it is better not to make a sharp cut, but rather scrape it off. This will mean less bleeding than where the cut is made abrupt. A separate incision should be made for each testicle, so as to avoid cutting across the midline.

It is a good plan to have a weak solution of either carbolic acid or coal tar dip to be used as an antiseptic. Wash the outside of the scrotum before making the cut. After the operation is over with, it is a good plan to wash the wound with the solution. thus guarding against infection. A clear, bright day should be selected for the operation, as there is then less danger of the pigs lying around and becoming cold and stiff. A good, clean grass lot is a desirable place to turn the pigs out on as there is usually little dnst and no mud in such places. Two persons can do the work to best advantage; the person holding the pig, taking both right feet in his right hand, the left feet in the other, and thus holding the pig in an upturned position resting its back on a bench or fence.

Beef Producing.

The farmer of to-day must study the cheapest and quickest way of producing beef if he means to compete against his friends abroad. To begin with, have a good calf from a good cow, for if the calf be a poor one it pays better to kill it at once than to attempt to produce beef. Let the calf suck the cow, and it thrives the best, but this spoils the cow for milking purposes. When not sucking the cow, the calf requires as much of its own mother's milk (preferably) as it will drink at equal intervals three times a day. In this manner feed the calf for eight or ten weeks, then give some hay or rolled oats to obtain the cud, and add some boiled linseed to the milk, which can now be reduced to twice daily. After a few more weeks the calf can be given skim milk and fed in the usual manner. *i. e.*, cake, fodder and hay, until about twenty-four months old. At twenty-four months old the beast, if it is has had a fair allowance of feed during the past twenty months, should be making headway towards beef, but it is the last three to six months where the time and expense is incurred. The treatment of the beasts during the last three to six months is to tie them up, and only turn them out to drink twice a day. If there is any skim milk to spare, give it to them along with a solution of feeding treacle, which they will drink freely when accustomed to it. Dissolve the feeding teracle in boiling water. and add to it the chopped hay and Indian or bean meal the previous night. Next morning take about 6 lb. or 7 lb. of fodder as above, and also allow the following per beast:—7 lb. to 10 lb. mixed cake (Egyptian cotton and soya cakes), and a small amount of linseed cake. Repeat the fodder and cake twice daily, and give hay at discretion, *i. e.*, as much as can be eaten. By the end of the six months the beast should be ready for any butcher, and will also be in good condition.

Summary of beef producing:—(1) Good calf, well fed on milk as long as possible. (2) A fair allowance of food between the age of six and twenty-four months to uphold the condition derived from the milk. (3) When tied up to feed, do not neglect, but fatten as quickly as possible. Note:—This last few weeks beef has been very dear, and no doubt has paid the farmers for once

S. D.

YOUR VITALITY CAN BE RESTORED

Strong, vital, healthy manhood fascinates all who come in its influence. As true as you are a living, breathing human being, I can restore your VITAL strength, there is not a question of a doubt as to what I can thus do. BUT there is a single condition, one restriction I put a certain solemn promise I exact from you before you can exact a promise from me; namely: you must unconditionally agree now at once and forever to discontinue all dissipation; with this out of the way I will do the rest. Remember what I say; no matter what your present condition, no matter what has happened in the past, just forget it and put yourself in my hands; everything will come out as you wish it. I use no drugs, no lotions, no medicines; I place no foolish restrictions upon you; just lead a natural life, get all the enjoyment you possibly can, but cease dissipation; always remember that. I can then restore your vital energy: I can take you out of the half-man class and put you in the spotlight of full, healthy, contented vigor; I can make you feel young again and keep you feeling young to a ripe old age, because I drive into your system the one thing which keeps the whole organism in balance, namely, VITALITY. My HEALTH BELT with suspensory attachment is the greatest single self-treatment remedy or VITALITY RESTORATIVE that the world has ever known, or probably ever will know. It is worn comfortably about the waist all night and every night for two or three months. Thus while you are sleeping it sends a great, soft, potent, life-giving current of VITAL FORCE into your blood, your nerves and your organs. There is not a moment's wait. It helps you immediately; it commences from the first time worn, to show you the sunshine of new energy; it takes the kink out of your back in one night; it makes a man of you after you have given up in despair, simply because it supplies you with VITAL POWER—which means health. Just stop to think. You have the same organs, nerves and fibre, the same make-up exactly that healthy, vigorous men possess, the only difference being you are under tone; you need a foundation of NEW VITAL RESERVE, and it is this I give you. There is no reason why you should not be as strong, healthy and vigorous as the best fullest-blooded man of your acquaintance. The matter is easy if you do your part. Never mind about buying a HEALTH BELT as yet; first get in communication with me; read over my booklet, and if you want to do so tell me your physical ailments that I may advise you; then a little later we can arrange in some way for you to try my HEALTH BELT. But first fill in the coupon and get the book free, or call at my office. My HEALTH BELT also cures Rheumatism, Kidney, Liver and Stomach disorders.

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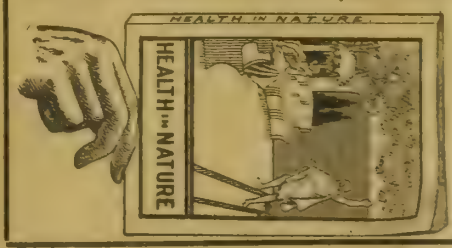

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THE HORSE.

The Care of Weanlings.

To some, advice on this head, is of course, superfluous, but others, less experienced, may be glad of a few hints as to the most approved methods of starting the youngster on an independent career. In the first place, be certain that your foal is old enough to wean, that he is in fair condition, thriving and healthy, that he knows what grain is and what it is for, and that, should you have any cows milk to spare, he will not be above drinking it. As to age, no colt should, if at all possible, be permanently separated from his dam until he is at least four months old, while another month, or even two by her side will make him a better horse and lessen considerably the risks of his first winter. Many farmers, however, who are trying to raise colts can ill afford to let their mares suckle so long, and while it might, in many cases, be more profitable for snch men to refrain from breeding altogether, the fact remains that they must use the mares on the farm, and the foals have to suffer accordingly.

It is a good plan to teach the foal to eat out of the same box as his dam, and it is astonishing how little tuition, even with very young colts is necessary when the food is placed within easy reach. For some time also before the foal is actually weaned he should be schooled to drink milk, if there is milk to be had, and it is well to remember in this connection that milk drinking is an accomplishment of no little value for any horse to acquire, nothing being more advantageous to an animal suffering from any febrile or delibitating disease, than the voluntary absorption of milk in lieu of other fluid when the appetite for solids is capricious, or altogether lost. As regards the diet best suited for young foals, many different opinions are promulgated, but in the experience of the writer nothing is equal to good sound oats with a moderate admixture of bran twice a day, and a well scalded, not too bulky, mash of the same materials, seasoned with a tablespoonful of salt, and perhaps a handful of crushed oil cake for the evening meal. Many recommend crushed oats, but repeated trials have convinced the most successful breeders that whole oats are more nutritious, and if properly masticated, as they generally are when fed with dry bran, more easily digested than chopped feed of any kink.

Colts should be halter broken and taught to lead while yet with the dam, as this renders them much more tractable and easily controlled during the excitement inseparable from weaning, and also facilitates housing when the accommodation is limited, and there are several to be kept together. Loose boxes are preferable to ordinary stalls for young stock, but provided the stable is clean, airy and well lighted it will do no harm to have them tied at night, taking it for granted that they enjoy for the greater part of every day the freedom of a roomy, and in winter, well sheltered yard. This latter point is of very great importance. Your youngster must have a chance to develop bone and muscle, and in no other way than by lots of exercise can he be reasonably expected to properly assimilate the generous diet recommended above, while despite all old-fashioned ideas to the contrary, without a liberal grain allowance he will not likely be much to look at when the sun begins to melt the snow in the spring. When two or more colts are kept together it is better to have them separated at feeding times, or the strongest of the lot will be apt to wax fat at the expense of his weaker or less voracious companions, many backward colts being literally starved by careless neglect of this simple precautionary measure.

Weanlings are frequently troubled to a considerable extent with intestinal worms of various kinds, especially if grazed on low lying pastures in late summer or early fall. Some of these parasites are more to be dreaded than others, but none of them are desirable guests or in any way beneficial to their involuntary hosts, and it is therefore advisable to take measures for their removal. The old farmer's remedy of wood ashes and salt is not to be laughed at in this connection, and if persevered with in small doses for some time will often have the desired effect, but where a more speedy and certain riddance is desired it is well to give a course of anthelmintic powders, as iron sulphate 1 drachm or powdered arecanut 2 or 3 drachms twice a day in a little soft food for a week, to be followed by a drench composed of turpentine 1 oz., and raw linseed oil from 10 oz. to a pint, according to the size and condition of the patient. This mixture should be given on an empty stomach and all dry food withheld until the bowels have responded to its action. In all cases of intestinal worms, benefit is found from occasional injections of tepid water strongly impregnated with soap, and for this purpose Gamgee's enema funnel, a cheap and convenient instrument easily turned out by any tinsmith, will be found suitable. Some varieties of worms demand for their successful removal a repetition of the medicinal treatment but those most commonly met are generally satisfactorily disposed of at the first attempt.

External parasites should also be guarded against. Many a good colt has gone to skin and bone from the constant irritation and uneasiness produced by lice, and whenever a young animal shows unaccountable loss of condition and want of thrift it is advisable to examine him closely for signs of the presence of these undisirable companions. Should they be detected, the sufferer may in reasonably mild weather be washed well with carbolic soap and soft warm water, and after thoroughly drying the skin, carefully and closely dressed, more particularly about the roots of the mane, with a good insecticide. For the purpose an ointment composed of equal parts by weight of sulphur and lard will be found effectual, as also safe, cheap and easily procured. In cold weather the washing must of course be dispensed with, but the ointment may be applied without risk in a moderately warm stable at any season of the year.

When colts are debarred from taking much outdoor exercise their hoofs very soon become deformed, and great harm is often done to the bony and tendonous structures of the limbs from neglect to properly trim and regulate the growth of the horny coverings of the feet. Accidents of various kinds are liable to occur, and in all such cases the advantage of having the patients halter broken, thoroughly domesticated and free from fear of their human friends if incalculable. This state of affairs can only be brought about by the most careful, systematic and painstaking handling of the young animals ,rom the time they are foaled, but more especially during the first week or two after weaning.—J. G. Rutherford, C. M. G.

Barren mares are one of the worst menaces the horse industry has to fight against. Not only do the mares refuse to get with foal, even when bred a dozen times a season, but they effect other mares bred to the same stallions. Breeders are unanimous on this point and many are refusing to allow their stallions to serve mares that are known to be barren. A sterile mare spreads her sterility, making her a menace to the community in which she is owned. Recently a healthy mare was used in a demonstration to prove this theory. Germs were injected into her uterus on February 9 and she was killed and the parts carefully dissected on February 16. In this short period a remarkably diseased condttion of her uturus had developed.

Some Hints on Shoeing.

The management of horses' feet with the object of keeping them strong and healthy, is most important and demands the constant attention of every horseman. The following rules should therefore be strictly observed if horses are to be kept free from lameness and remain serviceable to a good old age; so far as shoeing is concerned:

1. Horses should be newly shod, or the old shoes removed and replaced, at least once a month.

2- When being shod the hoofs should be reduced to a proper length and evenly leveled, so that the toe will not be too long, nor one side higher than the other.

3. The frog and sole should not be pared, interference with them being limited to the removal of any loose portions.

4. The shoe should not be heavier than is necessary to withstand wear for a certain period—say a month.

5. The shoes should be made to fit the hoof—that is, be the full size of the circumference of the latter.

6. The shoe should be attached to the hoof with as small and as few nails as may be necessary to keep it securely on the hoof.

7. The nails should not be driven higher in the hoof than is needed to obtain a firm and sound hold.

8. When the shoe is nailed on and the clenches laid down, the front of the wall should not be rasped, but left with its natural polish, and in all its strength.

9. If possible the frog should be allowed to come in contact with the ground.—By Dr. George Fleming. C.B., F.R.C.V.S.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'SCONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevets the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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SPLINTS
CURBS
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COLDS
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Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it. Very truly,

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DEAR SIR :--I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

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(Signed) WALTER SLATER, "Cash Livery."

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of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

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from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered. Horse Book 9 E free.

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POULTRY.

Parasites of the Poultry Run.

One of the most remarkable features of poultry-keeping lies in the fact that certain birds "go wrong" without any apparent cause. They are obviously ill at ease, sickly looking, or positively suffering. The food is changed with a view to restoring the birds to good condition and sound health, but the experiment fails to have the desired effect. A fresh roost or run is chosen, the company of fresh birds is tried; but all these attempts at betterment prove a mixed blessing, and we wonder what has gone amiss.

STALKING PESTS THE REAL CAUSE.

The real cause of the mischief has, unfortunately, been overlooked. The birdis the victim of a host of parasites, which neither good food nor fresh runs will eradicate. They cling to their host with the tenacity of a viper, and the poor bird carries them with every step. Just turn back the quills gently, keep the warm hand hidden for a moment, and the secret will be revealed. A small colony of parasites will jump from their lair, and spot the hand of the disturber. The significant growth of parasitism in poultry has come more acutely into prominence among breeders and fanciers. It is perfectly useless to close one's eyes to the fact that pests in the roost are the most dangerous enemies which fowls have to encounter. They are numberless; their vicious habits know no mercy nor quarter; some attack by day, others by night, while others are continually preying on some part of the bird's skin and quills. If fowls are to be healthy, robust and in the "pink" of condition they must be kept free from parasites, for when once these pests take possession of the epidermis of a bird it may be swarming within a fortnight.

FLEAS WHICH STICK TO THE FOWL.

Perhaps the most tantalising and bloodthirsty of these parasites is the hen flea. His chosen host is the fowl. He is well known for his peregrinations among the feathers, where he hides foxily from the possible nips of the bird's beak, and at the opportune moment makes a painful plunge into the bird's flesh, drawing his drop of blood at every dart. Happily these parasites are "partial" only. They flee from the light of day; the airy fields and meadows, the cheery sunshine have no attractiveness for fleas. Their abode is in the dark. So when the birds leave their perches with the rising sun the pests retire with the darkness, and find their way into the nests, crevices or niches of the roost. The hen flea is quite distinct in the pulex family, and is somewhat dissimilar in appearance and habit from the other fourteen fleas which form our English species. He sports a fine array of barbs—twenty-six of them—on the first segment of the pro-thorax, so that we need have little difficulty in tracing him.

WHERE THE NITS ARE LAID.

If we can discover the "nits"—those pearly white specks which are the ova of the flea—we have a clue to the extinction of the pest. These are not discoverable among the bird's feathers; but in the lower parts of the nest, which in some roosts is not renewed for weeks together we should find a veritable multitude all clinging to a filmy network of hazy webbing, interwined among the dry wisps of hay and straw. This is the breeding ground of the fleas. Here they form their nidus during the day, and scour forth for food among the fowls at night. The nits hatch in ten days, and the larval fleas begin their out let or hindrance as she takes to her nest for laying. In two or three weeks the larvae crawl to the nearest crevice, spin a silken cocoon, and lapse into the pupal stage. Twelve more days pass when the fully-formed insects, with stumpy wings, legs, eyes and antennae, cut away the webbing and begin their depredations. Hen fleas are continually reproducing their kind throughout the year. They are most prolific in the warm days of summer, when their multiplication is amazing.

THE PLAGUE OF MALLOPHAGANS.

These are true insects, which prey incessantly on the birds; night nor day allows of any intermission. Bird lice (mallophaga) bear little or no resemblance to their human congeners. Human lice pierce their victims with a plunging dart; bird lice have heads provided with biting and chewing organs. How formidable are their jaws! What terrible havoc they must create among the tender growing parts of the quills of young pullets and chicks! See the rough-nibbled edges of feathers near the skin of the bird where these mallophagans have been at work. They are born biters; they have no metamorphoses from egg to larva, pupa and imago, like fleas. They begin life as true lice and end it as such. On English fowls there are eight different species, and each selects its particular bird. A hen-louce will not live on a duck; a guinea-fowl-louse will not thrive on a peacock. Besides, different species of lice will cling to different areas on the same bird. Some colonise only among the wing feathers, while others infest the neck and head only.

MALLOPHAGANS UNDER THE MICROSCOPE.

These animals are so infinitesimal that the unaided eye sees them only as mere specks. Their implements of torture are completely hidden from view. To discover how and why they attack the choicest treasures of the poultry run we must submit them to the objective of a microscope of medium power. The revelation will solve the mystery of sickly-looking fowls. We then wonder how birds can appear even moderately healthy with these gnawing at their vitals. Truly the study and investigation of these parasites, which literally swarm in some roosts, is of profound import to all lovers of fine birds.

Just look at a few of these warriors. The Goniode is a dull, brownish individual, with dark markings across his body, which separate him from all other mallophagans. His head is an awesome mixture of hooks, teeth and jaws, which must seriously affect the life of any bird. These pests make their home about the rump and straggle occasionally about the larger wing feathers. Goniocotes are smaller in size, but are more prolific than goniodes. A hand inserted among the finer feathers of the rump and back will draw a dozen at least if they are present at all. They are of dirty-brown aspect, with shadowy lines on the body. The Docophorus boasts a powerful head, two glaring eyes, and fierce claws which cling to the quills while the louse masticates his food. The Lipeurus differs from the former very materially. He has a slim, narrow body, with brown bands and spots. His head is less formidable, and he does much less damage to the birds. His mouth is rounded off with a neat fringe, which enables him to hold aloof the fine downy hairs while he nibbles at the skin of his host. The Lipeurus is widely distributed among fowls, and lives generally among the wing quills. The Menopon louse is a lithe, wary creature, and although numerous on all infested birds is not easily captured. He flits about among the feathers with remarkable agility, seldom remaining in one position for a single minute. The Menopon is found on fowls, turkeys, geese and pigeons.

HOW TO PREVENT AND CURE.

Parasites on poultry are much easier to prevent than to cure. Hence vigorous efforts should be made to check them at the very threshold of the run. The all-important items in poultry keeping are systematised cleanliness, frequent limewashing, and prompt removal of refuse. Pests live and multiply enormously in dirty roosts. Their partiality is for dirt, gloom and insanitary surroundings. Ceilings, walls, floor, perches and nest-boxes should be limewashed not once merely, but several times a year a little paraffin and soft soap being mixed with the wash. All crevices, corners and joints should be deluged with wash. Suitable and sufficient dust-baths are indispensable; good road dust, with a generous sprinkling of sulphur and lime, is admirable for the purpise. Creosoted sand and ashes are also suitable as preventives.

Where birds are already attacked they should be set apart for individual treatment. White precipitate (ammoniated mercury) is used, but owing to its poisonous properties caution is necessary in applying it as a liniment to the affected parts. A bath of elder-flowers and soft soap is also effective in clearing all parasites; this bath does not in any way damage the plumage.—J. H. Crabtree in Farm and Home.

Effect of Corn on Color of Egg Yolks.

The Maryland station recently concluded experiments to determine the effect of corn on the color of the yolk of eggs. A flock of 120 Single Comb White Leghorns were divided into three lots of 40 each and were housed and cared for alike except that one pen received its whole grain in the form of corn; another in the form of wheat, and the third received a mixture of corn and wheat. All pens were allowed free access to narrow yards which furnished a very limited amount of green stuff. All the eggs laid by these pens were saved and, after boiling, were cut in half and placed in parallel rows for comharison. In every instance the eggs from the corn-fed lot showed yolks with a deep yellow color. Every egg from the corn-and-wheat-fed lot had a yolk of a good yellow color, while with but three exceptions the eggs from those fed wheat had yolks of a very pale yellow color. The three exceptions can probably be accounted for by some of the hens getting green food from the yards. Another test was made subsequently with white corn and the yolks were a very pale yellow.

As a result of the tests it was concluded that yellow corn, when fed to hens in the proportion of 9 parts corn to 12 parts mash, gives a very deep yellow color to the yolk. Yellow corn, when fed to hens in the proportion of 4 1-2 parts corn to 16 1-2 parts other foods, gives a noticeable yellow tint. Wheat, when fed in the same proportions, does not give any yellow color to the eggs; and white corn is no better than wheat, so far as furnishing a tint to the yolk is concerned.

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

When We Teach the Child.

"I see in every child the possibility of a perfect man."

What do we do when we teach the child?
We put a thought that is sweet and mild
Into a mind that is waiting for seed,
Into a heart that has never felt greed.
The man with such thoughts is never beguiled,
For we teach the man when we teach the child.

What do we do when we teach the child?
We take the treasures which may be pil'd
In lesson or poem or Nature's store,
And transform them all into golden ore
Of character, which cannot be revil'd;
The strong man comes from the well-taught child.

What do we do when we teach the child?
We take the nature, untam'd and wild,
And mold it into a life serene,
With heart and will and judgment clean.
We make the man who is undefil'd
When we teach, as we ought, the child.

What do we do when we teach the child?
We plant the truth, where the Undefil'd,
Our Lord and Master, said freedom makes.
Thru knowledge, true freedom comes and takes
Its place, and dominates passion wild;
We've saved the man, when we've saved the child.—Friedrich Froebel in the Glenwood Boy.

The Prisoner of Baalbek.

Grant had suddenly displayed an unexpected zest for bargaining. The cause of his former silence was the Syrian fever, induced partly by an intemperate use of Turkish Delight, his favorite sweetmeat; and until we crossed the Lebanons my companion had denied himself the Eastern relaxation of beating down the Turk. Perhaps the whiffs of winter had revived him, and the unwonted grandeur of the ascent past Brummana into the highlands, where the rivers of Syria had their snowy homes, and where cedars grew.

The railway journey from Beirut was the slowest on record, 16 miles in four hours; but no lover of the beautiful could complain that it was too slow. The mosques and the American college, the trees and white houses, the ill-fated quarantine ground, all stood out in the earlier ascent. On the more elevated hillside a mingling of greens added to the scenery. The darker hue of the flat-roofed mulberry, whose leaf, changed into silk, would ere long adorn some Parisian beauty, vied with the light green of the grapevine whose juices would fire the wit of that Parisian's courtier; and these greens with the red tiles of the houses gave colour to the landscape.

As we passed out of the realm of human labors into the abode of Nature's bolder work, a whirlpool of mountain peaks seemed to be encircling us. Deep scars were visible on the lofty rock walls. Sudden droppings of prepices, and the empty spaces of former hills, suggested the battle scenes that Milton dreamt of, when Satan waged his war on Heaven and

"Sidelong pushed a mountain from his seat."

Emerging upon the open again, we beheld far below us the clearly traced shore line, and the blue of the Mediterranean, whose waters to the further west were lost in the haze of the sky, and joining the vault of heaven seemed to rise up to the atmosphere we breathed, which now was crisp and keen, cooled over these eternal snows.

All this revived Grant, so that when we arrived at El-Ma'allaka he was a new man. There was much noise and movement about the station, which was filled with passengers to and from Damascus, while a few, like ourselves, were waiting to go by carriage to the famous ruins of the temple of Baalbek. The table was a credit to the station-mistress. Among those who enjoyed the meal were several of the normal types of tourists, a captain of the Turkish infantry whose pock-marked face was marvellously illuminated when he mentioned the beauty of his native Damascus, and a youth from Jerusalem who had donned all of the costume of the West, some of its language and very little of its courtesy. His familiarity was preparing him for a fall.

During the service of dried figs, more like the "naughty figs" of Jeremiah than to our taste, Grant slipped out unnoticed to interview the liverymen in the yard; and such was his success that on my appearance the platform was the centre of what in our undemonstrative West would be called a riot. There was evidently an uprising of charioteers.

"Only ten francs to the Temple." This was the sentence which rose shrill and clear above the hubbub of sounds; and at its delivery a fresh outbreak of voices, cracking of whips, and wild gestures. The usual price, including the return journey, was twenty francs for each person; and the guild of unsuccessiul applicants was indignant.

But Grant was calm: his triumph was kingly. The fever had departed. He was tasting a new kind of "Turkish Delight."

True, our carriage was not of the best, and jolted as if quite conscious of the bargain; the horses seemed to catch the spirit of the carriage, while the driver would stop every now and then to take in some straggler by the way, pleading as his excuse that each was his brother. However, we arrived early in the afternoon in time to visit the Temple, and with the pleasurable knowledge that it was the cheapest trip of the journey.

In a few hours we had finished our inspection and had turned to the hotel on the eastern slope, discussing as we went the labor involved in the quarrying and moving of the giant stones, and that labor now a waste, a haunt for the antiquary to sport in

While we talked of the temple ruins a women came towards us, tall and bold of form, with the customary looseness of atire and a shawl on her head. The sun shone dark on her burnished face, the same light which farther west was coloring the snows of the Lebanon with a rosy hue. The face was uncommon for the East; the hair and eyes were fair, and a flush passed up and down the cheek. As we waited for the inevitable "Backshish," a voice spoke in purest English: "You look at ruined temples, but there are more ruins here than the temple of the Sun." The eye flahed, and the words were fierce, only as they died away the fierceness gave place to a deep sadness, as when the infant's petulant cry of anger tones off into the low wail of one broken-hearted.

"How do you speak English so well?"

"It had been well for me had I known no other tongue."

"You speak in mystery."

"It is no mystery to me, but only misery."

"What troubles you, good women?"

She waited, scanned our faces and, as if satisfied, made answer:

"Will you listen if I tell my story? It can be of no avail—I must remain; but the telling of it will relieve me; and when you hear it you will know that there are other broken things in Baalbek besides the fallen pillars."

"We will gladly hear you, and help you also if we can." So Grant encouraged her; for he was kind and easily moved to pity. The following was her tale:

"I spent my childhood in the Province of Nova Scotia, on a farm remote from the sound of railroad, and far from any meeting-house or village. My parents had migrated from Scotland and, being too poor to buy a farm, had gone inland to cut out a home from the native wilderness. After devoting every moment to their toil they earned the reward which honest effort seldom fails to receive, so that in my time the landscape had been transformed. My father had made all the improvements himself, following the method of home production. The wooden cottage was built from our own trees and, though there were some faults in the sills, these were concealed in winter by the annual banking of the tan bark, while in summer my mother planted along the edge her flowers, of which she loved most of all the lupins and the bleeding-heart. I used to pick these to pieces and wonder if hearts could really bleed. The fields of grain and grass, alternating with crops of roots, were my father's pride, and he would tell of the cartloads of stones which had gone to make the farm the richer, and which were now used for the front wall along the roadside. He had cleared, burnt and stumped every acre of the fair hillside. And it was an object worthy of his joy, though the world has scant admiration for the heroes of the soil who recover the forests and drain the swamps.

"But success had claimed its wage, and, by degrees, work, like a slavemaster, had bound him over by a fast contract. The struggle was impressed on him and my mother, even as on yonder stones of the temple you watched the chisel marks of the past. Sometimes they would rebel against their fate, but their protest was in vain, so that when years brought affluence and a prospect of lessening the tension, the time for such relief was ever postponed. My mother was not of the ordinary type, being the supplement rather than the complement of my father. She had not limited her efforts to the female duties of the farm, and the chores about the yard, but had loved to work in the woods and the fields. They were both chips of some harder block, and the stream of a common work had worn them into one shape.

"They treated me as a member of another state from theirs. My girlhood was passed in ease, free from the incessant toil which followed them. Every stone they lifted from my path; and, while in my heart I knew that their care for me was a labor of love, yet my rebellious nature would whisper that all was due to their love of labour. My parents had given me leisure, but had not furnished me with the social necessities of leisure, so that I was a creature living without an atmosphere. My world was uninhabited. I was a foreigner at home. They gave me all that care could give; they could not give me companionship. They were prisoners of labour, and I was a flippant child of ease; and we passed our lives in closest separation. Most of all it was tedious in the long winter, when the snow came in November and blocked the road, while it was well on in May ere the frost had heaved out of our salty soil. Mails were irregular; visitors were very rare. I chafed against my lot. I only faintly perceived their love. I rebelled against their labour."

A pause came in the story, as she looked at the distant hilltop, and then continued:

"Into that silent anarchy of our home an agitator came. I can remember so well watching him as he climbed the road. His figure was unusual and could not be mistaken. The stalwart form only partially concealed the traits of his class, for the swing from side to side, and the stoop of the head revealed him to be one of those pedlars who crowd our Province in such numbers. His manner was as striking as his form. A soft accent and pleasant smile put him at once on good terms with his company.

"He came with our December storm and that winter it was impossible to

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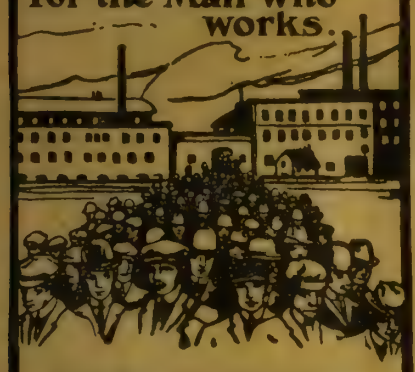

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move for many days; and into our snowbound home he brought great pleasure. He told of the romances of the Middle Sea, of the thrilling tales of Druse and Meronite; of the beauty of Damascus, the river Barada and the slopes of the Lebanon. He stirred my mind with the Scripture prophecies of the time when the nations of the earth would return to the land of promise at the second advent of the Saviour to this world. He told of a large estate of his family near Baalbek, into which he would enter when his father, now aged, had passed away. He told me of more than one "Temple of the Sun." Thus he gave me my atmosphere; peopled my silent world. He entered my realm and became my king. Enough to say that ere the last snows fell that winter we were married, and escaped together to our "Promised Land."

Another furtive glance our her shoulder, and she read our thought, "What of your farm and heritage?"

"Yonder is my home;" and she pointed to a field of several acres on the distant hilltop, where slight patches of green were visible. "That is our farm. I am its keeper. Within the room he dwells who brought me; and our heritage is all but gone. He is a lover of indolence and I am the reluctant slave of labour. Often do I wonder at my parents, and at the irony of events that I should by force be driven to their calling. I I have so often asked if there is not something in the blood that has transmitted it. Doth fate ever follow people thus? So still I rail at work; and when I think of the curse of the land I wonder what murder I am guilty of. Is it my parentts' character that I have killed?"

When she stopped Grant questioned her as to her return home.

"Who can escape the passport system of this land of captivity? Besides, he watches and will soon call for me. I go back to my lot; and of late I have been regarding it a little more kindly. I recall the glow that would brighten my mother's brow when a day's work was accomplished, and my revolt passes into submission. I begin to feel that I am more their child than formerly. Their spirit, though late, is passing into me. And amid it all I remember the words of a perfect child who was one with His Father, and who said, "My Father worketh hitherto and I work.' I think, too, of the motto that hung over our mantelpiece at home: "Man goeth forth unto his work and to his labour until the evening." Then I cease my flippant ways and check my complaint."

The shrill voice of a man cried out: "Marie," and with no farewell she had gone. The sun began to set; the Lebanons, that were so rough in daytime passed through that wondrous range of colours that repeats itself each evening in the East, and the ruins of the temple seemed to hear the old sun god, and the six pillars stood out as if no destruction had ever entered, while a ray of gold followed the women as she hurried off.

In the morning early our coachman called and asked the prepayment of the fare, that he might settle with the innkeeper. We gave him the stipulated ten franc piece. He took it and chuckled, and said he would not drive us back to the railway until we paid another

"It only meant one way."—Jas. W. Falconer in the Canadian Magazine.

More Prize Money at the St. John Exhibition.

Copies of the Greater St. John Exhibition Prize Lists are now in circulation and an examination of the various rules and prizes show that the Committee in charge this year have made some radical changes and tried to meet where possible the question of the exhibitors.

In the Horse Department the most material change seems to be in the rule where permission is now given to one animal to enter in one or more classes, as is the custom in the Winter Fair at Amherst. This not only gives the individual exhibitors a better chance to reap more prize money and so meet their expenses, but by increasing the entries in each section adds very largely to the interest of the spectators and those generally who attend the Fair.

In the Cattle Department a radical change is introduced in the form of a graduated Prize List as applied to the dairy breeds. Three separate Prize Lists are printed, one applicable if the entry, that is the actual exhibit, number less than sixty; another applicable if the exhibit numbers sixty, but not over eighty; but still the third applicable if the exhibit exceeds eighty in number. By the use of this graduated Prize List the Committee hope to meet the objection and where the competition is strongest, there the money should be devoted as the standard of excellence required to win will be certainly higher than in a class where competition is light; this should also tend as an incentive to the various breeders to get their brother breeders in line, so as to increase competition and thus qualify for the larger Prize List.

The Sheep section presents no radical changes, but the prize money is kept on the same basis as during the Dominion Exhibition and there has been no revision to the money originally prevailing there at previous Provincial exhibits. To this extent the Association are co-operating in the present movement to encourage sheep raising in the Maritime Provinces.

In the Swine Department we see a large increase in prize money, the amount devoted to each class being in excess even to that of the Dominion Fair; this we feel is a change in the right direction as the cost of exhibiting swine is quite large and some return should be made to the breeders to offset their trouble and expense.

In the Poultry Departement the same general classification was maintained as at the Dominion Fair in 1910, whereas in the pens of the poultry many increased classes may be found.

The balance of the Prize List appears to adhere quite closely to lines of former years, with perhaps a slight increase in prize money noticeable throughout the whole list, that is not necessarily over the 1910 figures, but over those which ruled in 1907 and years previous to the Dominion Exhibition. In the Apiary Department there is a good list of special prizes given by different people, which should tend to bring out a good exhibit in this class which has always been more or less weak in our local shows.

In a general way, the Greater St. John Exhibition from August 31st. to September 7th., bears every indication at the present time of proving a remarkable success. The magnificent new equipments of buildings erected in 1910 for the Dominion Exhibition, is an advantage of inestimable value, and the flood of lime light which has been focused upon the city during the past year, because of its great transportation prospects, has induced a large number of entries that is far in advance of other years at this time.

The entertainment features, upon which after all, the holiday-making success of an exhibition depends, are this year of an especially fine quality. They will include two aeroplane flight daily, by the noted French aviator Emil Metach; two daily concerts in the main building by Signor Jovine's renowned Neapolotan troubadours, a party of thirty instrumentalists, singers and dancers; the renowned Takezawa Imperial Japanese Troupe of balancers, jugglers, acrobats and black art workers; the Ernst Trio of German knockabout comedians; some thrilling animal acts; the magnificent fireworks spectacle, "The Bombardment of Tripoli," a bigger pike than ever, two vaudeville theatres, band concerts, etc.

Among the industrial exhibits, there will be some notable displays of manufactures in motion, in Machinery Hall. The motor show, the food show, Women's Department, art gallery, etc., will be along the lines of the big Dominion Exhibition.

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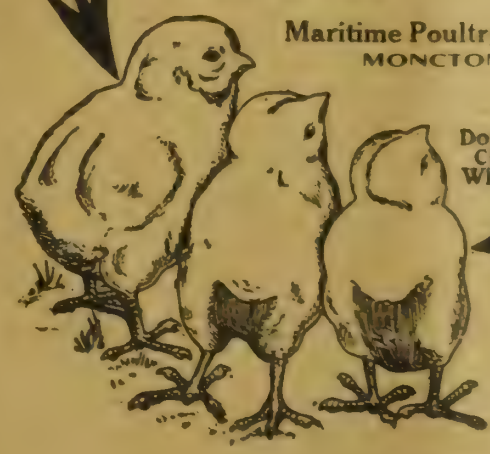

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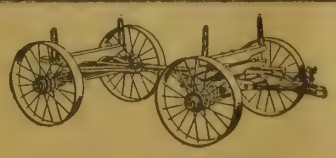

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Flour and Breadmaking.

(Continued from last issue.)

MILLING OF FLOUR.

The roller proress of making flour is a gradual one. In the old days, when all the flour was ground by the stone process, the whole of the flour was left in one grade, and the germ and some of the bran layers of the wheat were not removed in the bolting process. The conshmers' demand for a whiter flour than could be made by this process was partly instrumental in bringing in the roller process of milling, although the introduction of harder varieties of wheat, closer milling, and the division of flour into a number of grades were some of the other reasons for its introduction.

By the roller hrocess the miller has it in his power to separate the flour into as many grades as he chooses, and in the larger mills as many as six grades of flour are made from one stream of wheat. The process is, briefly, as follows:

After being thoroughly winnowed and scoured, the wheat is passed between a pair of corrugated rollers, revolving towards one another, but one travelling slower than the other. In this first "break" the wheat is simply broken open along the crease; the whole of the broken-up material is then separated according to fineness into a number of products. The coarse, main part of the grain is returned to another pair of corrugated rolls, and is ground a little closer; the product is again sifted and the branny part returned to other rolls. This is repeated a fourth, fifth, or even a sixth time, or until practically all the starchy materials are removed from the flat particles of bran. With each sifting some material fine enough for flour is obtained, but the greater part of the endosperm, or central part of the wheat, is left in a coarse, granular condition, which, when purified, forms the wheat farinas that are sold as breakfast foods under a great number of fanciful names, such as Meat of Wheat, Hearts of Wheat, Wheat Crystals, etc. It is from this same part of the wheat that the whitest and strongest flours are made. The germ is the richest part of the grain in protein and fat; the inner bran layers are the next richest, and the starchy endosperm contains the least of these constituents. It naturally follows that if flour is made from the endosperm it will be whiter, and lower in protein, fat, and crude fibre than if the whole grain was included, or somewhat poorer than if all the flour made from the wheat was left in one grade, as was done in the old stone process, or as is done to-day in making a straight-grade flour.

The names assigned to the various grades of flour are very numerous, as practically every flour miller has special names for his products. But, while there are a number of variations, nearly all flour may be graded as "patent," "bakers'," or "straight." The well known flours, Royal Household, Five Roses, and Purity, are patents which probably form about 35 per cent. of the total flour. Sometimes, however, the term "standard patent" or "long patent" is used to designate a flour which forms about 90 to 95 per cent. of the total flour, and is, consequently, only a little better than a "straight." The "bakers'" grade, o r "clears," usually represents about 55 per cent. of the flour after the patents have been taken off. A good bakers' grade of flour will yield about as much bread as a "patent," but the bread is not of so good a colour. The low grade is got by grinding still closer to the bran leaves, and represents the remainder of the flour, or about 10 to 15 per cent. of a total flour. The "straight" grade is the whole of 100 per cent., of the flour from the wheat left in one grade. Of course, the per centage amount of the flour left in the various grades are not fixed, but are varied by every miller, according to the quality of the wheat he is using and the strength and colour of the flour he wishes to produce.

To show the difference in the composition of these different grades of flour the following figures, taken from Bulletin No. 13, part 9, of the Bureau of Chemestry, Department of Agriculture, Washington, are given:

PERCENTAGE COMPOSITION OF WHEAT AND THREE GRADES OF FLOUR MADE FROM IT.

	Moisture	Fat	Carbo-hydrates	C. Fibre	Ash	Proteids	Gluten	
							Wet	Dry
Wheat	9.07	2.74	70.37	1.68	1.79	14.35	32.31	11.88
Patent	11.48	1.45	73.55	.18	.39	12.95	36.14	10.85
Bakers'	12.18	2.00	69.99	.33	.62	14.88	51.21	16.97
Low grade	12.01	3.86	63.26	.93	1.99	17.95	10.01	4.26

It will be noticed that the low-grade flour contains the most fat, fibre, ash, and proteids, and the least starch and gluten, while the patent flour has the least of the first four named constituents—in every case very much less than the wheat from which it was prepared—and the largest percentage amounts of carbohydrates, or starchy material, and a much larger quantity of gluten, although not so much as the bakers' grade. When we remember that there is more fat, ash, fibre, and proteids in the bran layers than in the endosperm, and that the patent flour is kept as clear as possible of bran particles, we are not surprised that this flour is low in these materials and that it is particularly rich in starch. Because of these facts it is lighter in colour than the other grades; and, because consumers of bread attach so much importance to this question of colour, the patent flours sell for more money than any of the other grades; while, judging by percentage composition, the low grade would appear to be the most nutritious, although, as we shall see later, this does not necessarily follow.

The above named grades of flour are generally made from the hard Western wheats. The softer Ontario wheat may also be separated into as many grades, but it is more commonly sold as a "straight" grade flour, or as a long patent, i. e., a straight grade flour from which 5, 10, or 15 per cent. of low-grade flour has been removed. As shown earlier, the soft winter wheats contain less protein and more starch than the spring varieties; consequently, as gluten is a part of the proteins, the flours will be lower in gluten. They will also be more starchy, and are generally whiter in colour; these flours are usually sold as pastry flours. Although good bread can be made from them, it is not so suitable for commercial breadmaking as the stronger spring wheat flour. It is generally thought that the soft flours make a sweeter and more palatable loaf of bread, but it will not produce so much, nor will it make so large a loaf, as the stronger flour. Many millers in Ontario make a blended flour, in which there is 30 or 40 per cent. of spring wheat and the balance made up of winter wheat. Most of the bakers use large quantities of the soft flour; but, usually, they prefer to do their own blending, because the two flours do not "work" evenly in the breadmaking process.

There are other grades of flour on the market. Among these possibly the Graham is the most important. This flour, if true to name, should be the whole wheat, ground fine, without no bolting process. Therefore, it should be of the same composition as the wheat from which it is prepared. It is to be feared that very often the material sold for Graham flour does not come up to this standard. Entire-wheat flour is not used to any great extent in this country. In preparing it the outer bran layers are practically peeled off by machinery, and then the remainder of the wheat is reduced to flour.

Gluten flour is a special brand prepared for people troubled with diabetes, or others who cannot use starchy foods.

(Continued in next Issue.)

Household Hints.

Add a little boiling water to an omelet to keep it from being tough.

If you grease the inner rim of a kettle its contents will never boil over.

If you find the oven too hot and your cake commencing to burn, set a pan of cold water in the oven.

Never fold a fur-lined garment when putting it away for the summer. Put around it a large cloth lined with newspapers and hang it up.

Keep your spices in glass bottles with screw tops—such as peanut-butter jars. A glance will tell you the contents, even if marked covers did get miffed.

As a substitute for hot-water bags, use common flannel bags made in convenient sizes, with drawstrings. Fill them with hot sand or salt; keep a half-dozen ready.

Stuff wet shoes with oats or paper, and rub the outside with sweet-oil to prevent stiffening of the leather.

Plant dwarf nasturtiums just in front of your trench of sweet peas, and as the pea vines grow shabby at the bottom the the nasturtiums will screen them.

If a little sweet milk is rubbed over the tops of rolls or loaves of bread (just enough to moisten them) before they are placed in the oven, the crusts will be a rich brown and much softer.

If there's the faintest suspicion of moths about the edges of the carpets cover with a damp cloth and iron with very hot irons that will drive enough steam through to destroy moths and their larvae.

All nails and hooks used where damp articles will be hung should be dipped in paint and dried before being put up. Then there will be no rust.

To swallow a dose of castor oil heat a cup by pouring boiling water into it. As soon as the cup is thoroughly heated, pour the water out and immediately put into the hot cup your dose of oil. You can then swallow it as you do a raw egg, and with as little inconvenience.

Improved Ironing Board.

The ordinary ironing board may be made much handier for ironing garments of all descriptions, but especially skirts and shirts, by the use of a saw, plane and square. Notches are made near the ends, to allow the tips of two chairs to pass through, while a clothes basket or some heavy object placed on one of the chairs will steady it.

Darning Wool.

Before mending stockings, socks, or any woolen material, place the skein or card of darning wool over the spout of a kettle of boiling water. By this means the steam shrinks the wool, and when the stockings are sent to the wash there will be no fear of the mended portion shrinking away and tearing the surrounding part.

Hints for the Bathroom.

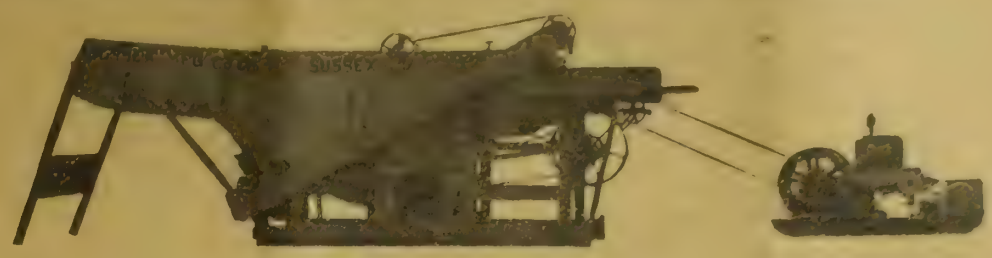
1. Open the window, top and bottom.
2. Take out all the soiled towels, washcloths and linens.
3. Take out the rug, if there must be a rug, and leave it in the air a while after shaking.
4. Run hot water into the bath-tub with dish of ammonia or soda or plain soap, and scrub well— ends, sides and bottom. Rinse well with hot and cold water and wipe dry.
5. Wash all sponges and hang in the air to dry.
6. Wash soap dishes, mugs, slabs, faucets, bowl and closet with soapy water, and wipe dry.
7. Wring a housecloth as dry as possible and lightly wipe over the closet seat and lid and all woodwork, and last of all, the floor.
8. Bathroom walls should be painted to permit their being washed frequently. Painted walls are much more sanitary than walls covered with paper, and more easily kept clean.
9. Where possible, the floors and walls up to four feet in height should be made of tiling. This material is moisture proof, and will not absorb odors.

Furniture Polish.

This is a very effective and quickly made furniture polish. Take equal parts of turpentine and vinegar, and a quarter part of salad oil. Mix all well. To use, dip a flannel rag in the mixture, and rub it well on the furniture; then polish with a duster. I have never used any other polish since I was married, twenty-one years ago, and a girl whom I had recently said my home was like that of a newly-married woman. That speaks for itself—I mean the newness and preservation of the furniture.

The Best Judge of a Thresher Is the Man Who Has Used It

It is not the purpose of this advertisement to tell in detail the merits of the Little Giant Thresher. This is simply an expression of the opinion of a man who has used it, which is, perhaps, better evidence of its superiority than anything we can say. Any reader who is thinking of purchasing a Thresher, will get our descriptive catalogue on application.



Four Horse Thresher.

Description of Four Horse Size

Dimensions of Cylinder -	17x30
Size of cylinder shaft,	1 1-2 inch
Speed of Cylinder,	900 to 1000 Rev.
Size of Sieve - - -	31x36
Weight not mounted,	1700 lbs.
Weight with wheels etc.,	2200 lbs.

Woodstock, Dec. 12th, 1911.
THE SUSSEX MANUFACTURING CO.
Sussex, N. B.

Dear Sirs:—I can say in regard to your Four Horse Threshing Machines, that I have used many makes of machines, but will say that the Sussex Little Giant is the best I ever used, it runs easy and cleans good and without any waste of grain.

Yours truly,
F. D. BURPEE.

This is just one of hundreds of similar testimonials we have.

We make the Little Giant Thresher in four different sizes: one horse, two horse, four horse and ten horse power.

Threshers can be supplied with or without tailings elevator and bagger. Every machine is guaranteed for one year against all defects in workmanship and material. We carry a large stock of Thresher Teeth and other repairs.

All enquiries will receive prompt attention.

THE SUSSEX MANUFACTURING COMPANY, LTD.

SUSSEX, - - New Brunswick.

GREATER ST. JOHN EXHIBITION!

READ THE NEW LIVE STOCK PRIZE SCHEME IN THE LIST

PRIZE LISTS

MANAGER H. A. PORTER WILL SEND YOU a Prize List upon application.

AGRICULTURISTS AND STOCK BREEDERS will find the list fully explanatory of the various classes of exhibits in their departments and the prize monies to be given in each.

RULES AND REGULATIONS GOVERNING THE SHOW, the matter of Entrance Fees, the days for Judging, Applications for space, the care of Cattle, and the showing of the Live Stock are also explained.

SEND FOR THIS BOOK AT ONCE if you intend to be an exhibitor —whether it be Live Stock or even in the Fancy Work department.

AUG. 31 - SEPT. 7

Comprehensive Exposition of Canada's Resources.
Fruits of the Factories. A show in themselves.
A Rounding-up of Eastern Canada's Fancy Cattle.
Agricultural, Horticultural and Dairy Fair.
Food Show, Motor Show, Vehicles and Implements.
Horse Breeder's Exhibition
Pet Stock, Poultry, Etc.

ACRES OF BUILDINGS

AMUSEMENTS

AEROPLANES FLIGHTS TWICE DAILY—A perfect demonstration of the mastery of the air.

FAMOUS JAPANESE TROUPE of acrobats and wonder-gymnasts. Six different acts in one.

ONE LONG SCREAM OF MERRIMENT in the world-renowned Ernst Trio of rough-and-tumble fun-makers.

THE RENOWNED NEAPOLITAN TROUBADOURS.

AMUSEMENT HALL SHOWS twice a day, a Bigger and Better Pike than ever. The interesting side-shows, the freaks, the ballyhoo fellows, etc.

Something Doing Every Hour Of The 7 Days!

SEND FOR PRIZE LIST TO-DAY---MORE MONEY FOR YOU!

The Conditions Essential for the Most Successful and Profitable Growth of the Clovers.

(Continued from page 705)

ly tried to warrant an expression of opinion concerning their value, but the method, at least judged from a scientific point of view, appears better calculated to yield successful results than the earlier method.

It has been urged that the bacteria sent out in culture form are selected and especially vigorous forms, and that accordingly, even in cases where the soils contain the right species of bacteria, the clover crop may be increased, or be enabled to draw nitrogen in larger quantity from the air through suitable inoculation with these improved cultures. It does not appear to the writer that this point has been as yet proved, and in conclusion he would go on record as most emphatically advising against the use of cultures for clover, unless, indeed, it is found on experiment that clovers do not develop in any given locality the characteristic nodules.

The Nova Scotia Agricultural College, Truro can supply nitro-culture at 25 cents per bottle. When ordering Nitro Culture state the particular leguminous crops on which you wish to use it.

Thinning Fruit.

"The marked improvement in the care of orchards and the increased interest in fruit growing in Canada, are notable features of the last few years. During last winter the agricultural colleges held short courses, in all of which an enthusiastic interest was shown, but in none was the increased interest so marked as in the horticultural subjects. The attendance at fruit growers' meetings reflects this increased interest, and those who are following fruit growing as a profession formed a higher percentage of the attendance than has been the case in former years. This change of sentiment is also noticeable in the reports of our correspondents. Constant remarks are made with reference to the culture and care of the orchard, and an eager interest in these subjects is manifested where formerly there was little, if any.

"Thinning" is engaging the attention of the fruit growers. This practice has always been common in British Columbia, but was practically unknown in the East until a few years ago. One of the complaints in the case of Nova Scotia apples has been their small size, and some orchardists there have declared that Nova Scotia did not grow as large apples as the other provinces. It has been demonstrated conclusively that thinning and good culture will remedy this want of size, and particularly where apples set as heavily as they do in Nova commonly practiced, nor does it appear to be so much needed, though there are cases whrre it has proved exceedingly valuable. The set of fruit in Ontario is scarcely ever so heavy as in the extreme east and west, and the soil and moisture conditions are such as to yield a fair-sized fruit without resort to thinning."—The Fruit Crop Report for May.

San Jose Scale Again.

Mr. G. H. Payne, Entomologist was in town last week. Mr. Payne, with his assistants, are making a thorough search of the orchards in the valley to discover the presence of SAN JOSE SCALE. Mr. Payne informs us that up to the present he has cut down, or had removed from the orchards in the valley, about 300 trees. Live Scale was found on trees imported from Ontario and set out in 1910, 1911, and 1912.

Even if it was necessary to remove 50,000 trees the loss would be fully offset by the saving in extra spraying made necessary by their presence in the orchard during the next two or three years.

Another thorough inspection of all the orchards in the valley will be made later in the season. When will the orchardists of the valley decide to raise their nursery stock right here at home, and free from liability to infection? No better facilities and conditions for raising nursery stock are to be found anywhere in the Dominion than are to be found right here in the Cornwallis Valley.—Western Chronicle, Kentville, N. S.

$50 Bank ... No. 52041. ... treal.
Pay ... Dollars

108 Cheques Will be Distributed Among Canadian Farmers. Will You Get One of Them?

In addition to the twenty-seven first prizes of $50 each, there will be eighty-one other cash prizes, ranging from $10 to $25 in our

1912 PRIZE CONTEST FOR FARMERS

This contest is along the same lines as the one which was so successful last year, except that there are three times as many prizes, and therefore three times as many chances for each contestant to win. Every farmer in Canada who uses "Canada" Cement is eligible to compete. The conditions are such that large and small users of cement have equal opportunities to win a $50 prize.

The contest is divided into three classes, and there are first, second, third and fourth prizes ($50, $25, $15 and $10) in each class.

CLASS "A"—Prizes to be awarded to the four farmers in each province who use most "Canada" Cement on their farms in 1912.

CLASS "B"—Prizes to be awarded to the four farmers in each province who send photographs of the *best concrete work* done with "Canada" Cement on their farms in 1912.

CLASS "C"—Prizes to be awarded to the four farmers in each province who send the best *description*, telling how any piece of concrete work was done with "Canada" Cement. (Entries for this prize must be accompanied by photographs of the work.)

In addition to thus being divided into classes, so as to give small users of cement an equal chance with those who use more, the Contest is also divided into nine divisions, one for each province. So you see you need only to compete with the other farmers of your own province, and not with those all over Canada.

Don't think that because you have never used cement, you cannot win a prize. Many of last year's prize winners had never used cement before they entered the Contest. We will send you a free book, "What the Farmer Can Do With Concrete," that will not only help you in the Contest, but will tell you everything you could want to know about the use of cement on the farm.

Don't delay, but send us your name and address to-day and get this free book and full particulars of the Prize Contest right away.

Use a letter, postal or coupon.

Send me particulars of your 1912 Prize Contest.

Address Publicity Manager

Canada Cement Company Limited

501-561 Herald Bldg. - Montreal

A free book, "What the Farmer can do with Concrete" will be sent to all who request details of the Prize Contest.

APPLE BOXES!

SHIP YOUR FRUIT IN ATTRACTIVE PACKAGES

AND REALIZE GREATER PROFITS

Write us for Prices

WILSON BOX CO., LTD. - St. John, N. B.

INTERNATIONAL Sold On A spot Cash Guarantee GALL CURE
Cures Horses While They Work or Rest
PRICE 25¢ AT ALL DEALERS
INTERNATIONAL STOCK FOOD CO LIMITED TORONTO

FLORICULTURE.

Enquirer, St. John, writes;—I enclose leaves of Rowan tree that is partly dead, what is the cause?

I regret to say that I could not give any idea as regards disease of tree and trouble with L;ly of the Valley without seeing the plants and surrounding conditions. If correspondent will send address I will call at first opportunity.

The long cold period during the first of the season has been very hard on the garden plants. I am afraid that many tender annuals will hardly recover from the shock. Stocks and Mignonette seem especially affected. The first blooms on such plants should be snipped off and branching encouraged.

Do not apply any liquid fertilizer until the last of July or until growth has become well established.

Sweet Peas look well and they should receive some support in the way of a trellis or sticks as soon as six inches high. A little heaping of the soil around them is a great help.

St. John, writes:—My Rose bushes are infested with green lice which are clustered about the tips and buds. They are very plentiful. Please tell me how to get rid of them.

Soak a fig of tobacco in one quart boiling water for a few hours. Dilute this one half strength and sprinkle the buches. Two applications will usually suffice. Strong castile soap suds is also good.

The following are a few receipes for the commoner insect pests that are busy this week. For the slug that eats the Rose leaf use kerosene emulsion as a spray. Make it as follows;

1 gallon kerosene oil
½ gallon water
½ lb. hard soap

Dissolve soap in soft water and mix with oil. Of this gluey mixture take one part to ten parts water and be particular to stir well while applying.

If instead of this you prefer whale oil soap (equally good) use one part to eight parts water.

For green lice use tobacco water the emulsion is also good.

For slugs or leaf eating worms on shrubs use hellebore. One teaspoonful to one gallon water—apply during bright sunshine.

Anxious Inquirer, Rothsay, writes:- I am writing to ask assistance with my garden. The old fashioned Peonies are not flowering but my neighbor's are although my plants are much larger than hers. They have bloomed each spring for twenty years but last spring not as well and this spring not at all. There does not seem to be any insects or anything to bother them. They simply do not bud. What can I do to make them bloom? I planted a number of Asters that I bought in the City; The leaves and also the bottom of the plants are beginning to shrivel up, the tips are growing, however, do you think they will come along all right?. My Sweet Alyssum plants were in fine bloom when I planted them but they are now turing brown and look badly, what can I do for them?

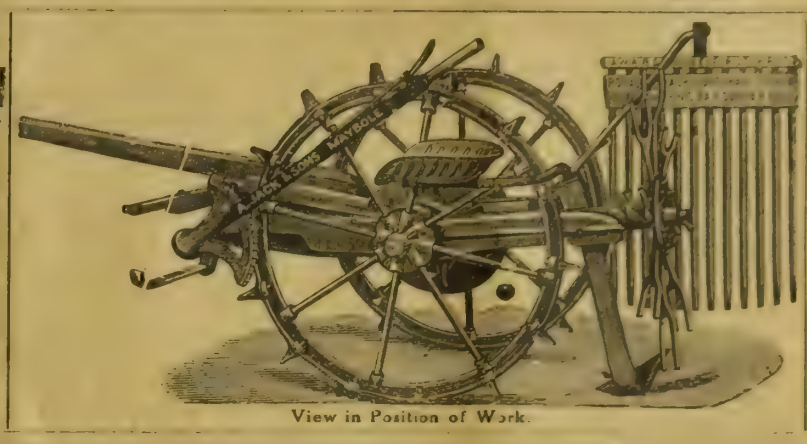
Your Peonies are so thoroughly root bound that they will not flower again until the roots are divided and given fresh soil. In the fall, after the leaves are frosted separate the clumps of roots into quarters with a sharp knife or axe and plant each quarter in rich soil in different spots. The second year they should all be good as ever.

The World's Best Potato Digger

Jack's Royal First Prize New Patent

CALEDONIAN POTATO DIGGER

Fitted With Ball and Roller Bearings



View in Position of Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christana (leading Foreign and English Machines competing). WRITE FOR CATALOG and PRICE.

ILLSLEY & HARVEY, Canadian Agents, Port Williams, N. S.

MOLASSINE

Mill Feeds are Higher and Going Higher Yet

The Farmers in the Maritime Provinces will have to pay high prices for Middlings and Bran this Winter. THINK IT OVER and see if you can determine where your profits are coming in. We think in some cases, they will be rather small when you are forced to pay such high prices for your Feed Stuffs, in fact, we believe you will need an extra pair of Glasses to find them.

MOLASSINE MEAL decreases your feed Bills

and keeps your Animals in the pink of condition. Two important factors in connection with this Feed are; Animals must masticate their feed when mixed with Molassine Meal, and remember that it is not what an Animal eats so much as what it digests which benefits it.

Orders are coming in for MOLASSINE MEAL each mail. Let your Dealer know what your requirements are now.

L. C. PRIME COMPANY, LIMITED

DISTRIBUTORS.

Offices at ST. JOHN, MONTREAL & TORONTO.

IF YOU WISH TO BE WELL

YOU MUST KEEP THE BOWELS OPEN

Any irregularity of the bowels is always dangerous, and should be attended to at once. If the bowels cease to work properly, all the other organs become deranged.

Milburn's Laxa-Liver Pills work on the bowels gently and naturally, and will cure the worst cases of constipation.

Mrs. J. Hubbard, Port Colborne, Ont., writes:—"I have tried many remedies for constipation and never found anything so good as your Milburn's Laxa-Liver Pills. We always keep a vial in the house, for we would not be without them. I always recommend them to my friends."

Milburn's Laxa-Liver Pills are 25 cents per vial, or 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

P. E. I. July Circular.

The weather during the last month has been too dry for the favorable growth of crops. The total rainfall amounted to 1.71 inches. The first week of June was very showery, the second fine and cool with a lot of north west wind blowing. There was a very heavy rainfall on Monday, June 17th. The last half of the month was fine and warm with the exception of Sunday the 30th., which was cold and showery. Up to the time of writing, July has been very warm and dry, light showers however fell on the evening of the 8th., and 9th. A heavy fall of rain is badly needed. Pastures are beginning to be pretty bare. The hay crop will be very much below average and weedier than usual. There is very little of last year's crop left over so that it will likely be very dear. Quite a lot of oats and peas will be cut green and made up into hay. All kinds of grain look healthy. Growth, however, has not been rapid and the straw is short for the season of the year. The dry weather is beginning to effect the colour.

Potatoes have come up well and are making rapid growth. The potato beetle is very plentiful. A considerable amount of Arsenite of Lead will be used this year instead of Paris Green.

Turnips, where sown early, are doing well, the cut worm is making great destruction among those sown later. It is reported to be cutting even potatoes.

Quite a lot of the corn failed to come up. Some fields however are exceptionally good.

There is a fair setting of apples, plums and cherries and an abundant setting of strawberries and bush fruits. The dry weather is however shortening the crop of strawberries.

Weeds are continuing to spread. The present season has been very favourable for them.

All kinds of live stock are scarce and dear.

The following are the market prices for July 10th., 1912.

White Oats	$1.91	per	hundred	lbs.
Black Oats	8.00	"	"	"
Potatoes	.67	"	"	"
Wheat	2.15	"	"	"
Hay	.76	"	"	"
Straw	.31	"	"	"
Beef Cattle	6.75	"	"	"
Butter	22.00	"	"	"
Eggs	.20		per dozen	
Strawberries		3 boxes for 25c.		

If you are a housewife you cannot reasonably hope to be healthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunlight. If you do this every day and keep your stomach and bowels in good order by taking Chamberlain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

Forage or Mould Poisoning.

Iowa farmers have suffered heavy losses in the past few months by the death of horses from a disease that affects these animals almost exclusively. It is usually fatal; it is not contagious, and it is quite certain that it comes from the eating of moldy fodder or grain. There is only one safeguard againgt it and that is the rejection of any feed that shows signs of mold. Ensilage and corn fodder of any kind and hay from swampy lands need to be inspected with special care, for they are the most likely to be moldy. Cattle often seem to eat spoiled plant food without harm, but to horses it is poisonous.

It usually appears in isolated outbreaks and generally the horses on a single farm in a community are affected. In some cases where horses are not fed alike, only those given a certain kind of feed are taken sick. In these facts there is quite conclusive evidence that the disease is associated with the food eaten and that it is not transmitted from one animal to another. The outbreaks appear more frequently in low, swampy districts because conditions there are more favorable for the development of the molds and the undesirable changes in plant foods believed to be responsible for the disease. It is not by any means confined to these districts, however, nor is it limited to any certain food stuff. It merely occurs more frequently in some foods than others, due to their nature and method of storing.

CAUSES

Forage poisoning is likely to appear whenever moldy grain or fodder is fed to horses or mules, but it does not follow in every case where such food is given. Moreover, it very seldom affects cattle. Horses and mules may sometimes be fed for a considerable time on fodder containing more or less mold without sickness while in other cases a comparatively small amount of such feed will cause death in a short time. Danger lies in the use of fermented foods, also, on account of poisons developed in fermentation. Some plants are likewise poisonous at a certain stage of their growth or when partially wilted. This is true of sorghum, particularly the second growth, which in some cases causes almost instantaneous death.

There are several molds which grow on food materials under certain conditions which are more or less injurious. The most common are the black mold, the blue mold and the green mold. They are found frequently in ensilage, corn, hay, oats and ground feeds. Moisture favors their development on all food stuffs.

ENSILAGE

Ensilage is one of the most important and valuable foods available to the Iowa farmer, but it is often responsible for forage poisoning. Sweet ensilage is of proved worth as a feed for horses as well as for cattle, but speaking generally ensilage feeding is attended by some dangers that the owners of silos should know. Ensilage contains the necessary moisture and, in most cases, the required heat, to favor the development of molds. On this account it is more often a cause of forage poisoning than other food stuffs. Perhaps 80 to 90 per cent of the outbreaks reported to this station come from feeding moldy ensilage. The quantity of mold may be so small as to be overlooked and yet be dangerous. Especially is that true of hay coming from low, marshy ground; though the mold in it may not be seen at first glance, there may be enough of it to produce poisoning and death.

Moldy corn has been responsible for several outbreaks of forage poisoning. Ears that have been attacked by the corn ear worm are particularly liable to be moldy.

SYMPTOMS

Two forms of the disease are most common, the acute and the sub-acute.

In acute forage poisoning loss of appetite and lack of thirst, associated with depression and lack of spirit are usually the first symptoms. Following this usually comes unsteadiness of gait and inability to control the hind quarters, which become worse until the animal either lies down or falls and is unable to rise. At the same time there is in practically all cases a paralysis of the muscles of the throat and cheeks as a result of which there is a slobbering due to inability to swallow, and a flabby condition of the cheeks which appear swollen and pouched. After the animal is unable to rise it will sometimes lie quietly for hours, and sometimes it will struggle or show spasms at frequent intervals. In acute cases there is usually profuse sweating and many times a peculiar staring appearance of the eyes. The temperature is normal or frequently below normal, which is contrary to the fact in contagious diseases. The breathing is usually irregular and jerky. The acute cases generally die after a course of 12 to 72 hours and are usually the first animals to be affected after moldy food is eaten.

In sub-acute cases the symptoms are similar to those in acute cases but they do not come on so suddenly and are less violent. The sub-acute cases occur among animals that have eaten less of the poisonous food and they are the last to show symptoms. Dullness and difficulty in swallowing, associated with slobbering and dropping partially chewed cuds of food into the manger and feed box, are early signs of the disease. These are followed by increasing paralysis, especially of the limbs, weakness, and often indications of delirium. In fatal cases death follows in from several days to a couple of weeks. A few of the less severe cases may recover.

The length of time between the feeding and the appearance of the symptoms, the suddenness of the attack and its duration, depend upon the amount of poisonous food taken. The course is shorter, from 2 to 4 days, the attack is more sudden, and death soon follows in from 12 to 36 hours when large quantities are consumed.

PREVENTION.

Since horses and mules are very liable to poisoning with moldy foods where cattle may eat the same foods with little or no danger, the method of preventing the disease is clear. Under no circumstances feed horses or mules ensilage that is in the least moulded or decayed. In feeding ensilage to cattle do not put it or scatter it where horses or mules can get to it, for they will sometimes eat the leavings in the feed trough after the cattle have picked out the best food. Do not throw waste ensilage where horses or mules can reach it. Sweet ensilage is a wholesome food for horses and of known nutritive value, but unless it is certain that it is perfectly fresh and free from mold it should not be fed to horses at all. Moldy silage has already caused such heavy losses on some farms that it will take all the profits a silo can bring to make good the cost.

The hay, corn, oats and other grains fed to horses should always be of the best quality and the water troughs should be kept clean and the water pure and fresh. With all these precautions, forage poisoning can be eleminated.—C. H. Stange, Iowa Agricultural Station, Ames, Iowa.

Butter Makers Over Run.

In Denmark the salary of a butter-maker depends on the over-run he secures. This compels him to give attention to this important feature of his work. The law limits the amount of water he can incorporate, so there is no danger on that point, but it makes the butter-maker who gets a 12 per cent. over-run "sit up and take notice." The Danish Government assists the creamery in this as well as other features of creamery work, and many analysis of butter are made at the Government laboratories.

In that country of keen competition and small profits the success of a creamery depends on the over-run it secures and uniformity in over-run is also important. It will not do to get 13 per cent. one day and 18 per cent. the next. The 18 per cent. butter may get the creamery in trouble and the 13 per cent. butter will mean a financial loss.

Minard's Liniment Co., Limited.

Gents,—I cured a valuable hunting dog of mange with MINARD'S LINIMENT after several veterinaries had treated him without doing him any permanent good.

Yours, &c.,
Wilfrid Gagne,

Prop. of Grand Central Hotel, Drummondville, Aug. 3, '04.

EATON'S SEMI-ANNUAL JULY & AUGUST BARGAIN SALE

MONEY-SAVING OPPORTUNITIES FROM CANADA'S GREATEST MAIL ORDER HOUSE

SEE TO IT THAT YOU GET THIS CATALOGUE OF BIG VALUES

LET US HAVE YOUR NAME and address on a post card and we will mail you a copy of this book of bargains. You'll welcome its coming because within its pages are better buying chances than you've ever known—and besides the assortment is most varied. There's something of interest for all the family. Natty Summer wear for the women folk in the most pleasing and becoming styles — Men's and Boys' wearables—well tailored clothing and other garments— and what a host of home needs! It would almost seem as if we had gathered together a little of everything—just enough for one's needs and present requirements. So now that we have given you a foretaste of what's in store for you and with the assurance that this Catalogue can, and will, save you money, why not share in all this saving—and don't delay either, because the time is short.

JUST TWO MONTHS TO BUY AT LOW PRICES

WRITE US TO-DAY FOR A CATALOGUE

ALREADY orders are pouring in—and pouring out—quick service is our motto. We aim at sending out orders the same day as received. It's just like shopping in town. With you the wonderfully interesting choosing this Sale Catalogue affords, and we, at this end, fully keyed up for quick action—ready at a moment's notice to fill out your commands, and hasten your purchase with all necessary precaution and despatch. To those who have not this Catalogue at hand, we say again, "Why miss all this?" At least try out your own judgment on this Catalogue of great values. Send to-day for **YOUR** copy. **DON'T DELAY.**

AN EATON PURCHASE MEANS SATISFACTION OR YOUR MONEY BACK

REMEMBER that should you for any reason feel dissatisfied with your purchase, **WE WILL GLADLY REFUND YOUR MONEY AND PAY TRANSPORTATION CHARGES BOTH WAYS.** We feel sure, however, that your purchase will open up to your entire satisfaction. Be it a ten-cent article or a one hundred dollar purchase—the guarantee goes just the same—no exceptions—no rulings or equivocations. The **EATON** guarantee says, **MONEY BACK IF WE FAIL TO PLEASE.** That's your protection against any possible failure on our part to serve you well. Send us a trial order during this Sale, and see for yourself how we make dollars earn more than usual for you.

EATONS SEND ALL HEAVY GOODS OF $25.00 AND OVER ARE FREIGHT PREPAID, AND ALL ORDERS ALSO SENT FREE DELIVERY

GET EATON'S PRICES ON BINDER TWINE BEFORE BUYING

THE T. EATON Co LIMITED
TORONTO - CANADA

DO NOT FAIL TO GIVE YOUR CORRECT NAME AND ADDRESS — AND WRITE PLAINLY —

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issie. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

FOR SALE AT A BARGAIN—A Farm of 102 acres. Full particulars given on application to C. W. PHINNEY, Bear River, Annapolis Co., Nova Scotia.

JERSEY BULL FOR SALE—Three years old. Register No. 1254, Dam, Pedro's Sweet Alice; Sire Pogis 40th of Hood Farm. Write EDGAR SHAMPER, Kingston, N. B.

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MAN WANTED—I want a smart, capable man, for general farm work, used to horses and a good milker. Will pay twenty-five dollars per month and board for summer months and would engage good man by year. CHAS. PETERS, Elmhurst, N. B.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shddiac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, St. John, N. B. We are also in receipt of letter from Summerside enclosing eighty cents, and asking for premium Ben Hur or Handy Andy. This letter is also without signature. Kindly notify The MARITIME FARMER office. St, John, N. B.

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FEEDSTUFFS.—Bran, $25.00 to $26.00 ton; Shorts, $28.00 to $29.00 ton; Middlings, $29.00 to $30.00 ton; Oil-Cake Meal, $2.40 to $2.45 per 100 lbs.; Corn Meal, $1.90 to $1.95 bag.

DRESSED MEATS.—Butcher's cattle (carcass), 7 to 13c. per lb.; Milch Cows, $40.00 to $45.00; Lamb, 16 to 18c. per lb.; Hog, 9 to 12 c. per lb.; Veal, 7 to 10c. per lb.; Pork, 10 to 15c. per lb.

HORSE.—Drafters, $250.00 to $300; Roadsters, $200.00 to $250.00

DAIRY PRODUCTS.-Creamery Butter, 27 to 29 c. lb.; DAIRY Butter, 18 to 22c. lb.; Cheese, 14 to 15c. lb.

POULTRY AND POULTRY PRODUCTS.—Eggs, 20 to 22c. doz.; Fowl, 70 to 90c. fresh; Ducks, 15 to 17c. lb.; Geese, 17 to 20c. lb.;Turkeys, 22 to 24c. lb.

MISCELLANEOUS.—Hay, $16.00 to $18.00 ton; Straw, $10.00 to $10.50 ton.

VEGETABLES.—Potatoes, $1.75 to $2.00 3 bush. bag; Turnips, $1.50 to $1.60 3 bus. bag.

St. John.

DRESSED MEATS.-Beef (carcass), 9 to 13 cts.; Beef (retail), 11 to 22cts; Mutton, 7 to 9cts.; Veal, 9 to 10½ cts.; Pork, 9 to 11½ cts.; Lamb 15 to 17 cts. wholesale.

DAIRY PRODUCTS.-Creanery Butter, 24 to 25 cts.; Dairy Butter, 21 to 23 cts.

POULTRY AND POULTRY PRODUCTS.—Eggs, 23 to 25 cts.; Chickens, $1.25 to $1.50 pair and 20 to 22 cts lb.; Ducks, $1.50 to $1.75 pair; Turkeys, 18 to 20 cts.

FRUIT.—Raspberries, 16 cts. for the first of the season; Strawberries 10 cts. Wholesale.

MISCELLANEOUS.—Wool, 13 to 21 cts.; Beef Hides, 11½ cts.; Calf Skins 18 cts.; Lamb Skins, 25 to 35 cts.; Sheep Skins, 25 to 35 cts.

VEGETABLES.—Carrots (new), 80 cts. to $1.00 doz. Bunches; Potatoes, $1.75 to $1.80; Turnips, $1.00; Beets, $2.00.

Charlottetown.

GRAIN.—Wheat, $1.20 to $1.40; Oats white, 60c. to 62c. black, 62c. to 65c.

FEEDSTUFFS (retail).—Bran, $1.40 to $1.50; Shorts, $1.50 to $1.55; Middlings, 21.50 to $1.60; Oil-Cake, $2.35 to $2.60; Gluten Meal, $1.85 to $2.00 Corn Meal, $2.15 to $2.25.

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DRESSED MEATS.—Beef (carcass) 9c. to 12c.; Beef (retail), 8c. to 16c.; Mutton (retail), 8c. to 14c.; Veal (carcass), 5c. to 7c.

HORSES.—Drafters, $150.00 to $225 Roadsters, $150.00 to $225.00; Carriage, $150.00 to 225.00

DAIRY PRODUCTS.-Creamery Butter, 24c. to 25c. for Solid and 25c. to 26c. for Print; Dairy Butter, Tubs 18c. to 20c. Print 20c. to 21c.; Cheese, 12 11-16 Board Price.

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MISCELLANEOUS.—Hay Loose, 60c. to 68c. per 100 lbs. Pressed, $12.-50 to $14.00 ton; Straw, $6f00 to $7.00 ton; Wool, 23c. to 25c. per lb.; Beef Hides, 10½c.; Calf Skins, 15c.; Lamb Skins, 25c.; Sheep Skins, 25c.

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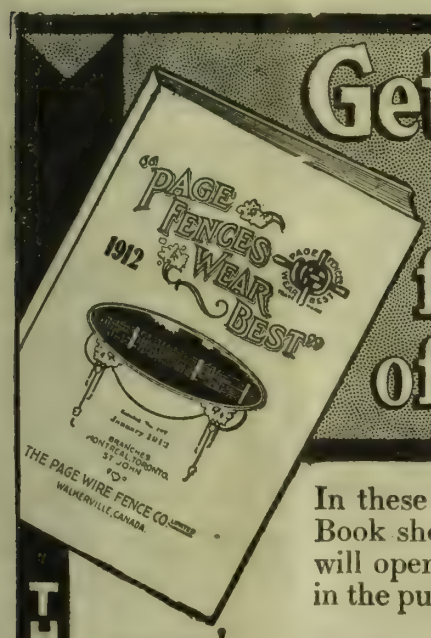

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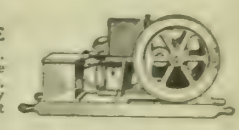

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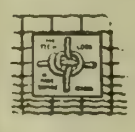

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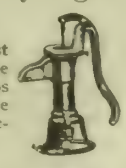

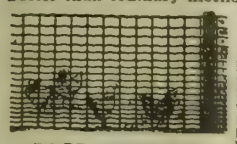

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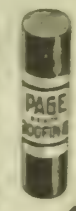

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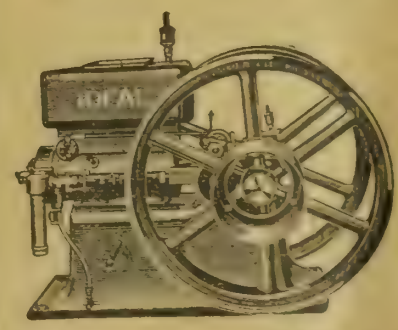

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Volume 17. **SUSSEX, NEW BRUNSWICK, AUGUST 13, 1912.** **Number 21.**

How I Made a Profit With Sheep.

By Andrew McPherson, Pictou Co., N. S.

Awarded Second Prize in the Maritime Farmer Sheep Raising Contest.

A good many years ago, the writer inherited a worn out farm the soil of which was naturally of a light sandy nature. A bad system of farming was not long in giving it the name of being the poorest farm in a district where poor farms predominated.

The practice had been to plow a field, take two crops of oats therefrom, sow a small quantity of timothy with the second crop of oats and then hay (if it would give it) and pasture for several years repeating the process over again. This method was carried on until the land would no longer yield any oats, when that field was abandoned and a new one broken up and put through the same treatment and always with the same results.

When the farm came into possession of the writer about 100 acres were cleared had yielded up the vergin fertility and as far as crops were concerned were valuless as a farming proposition.

At that time the "lure of the West" was strong and the fortunes made in wheat was doubled before our eyes in a manner that made the old farm look like thirty cents. However, there were family ties to be considered and the fact that it being the old Homestead appealed to us so we decided the matter. This decision was arrived at, after a failure on our part to dispose of it although offered at the ridiculous low price of $5.00 per acre.

Looking over the situation carefully and taking into account the poor condition of farm and buildings and knowing that live stock of some kind was necessary we decided to invest in sheep. Our forebears for generations, had been old county shepherds and the "instinct" was strong within us formed, no doubt, by the tales we listened to in boyhood days around a blazing log fire (often our only light) on winter evenings, tales that told of sheep herding in the glens and mountains of Bonnie Scotland.

Looking back over the many years since we purchased our first flock we have to acknowledge many mistakes, but through lean year, and years of plenty—years of adversityand years with a goodly share of prosperity—we have never, never regreted the choice we made for the flock always showed a profit, pretty small it it true at times but a profit never-the-less that tided us over many a drouth and when crops failed and other stock could hardly be given away, the little "mortgage-lifters,' kept the pot boiling and made several blades of grass grow where formerly nothing grew but weeds.

Our first venture was the purchasing of a flock consisting ef fourteen ewes, whose only redeming feature was their low price. They were bought at auction and cost $2.50 each or $35.00 for the lot with twelve months credit, the usual term, at auction sales in the district. Those ewes were a poor lot the result of years of inbreeding but they responded well to better care and feeding and began to improve in condition from the start.

For several previous years the agricultural Socities were experimenting with rams of the different breeds and had some good imported sheep. The Shopshire took our fancy on account of its ability to adapt itself to new environments and the early maturing qualities of the lambs which seemed to be ready for the butcher several weeks ahead of the lambs of the larger breeds. After choosing the breed we spent considerable time selecting the ram and we believe the time was well spent. We heard the maxim "the ram is half of the flock" and the result of our first selection proved its truth. The influence of the dam is shown in only one lamb or, at most, two while that of the sire is stamped on every lamb in the flock.

The ram we selected was one that was not much patronized by the members of the Society on account of being somewhat undersized, but he was what might be termed a "thyig little sheep" standing on short straight legs, short broad back, neck strong and smoothly joined to the shoulders, eyes bold and prominent giving him a very masculine appearance, face short, and well covered with the wool about the head, and with a dense fleece all over. He about fitted the bill in our estimation of what a ram should be.

The ewes got the run of the after feed for several weeks which with a little oats put them in splendid condition for breeding and the ram was turned with them early in November. As soon as all were bred they were dipped and sent to pasture. With the exception of one or two stormy nights they were not again taken up until early in July, when 14 lambs and one dry ewe were sold to the butcher. The lambs bringing $2.50 each and the dry ewe $4.00; $39.00 in all and leaving 3 ewe lambs in flock. The result of this first venture in sheep was as follows:

Dr.		
14 ewes at	$ 2.50	$ 35.10
Turnips 100 bush. at	.10	10.00
Oats 25 bush. at	.10	10.00
Bran 5 cwt. at	1.00	5.00
		$ 60.00
Cr.		
14 lambs at	$ 2.50	$ 35.00
1 ewe at	4.00	4.00
60 lb. wool at	.24	14.40
3 ewe lambs in flock at	2.50	7.50
		$ 60.90
Credit Balance		$ 0.90

thus paying for the original flock, adding 3 lambs to flock and $0.90 to the good. As the hay used was absolutely unsaleable we consider it being turned into manure very good value while the clearing up of weeds in the pasture more than paid for time expended in fencing and taking care of the flock.

The flock was also greatly improved and by the judicuous use of sires the progeny of this flock, 35 in all, was sold at auction 5 years later and averaged the handsome price of $5.60 per head.

The improvement in the condition of the pasture was so noticable that we resolved to stick to sheep and again purchased another flock, this time a much better class of grade Shropshire ewes, securing at the same time the best ram of the same breed that our means would allow.

This ram was a prize winner in Ontario and his lambs were an exceptionally good lot, proving to our satisfaction that "like produces like". They were so true to type that we used one of his ram lambs for two seasons in the flock. [illegible] inbreeding. While in a general way we do not reccommend this as it gave us, in this instance, what we were striving for viz. the true Shropshire type and landed the flock at the top of the prize list at the Provincial Exhibition, Halifax, for grade Shropshires. Figures in this case would only be a repetition of the others. Having better sheep and greater [illegible] we had also corresponding greater [illegible] business that we purchased a few [illegible] ewes and [illegible] the

breeding of registered stock, gradually working out of grades until for years back the farm has carried nothing but a purebred flock that has proved eminently satisfactory as a paying proposition. As this article has only to deal with a commercial flock we may, at some other time, give the Maritime Farmer readers, some of our experiences in breeding purebreds, fitting for show, etc.

In looking into the decline of the sheep industry in the Maritime Provinces, the causes therefore may be summed up under the following heads: The dog nuisance and the lack of proper fences, neither of which is unsurmountable. Regarding the dogs, the people have the laws in their own hands and it is up to them to see that they are enforced. When we went into the business we gave it to be understood that our sheep pasture would be an unhealthy place for roaming dogs, and very soon neighbors, who had dogs with a propensity to wander, began to sit up and take notice. In our twenty-five years experience we have never lost a sheep by dogs but of course we had to take precautions, one of which was to have some dog-proof hurdles made and on several occasions when dogs were troublesome the hurdles were used to good advantage. Hurdles are quickly and cheaply made by nailing light sawed rails to posts that are sharpened at one end and driven into the ground to form an enclosure, the upper end of posts being wired together. A handful of oats or salt will soon induce the sheep to go there when called and it is always a delight for the boys, and sometimes the girls of the farm to fasten them in and let them out again in the morning—thus ensuring the flock against the attack of dogs during the night. These hurdle enclosures were always put up on the highest, dryest knoll in the pasture and being easily removed from one knoll to another, the result was that these knolls soon became the most fertile places on the farm and always looked green as far as the eye could see.

The other objection—the lack of proper fences—is easily overcome. It requires no more material to fence for sheep than for other stock, except that it has to be put up different. We have never found anything that ,has answered the purpose as well as the old fashioned post and rail fence, using sawed rails and posts sharpened and driven. The rails should be one inch or one and one-quarter thick six inches wide and ten feet long. Four rails high is sufficient and the rails can be sawed out of lumber that is good for nothing else, fir, cat-spruce and hemlock all are suitable. If the fence is built on an embankment or side hill, three rails high would be sufficient and as the posts are sharpened they can easily be driven back if thrown up by the frost. Rails should be nailed on alternate sides of the posts to balance better and get a better nail hold. The cost of this fence should not be more than twenty cents per rod, labor included, and we have been able to do it as low as fifteen cents.

When we first started with sheep the pasture was so poor that we had to have some acres of rape near by to help out, and so arranged at first that only the lambs could get in, and later when the pasture got very bare, all were allowed in and it is surprising how far a small piece of this splendid forage crop will go to supplement a dry pasture. As time went by, the pasture began to so improve that this was unnecessary, and the rape was used only when fitting for show purposes.

A few points that we have to look for in ensuring success in the sheep business may be mentioned, as the result of out twenty-five years practical experience. Following in their importance are: Selection of suitable sires, keeping the best of ewe lambs, studying the flock and culling out ewes that fail to be good mothers, changing the pasture often, variety of winter feed, freedom from ticks which can be cheaply done by dipping spring and fall and regular exercise for the in-lamb ewes. Some of the results that may be expected from a well kept flock are; Profit derived from many sources, little expense as no costly buildings are required, destruction of weeds, even distribution of manure on pasture insuring increased fertility year by year, light work that is generally performed by the boys for pure love of it, keeping the boys on the farm by letting them handle their shares and lastly, providing the family with clothing and furnishing the table with the most wholesome of all meats and supplying a market, the demand for which far exceeds the supply at a figure that places the flock in the lead of all other live stock as a revenue produce.

Spraying For Black Spot---Experiences of 1912.

By Manning K. Ells, Secretary N. S. Fruit Growers' Association.

The season of 1911 left many spraying questions undecided, and many problems still to be solved by Nova Scotia Fruit Growers. Lime Sulphur as a summer spray was first widely used in the Valley last season, but on account of the dry summer there was no development of apple scale fungus, and the question whether lime sulphur would control black spot or not was left unproven.

Only a few men have had perfect results from the old Bordeaux Mixture. Under certain weather conditions on some varieties of apples, particularly the Gravenstein and Ribston, both desert apples, where a fine finish is desirable, Bordeaux caused a rusty disfigurement, often spoiling altogether the sale of the fruit.

Yellow leaf was common in Bordeaux sprayed orchards and the foliage was frequently more or less injured. With the growth of large orchards has come the power pump, that handles from eight hundred to fifteen hundred gallons of spray a day, and to mix this quantity of Bordeaux properly would take much time and considerable equipment. The time was ripe for something better as a summer spray and from reports from other orchard districts, Lime Sulphur seemed to fill the bill. For climatic reasons, Annapolis Valley apples are peculiarly susceptible to Black Spot. The moist winds from the Bay of Fundy and Minas Basin give an atmosphere of high humidity. Heat and moisture give perfect conditions for the development of moulds and mildews and all kindred fungi of which Black Spot is our most common example. Different parts of the Valley vary in this respect and better results from spraying have been attained in the West than in the Eastern end near Minas Basin. The Inland valleys of Oregon, Washington and British Columbia, shut off from the sea by high mountains and so dry that irrigation must be practised have not the fungus problems to face solely because of their dry atmosphere. As I said before spraying results from Lime Sulphur last season were inconclusive, but this year's experiment is letting a little more light on the question, and some fruit growers are showing beyond doubt or question the possibility of raising a perfectly clean crop of apples even in a year most favorable to Black Spot development. Spraying to be successful, has three essentials which must be observed— First the spray mixture must be properly made. The commercial Lime Sulphur as sold in the Valley, generally tests from thirty-two to thirty-three Beaume. The home boiled not so high and in using the latter more concentrate should be used that the spraying mixture may be as efficient. As a poison, Arsenate of Lead is used exclusively because of its adhesiveness, the fact that it does not settle easily, and its addition to the Lime Sulphur increases the fungicidal value of that spray about fifty per cent. There are two widely used brands on the market, both good; many farmers buy the "chemicals" and mix their own poison with good satisfaction as a spray mixture and a considerable saving to their pocket.

The second essential. —The spray must be correctly applied. Those who attended the annual meeting of the Fruit Growers in Windsor in 1910 will remember that Professor Wallace in his address on spraying, gave a life history of the spores or germs of the Black Spot. The spore wintered on the dead leaves and when conditions are favorable for its development in the spring, usually about the time the leaves come out, they begin to multiply and give off or shoot off into the air millions of tiny spores or fungi seeds that are carried by the wind to light on growing leaves and fruit, and if they find a suitable lodging place there develop into what we know as Black Spot. These spores only await a favorable period that a a moist warm spell of weather to begin their growth; and understanding this we can see how important it is that every leaf and fruit surface should be coated with some fungi killer, such as Lime Sulphur, that the infection cannot get a favorable lodging place. To do this thoroughly is not an easy job. Some advocate spraying with the wind one day and then waiting for the wind to change to spray the other side of the tree. This might do finely for one tree, but as a commercial proposition it is utter nonsense. With a proper power outfit and an intelligent man in charge, practically the whole leaf surface can be covered. Pressure of 175 to 180 pounds should be carried. Below this is not enough; anything higher is not needed. In the sprayer shown in the illustration the man on the top carries a fourteen foot rod with two ministery jr. nozzles on a branching Y, crooked at an angle of 45 degrees. This angle nozzle is one of the greatest improvements as an aid in applying the spray in the most efficient manner. The spray can be directed down into the top of the tree, or by twisting the rod, other side can be covered without shifting position. The fourteen foot rod is not tiring to the operator, for it is balanced in his hands by the weight of the hose as shown in the picture. The man working on the ground has a twelve foot pole and for the sake of economy only carries one nozzle; and his duty is to spray what the man on the tower cannot reach. The tower man can give directions to the driver and can see exactly what parts of the tree are not touched. By working at right angles to the wind practically every part of the tree can be covered. The outfit shown might not suit the peculiar conditions of some orchards. Each man must settle that according to his needs. Now I come to my third essential—and that is—The spray must be applied at the proper time. The leaves and fruit grow so rapidly in the spring that new surfaces are continually being exposed. So no matter what the season, three sprayings should be practised on principle as an insurance premium. These three just before the blossoms open, immediately they fall, and ten days afterwards should be given whether (in your opinion) they need it or not, like the boy who always washed once a month. If later sprayings than this are needed will depend on the weather conditions. If dry and sunny, the crop will be all right, but the years in this country, when an application from July 1st to 15th will not pay big interest are very few and quite aways between. This latter spraying needs only a small proportion of Arsenate of Lead, say two pounds to the hundred gallons. It is also a preventative of the fly speck or ink blotch spot that infects the fruit in July, but does not appear until the apples are packed in the winter. This fungus was very injurious two or three years ago. These three spraying essentials, a perfect mixture correctly applied at the right time, are all practised by the fruit growers getting the best results for their work. For these men the spraying bill is not a hasty task, because of the manifold returns. The men, who trusting to the experiences of last year have not sprayed at all, and the men who though lack of knowledge or indifference, have not done their work thoroughly are in the same box, both have a very large proportion of threes and culls due to the ravages of Black Spot. The Co-operative Fruit Companies by their high standard of packing are doing a great educational work in this fight for better fruit. In the old way of selling to speculators "tree run," the practise was to pay about one price to all, making the poor and good average up. The inducement to strive for better things when the reward is no greater is not a heavy one. In the Co-operative Companies each is paid for what he has and it frequently happens that the producer of spotted and low-grade fruit profiting by the lessons learned from his packing sheet when comparing it with his neighbor, is the high line man the year following. The great revival in the apple industry all over America, will have one certain result. Increased supplies and lower prices. Quality then will count. Our great natural advantages in relation to the markets of the world and the ease with which even our largest crops have been sold at good prices have worked against a higher standard in quality. We have accepted what nature has given us without attempting very much improvement, but the world moves and higher quality is becoming the watchword. In any successful scheme of orchard management thorough and systematic spraying is now imperative. The day of Luck and Guess So is passed.—M- K. E.

Clover Seed Production.

The common red clover is a biennial belonging to the Leguminosae. The plants belonging to this family draw from the air the greater part of the nitrogen they need growing in soils which contain hardly any, provided phosphoric acid and potash are present in sufficient quantities. A soil, far from being impoverished by a crop of clover, is fertilized by the resulting residues which contains a large quantity of nitrogen of atmospheric origin. Its long roots, nearly half the weight of the plant, absorb an amount of phosphoric acid and potash which cereals cannot get at, besides adding enormously to the humus in the soil. This humus binds together a sandy soil, and opens out a clayey one.

Clover hay is acknowledged to be superior to all others as a feed. Two pounds of clover hay contain about as much digestible nutrition as three pounds of timothy hay. The quantities of fertilizing matter in clover hay and timothy are in the same proportion as the feed values of these different hays.

It is not necessary to describe all the advantages of clover-growing. Unhappily, though its economic value is recognized in practice by most farmers, a great number still neglect the sowing of it as often as a good rotation demands, or they economize in the amount of seed necessary for a good growth. This condition of affairs is as often as not due to the cost of the seed; especially when it is 25c. or more a pound. And this is why I here recommend growing clover with a view to the production of seed.

HOW TO GROW AND REAP CLOVER SEED.—Red clover being a biennial, the seed is only harvested the second year, I would say the first year of meadowland. To get good results a thick vigorous growth is necessary; and from 8 to 10 lbs. to the acre, must be sown. It is usual to mow a field of clover intended for seed in the spring of the first year of meadow.

It has always already been proved by botanists and farmers in all countries that it is impossible to harvest clover seed from the first spring growth. The fertilization of the flower is helped by insects, the chief of which is the yellow bumble bee which, gathering the nectar or pollen, fertilizes the flower. Now, when the clover is in its first bloom the bumble bees are not hatched, for only the queen survives the winter; the young larvae appear about three weeks after the first blossoming. This is why the clover should be checked by mowing. The best time for this first cutting is from June 5th to June 20th. It is impossible to give an exact date because the clover is not at the same stage each year at the same date, but when it begins to form stems holding the flowers (lateral branches), it is time to mow. If the ground is dry it is a good practice to pasture instead of mowing. As a general rule it is better to mow early rather than wait for a harvest of hay, for the following reasons:—

1. It is generally dry at this time, and so it would be impossible to have a good second crop.
2. There is not much seed and it is of an inferior quality.
3. There is much damage done by the Clover Leaf Midge (Cecidomya leguminicola.)

WEEDING.—Mowing the Clover in June destroys a number of bad weeds; but to have a harvest that is practically free from them there must be two or three weedings. The weeds commonly found among red clover are Curled dock (Rumex crispus), Ribwort Plaintain or rib grass (Plantago lanceolata), the Field Thistle (Cirsium arvense), the Silenes, etc.

HARVEST.—It is important not to cut the clover till it is quite ripe, to ensure a good quality of seed. The best machine for cutting is the self-rake reaper. It shells least, and the crop is deposited in little heaps. Altogether the mower is not so good it can be used, but it must be heaped at once with a hand rake. To facilitate threshing the clover should be allowed to lie on the ground for three weeks. During this time if it rains much the heaps should be turned two or three times. The clover must be dry before it is housed, and handled carefully to prevent shelling. If the bottom of the wagon rack is not tight, cover it with a cloth, as the seed loosening itself from the stem is always the best.

THRESHING.—As soon as the clover is housed the best thing is to give it a first threshing (if there is no special clover thresher). Very little seed pods get broken from their stalks. For the second threshing it is better to wait till winter for at a lower temperature the seed shells more easily. But in spite of the cold a partition must be erected at the back of the machine, either of planks or sheet iron, with an opening that can be closed if wished. The object of the partition is to keep the seed in the cylinder. When this is too full, through the afore-mentioned opening the seed is allowed to escape. Although this method is certainly rather lengthy it is best where there is only a little clover to be threshed for it is thus possible to do the threshing of two acres in one day.

The machines specially constructed for clover threshing have two cylinders. The first is not unlike that of the ordinary machines. The second, called the "peeler" has a surface like a grater, as has also the partition which nearly surrounds it. This partition can be regulated close to, or far from, the cylinder as the clover threshes easily or with difficulty. The first cylinder makes about 1400 revolutions a minute, and the second 800. These threshers are equipped with the necessary apparatus for sifting and cleaning the seed and are run by steam or gasoline engines of from 12 to 15 h. p. They cost from $450 to $800.

I should not recommend any one person buying a thresher as the quantity of clover would be too small to make it pay, but bought by a good society or an agricultural club it would prove a profitable investment. These mills can thresh from 50 to 75 bushels a day; the owner charges 50c. a bushel or $1.50 per hour.

CLOVER YIELD.—This varies from 100 lbs. to 350 lbs. of seed to the acre. The thickness of the growth and the quantity of bloom indicate the yield. Just before maturity, the best thing is to test by rubbing the clover heads between the hands. If there is but little seed it is better to mow the clover, and make hay before it is too ripe. That is the usual course.

QUALITY OF THE CLOVER SEED.—There are four characteristics to be observed here:—

1. The absence of bad weeds.
2. Germinating strength.
3. Size of the seeds.
4. Their weight.

In estimating seed there must also be taken into account foreign matter which is always present such as stones, sand, rubbish, etc. Bright coloured seed shows that it is fresh.

OBJECTIONS TO THE GROWING OF SEED SLOVER.—One of the reasons advanced by some farmers for not growing clover seed is the uncertainty of the crop. To this fact is due the variable price of the seed. When the clover is in part destroyed by frost, or still more when drought prevails, the farmer should pay special attention to his clover.

Although this crop extracts the least fertilization from the soil some farmers affirm the contrary. Evidently those are they who expect their meadows to be as rich in growth after the seed harvest, as after the first year. But red clover is not a perennial. The reason the fields of red clover last more than two years when they are kept for seed is that they sow themselves each year, especially if the aftermath is not pastured. Nevertheless the hay yield decreases each year, and it not a paying practise.

ADVANTAGES OF CLOVER GROWING FOR SEED

1. It produces from $15 to $16 per acre, according to yield and market price.
2. The farmer who grows his own clover for seed is in less danger of introducing new varieties of bad weeds, and is less tempted to false economy in the sowing.
3. The seed is stronger and more resistant in its native district. The seed bought from the markets is generally of foreign origin and harvested in conditions of soil and climate totally different from those of our Provinces.—J. C. Cote.

Spraying Outfit Owned by Manning K. Ells, Secretary of the Nova Scotia Fruit Growers' Association.

Mr. Ells is holding the rod, Captain C. O. Allen, President of the Niagara Spray Co. is in the foreground. Note the thrifty condition of the trees which are fertilized only by excument from an adjacent hen house.

The Value of Careful Plant Breeding.

The cultivation of the sugar beet affords a striking example of the improvement that can be developed in a plant by careful breeding through a series of years.

The average percentage of sugar in the root has been increased during the last century in a high degree, as shown in the following table:—

In 1836 it required 1,800 lb. of roots to make 100 lb. sugar.
In 1842 it required 1,600 lb. of roots to make 100 lb. sugar.
In 1857 it required 1,200 lb. of roots to make 100 lb. sugar.
In 1871 it required 1,100 lb. of roots to make 100 lb. sugar.
In 1900 it required 750 lb. of roots to make 100 lb. sugar.
In 1910 it required 700 lb. of roots to make 100 lb. sugar.

And in some cases the sugar contents of the roots have been brought to even 20 per cent.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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Sussex, N. B.

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AUGUST 13, 1912.

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September 10-24

PUREBREDS VERSUS SCRUBS.

In discussing this question, the viewpoint must be taken into consideration, but while this must now be done, the sooner the conditions which cause the negative side of this question to be entitled to notice are overcome by the onward march of progress, the better for all concerned, both those who now advocate scrubs, and those who do not. Pure-breds represent the highest type of progress and thrift, while scrubs symbolize primitiveness and sluggishness. The latter type of animals are esteemed by those who advocate them, because they are good rustlers, usually the opposite temperament of their owners. They require little attention and are worth little. The conditions under which they will exist and do better than purebreds are usually hard on man and beast. and, as we have already stated, the sooner such conditions give way before the march of progress, the better for all concerned.

Apropos of the times, the purebred is typical of progress, and stands for all that is best in his class; his owner also is usually a purebred, and if he is not, the type of the flock or herd soon lowers to the standard of the man, Thus, for example, if a man becomes impressed that all he need do to emulate those who have made a success of purebreds is to secure from a successful breeder one or more animals of the best type. If then, by neglect or improper management of the young and growing stock, too much inbreeding, etc., he lets the herd deteriorate and lose vitality, size and all that is desirable in high-class stock, he would be very wrong in his reckoning if he should lay the blame on "purebreds," or if an advocate of scrubs should say, "I know that common chickens and turkeys are healthier, lay more eggs and require less than care purebreds, but I am going to try some just to see what they will do." He writes for some of the cheapest stock he can hear of, and with little experience, quite admires the trio when they arrive, which look pretty good in comparison with his common flock, but he was a better prophet than he knew, when his purebreds succumb to the ravages of lice, mites, white diarrhoea and other troubles, besides lack of a balanced ration, clean quarters, etc, Few of the young chicks survive the ordeal.

Then as season after season follows without change of males, the chicks lose their vitality the grown fowl do not come up to the stanadrd in size weight and appearance at this stage of his "experience with purebreds," he convincingly remarks, "I told you they were not as good as scrubs,"

To the question, "Do purebreds pay?" we would answer: Yes, if their lot is cast amid congenial environments, a well-fenced farm, with plenty of cross fences and fields for the proper and profitable handling of stock and crops, good and sufficient water, and above all, under the management of a purebred farmer who does not despise the experience of others, and who is continually reaching out for more information as to the best practice in conducting his work.

With such a man purebreds are at home and are guided to success by a congenial spirit.

So with grain and roots, seed selection and proper tillage, and with fruit, the selection, setting out, pruning, spraying, etc. is a purebred's work if you would expect a successful outcome.

The purebred farmer is also familiar with the modern farm machinery, its proper care and use as one of the factors in "making two blades of grass grow where one grew before," accomplishing more and better work with less labor than by the old methods.

Let me give you one illustration of a farmer who is not a purebred and has neither time nor money to spend on an agricultural journal. He came over to borrow my large self-dumping rake. I cautioned him about its proper care, oiling, etc., and he was very voluble about the care he would give it. He took the rake away and left the hack in which he had come. I had occasion to use the hack and from force of habit examined the wheels so see if they needed oiling. Judge my astonishment in attempting to remove a wheel; it refused to come off. I twisted and pulled till I dragged the hack after me before I could get the wheel off and I found all four in the same condition. My mental comment was "My poor rake,"

A farmer may have the nature of a purebred and yet by surroundings and circumstances, not be able to take the advanced step he would like, but he is thinking and planning on that line all the time, and if there is a possible chance for advancement he is ready to take it.

The purebred farmer is an educated man, either in the old and venerated (but very costly) school of experience, or the more modern A and M. college with its combination of technical and practical work. What would you think of a man beginning to practice medicine in your community, having never taken a course of instruction in medicine, or of a man offering his services as a legal adviser, who had never made a study of the law? Then what is there incongruous about a farmer taking advantage of all the learning that science and mechanical skill offer for the advancement of his chosen profession, for it is a profession most exalted, where the brightest and best prepared minds may find unlinited opportunities for the expansion and development of their powers.

The keynote of endeavor in all lines is preparedness. Why should the farmer be an exception to this universal rule?

The great Gladstone once said, "It matters not so much what you do, as how you do it." Even a scrub, by use of the best methods, may be made to look pretty good, but he is not usually worth the cost. Be a purebred.—D. B. Waugh in Farm and Ranch.

BREEDING ASSOCIATIONS.

One of the most practical methods of securing good dairy cows is by means of a co-operative breeding association. By this is meant that eight or ten farmers living in one neighborhood organize an association and purchase a well bred dairy sire for a very small outlay on the part of each. On the farm where dairying is used as a side issue, this method will prove very advantageous because of its economy. Where the farmer milks his cows for the sole purpose of selling the butter fat to the creamery and feeding the skim-milk to the calves and hogs, the average herd numbers about eight cows. Thus if ten farmers organized such an association and used the sire in common, it would mean that the animal would not be over worked and that he could be used for many years.

The great difficulty in trying to persuade one man to purchase a good pure bred dairy sire, is that such an animal is to expensive. If however, ten famers purchase a bull together they could afford to pay a price which would enable them to buy an animal which would do a great deal for the improvement of their herds. In many instances it has been shown that a good prepotent dairy bull, with well bred ancestors behind him, will increase the production of butter fat from 30 to 60 lbs. in the resulting daughters. In this case the average production would be raised very quickly and with little added expense.

If such associations were organized, however, it would be very essential to secure the best animal possible. In order to do this, a man would have to be secured who is familiar with the various dairy breeds and could advise which of these breeds to select. It would also be necessary in purchasing the animal to demand a a record of his ancestors and be certain that they were high milk producers.

COMMISSION SELLING.

The present antiquated methods of consigning perishable fruits and vegetables to commission men of whom the growers know nothing will not continue under systematic selling methods It is responsible for much loss to both the growers and commission men.

Selling fruits and vegetables is too important to practise such methods. There is too much risk and nothing definite. The first requirement of selling through a commission man is that the grower know the commission man and the dealer know something of the man that grows the products he handles.

With express shipments there is far more chance for misunderstanding and dishonesty. The fruits and vegetables of the entire country should be handled in carloads as far as possible, and there should be just as few middlemen as will maintain the system.

"What a young man earns in the daytime goes into his pocket, but what he spends in the evening goes into his character."

Encouraging the Sheep Raising Industry.

Last spring Hon. Martin Burrell, Minister for Agriculture appropriated the sum of $15,000 to the Dominion Sheep breeders Associatian for the purpose of stimulating sheep breeding interests in the Maritime Provinces and in British Columbia.

Numbers of pure bred rams and grade ewes are to be sold by public auction this fall in various sections of the above mentioned provinces.

In order to ascertain the breeds needed and the approximate number required, the Minister asked Col. McEwen, a successful Ontario sheep man to come to the Maritime provinces. Associated with him on the commission while touring New Brunswick is Col. H. Montgomery Campbell, President of the Maritime Stock Breeders Association, who is an enthusiastic sheep breeder. The Minister also sent Mr. C. M. McRae of his own department. Mr. McRae has travelled the Maritime Provinces very extensively during the past ten years on institute work and as judge at our exhibitions and is as conversant with the conditions prevailing in the Maritime Provinces generally as any man in Canada. While touring Nova Scotia the commissioners had H. W. Corning M. L. A., Secretary of the Canadian Guernsey Association, who is also a successful sheep breeder, associated with them to represent his province.

When they go to Prince Edward Island, Mr. Roy Curtis will join them to represent the Island Province. They are at present touring New Brunswick. having completed their work in Nova Scotia.

The Maritime Provinces are particularly adapted to sheep raising and have much land that is better suited to that industry than to anything else. This coupled with the facts that Canada is importing live sheep at the rate of 180,000 and mutton at the rate of 3,500,000 lbs. per year, that we have a good home market, our proximity to the Boston and New York markets with a cheap water haul and even beyond this the great English markets ever ready to take the surplus should make the sheep raising industry of these provinces increase from the present status of about 600,000 to 6,000,000.

Our lamb has already made a name for itself in the American markets and there commands a premium over the western American product. By better feeding and breeding better prices could be obtained with ever increasing competition for our surplus.

Today Great Britain has no chilled meat trade because there is no country of the world geographically situated that has the necessary quantity to supply the trade. She imports yearly very large numbers of frozen carcasses from Australia and the Argentine. If Canada, particularly the Maritime Provinces had the supply they could not only capture but hold this market, as they are near enough to place chilled meat in the British seaports and have it distributed to the consumers in good condition.

It behooves all farmers in the Maritime Provinces who are interested in sheep and who would like to purchase pure bred rams or some grade ewes to keep themselves posted on the places and dates of the auction sales which will be announced later.

Harvest Excursions.

The railways are beginning once more to advertise their so-called "harvest excursions," by which they mean that they will attempt in a week or two to drum up large parties of farm laborers and others in the Maritime Provinces and haul them to Alberta and Sasketchewan in order that the railways may profit by the passage money. cn former years the C. P. R. charged less for the journey from the Maritime Provinces to the West than for the return trip, thus discriminating against residence in this part of Canada. If that policy is to be continued this year it will meet with the sharpest sort of protest.

For that matter, boards of trade and city governments throughout the Maritime Provinces should set their faces sternly against this annual organization of an exodus from the Maritime Provinces by the railroads. When the census returns were published recently it was found that during the last ten years Nova Scotia had lost more than 20,000 of its population, and that New Brunswick and Prince Edward Island had also suffered heavily. A great many of these native sons were carried away by the railroads at excursion rates—but has anyone noticed that these railroads have at any time offered excursion rates for the purpose of bringing farmers and farm laborers, or useful people of any kind, to the Maritime Provinces? The railway likes the long haul, and therefore it is continually engaged in persuading the Eastern Canadian, or the newly arrived immigrant, to go as far west as possible.

Some time ago it was announced that the C. P. R. was going to do all sorts of things to build up that portion of New Brunswick through which its liaes run. The greatest practical service it could render the province would be to suspend the activity it devotes to the transporting of our people to the western prairies. The railroads owe no duty to the western grain grower that they do not owe to the eastern farmer. All this talk about saving the crop means merely that the railroad needs the money it collects from the passengers it secures through its annual drum-beating about the great harvest.

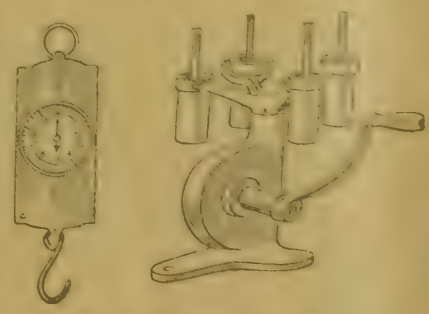
Some months ago when New Brunswick was discussing immigration, one of the ideas which received much attention from both political parties here was that the time had come to demand for eastern Canada equal terms as compared with the West in as these were influenced by Federal [illegible] The first thing to do is to stop the railroads from [illegible] Maritime Provinces that are [illegible] to the West. It is not good for the Maritime Provinces. It is not even good for the men who go from here to the wheat fields. Moreover, it is encouraging an unsound type of farming in the West. Just now the Grand Trunk is proposing to take 18,000 farmers or farm laborers from Ontario, carry them West and attempt to have them settle there permanently. The [illegible] Citizen, a conservative journal, to make some very [illegible] about this whole question. We, in the Maritime Provinces, are directly interested in the several questions which the citizen raises and which it discusses with considerable penetration.

In many instances those who go on these farm excursions are carried West under false pretenses. Many of them are unable to return to their homes, a majority are subjected to ill-treatment or hardship of one kind or another, nearly all meet disapointment, and no good purpose is served in most cases at least, by the so-called "excursion." New Brunswick has had more than enough of it.—St. John Telegraph.

Peter Tumbledown Says Dairy Farming Does Not Pay.

A Study in Comparisons.

Farmer Thrift, who uses the scales, and Babcock tester proves that it does. Cuts courtesy of Journal of Agriculture.



Babcock Tester and Scales.

Essentials in every Dairy [illegible] Outfit.

The Maritime Farmer Back in its Old Home

[illegible] TIME FARMER from Sussex to St. John, N. B., in October 1911.

[illegible] appreciation of the worth of THE MARITIME FARMER, we who have had a peep behind the scene felt that in order to keep properly in touch with farming conditions we must get [illegible] in the land.

The building [illegible] occupied in St. John was sold and as we were [illegible] decided to bring The Maritime Farmer back to Sussex, its [illegible] and birthplace.

Sussex is the centre of one of the finest farming districts in Canada, where the farmers are enthustasts and where science and practical experience go hand in hand.

THE MARITIME FARMER is now comfortably situated in one of the finest printing offices in Eastern Canada, the building having been especially designed for a print shop for the Kings County Record.

One of the greatest drawbacks we have had to contend with in the past was the lack of a press large enough to handle The Maritime Farmer in quick time so that we could hold our forms open until the very latest moment for the accommodation of our advertisers and to give the latest market reports. This difficulty has been overcome as we have installed a Babcock Optimus flat bed press, with one exception the largest in Canada. We are now able to print sixteen pages of the Farmer at one time instead of eight pages.

The move, we believe, will prove advantageous both to readers and advertisers as we are enabled to carry on our work with higher efficiency and to assume newer and heavier responsibilities.

We extend a cordial invitation to all our friends, old and new, to call and see us in our new home.

R. D. Robinson Publishers, Ltd., Sussex, N. B.

Smothering Out Weeds.

Here is a cheap, easily applied and most thorough method of eradicating quack grass, Canada thistle, etc. Buy at from 50 to 65 cents per roll of 150 feet each, the common tarred sheathing paper and lay it flat over the stubble of the pest cut when in blossom, usually in July or August. The edges should overlap 2 inches and be fastened to the ground with wire pins made by cutting ordinary fence wire into lengths of 6 or 8 inches. Bend one end at right angles and crowd down close to the soil through the lap at intervals of 1½ to 2 feet. This holds the paper securely and excludes air, sunshine and [illegible] kill any and all weed pests.

A vast amount of ill health is due to impaired digestion. When the stomach fails to perform its functions properly the whole system becomes deranged. A few doses of Chamberlain's tablets is all you need. They will strengthen your digestion, invigorate your liver, and strengthen your bowels, entirely doing away with that miserable feeling due to faulty digestion. Try it. Many others have been [illegible] way [illegible] For sale by all dealers.

HORTICULTURE.

July Fruit Crop Report.

WEATHER CONDITIONS

The weather for the past month, while quite favorable for tree fruits, has been much too dry for small fruits in all districts, where these are specialties. While the number of days upon which rain was reported by the Weather Bureau was normal, yet the rain missed certain sections with great regularity. The first part of July may be characterized as dry and hot in the fruit districts. Strawberries have been materially reduced in yield, and raspberries are likely to suffer in proportion.

APPLES.

The prospects of the apple crop as reported last month, founded upon the fruit bloom, are not borne out by the 'set' of fruit. There has been an exceptionally heavy 'drop' even where the 'set' appeared to be fairly good; but in many cases, especially in orchards that bore heavily last year, notwithstanding the full bloom, little fruit is expected. The damage by the Tent Caterpillar, over a wide area comprising the Eastern part of Ontario and Western and Southern Quebec, has been serious. Nevertheless it should be noted that correspondents usually under-estimate the quantity of fruit at this season of the year just as they are inclined to over estimate it on the appearance of the bloom. It is not improbable, therefore, if conditions are favorable, that an improvement will be reported in the season.

Taking 100 as a standard or full crop, the percentages for the Dominion stand at 67 per cent. for Early apples, 69 per cent. for Fall apples, and 65 per cent. for Winter apples. The average, for the Dominion, of all kinds of apples, therefore, would be 67 per cent.

District 1.—The Southwestern Counties have suffered considerably from dry weather and with the exception of the Niagara District, from lack of good culture. Early apples show up best, although the fall and winter varieties still show for a fair crop. The percentage for all apples in this District will be 71 per cent. of a full crop.

District 2.—Early apples are not a feature in this District although a large number of Colverts and Jennettings are frequently harvested. The winter varieties show for 64 per cent. of a full crop. Kings, Spies and Roxbury Russets will be below average, Baldwins somewhat better and Ben Davis standing as high as 83 per cent.

District 3.—There has been a serious falling-off in the prospects for this District, particularly in winter apples, the Spy being short, with the Baldwin, Greening and Stark somewhat better. The Golden Russet shows up well, but the Ben Davis heads the list of standard winter varieties.

District 4.—The ravages of the Tent Caterpillar are responsible for a serious falling-off in the prospects for this District. Early apples are fairly good, but the winter varieties will be decidedly short. One of the chief apples of the District, the McIntosh Red, is reported at only 41 per cent. of a full crop.

Districts 5 and 7.—The reports show a medium crop, with no special features. Fameuse and McIntosh are reported at 85 per cent. and 75 per cent respectively.

District 6.—All correspondents this month report a light 'set' compared with the heavy showing of bloom. The good prospects of last month have not been maintained, and estimates have fallen to about 52 per cent of a full crop. It is likely, however, that this estimate will be increased later in the season. The orchards are particularly well cared for, spraying is quite general, and so far the weather has been favorable. In addition to this, there are a large number of orchards bearing their first crop, so that the aggregate of fruit in all probability will be higher than the percentage would indicate. It is noticeable that the winter varieties have a much lower percentage than the earlier varieties. Gravensteins stand at 63 per cent of a full crop, and this will probably be maintained. Kings and Baldwins are also showing well, while Ribstons and Russets stand somewhat low.

District 8.—A full crop is expected in this district. Being somewhat late, the orchards are not yet at a stage where a report can be made upon the amount of 'drop.' Nevertheless the orchards are looking well, and no adverse conditions are reported.

District 9.—The prospects are not quite so good as reported last month, though correspondents still anticipate 80 per cent. of a full crop. The King and Ribston are reported as dropping heavily. Early apples show even better than the late varieties.

District 10.—A heavy 'drop' is reported, but further thinning will be necessary. The average of the percentages stands at 85. Jonathans are said to have depreciated considerably. The Ribston, Blenheim, McIntosh Red, Golden Russet and Ben Davis all stand high. Crabs are a heavy crop.

PEARS.

Pears have depreciated somewhat during the month. Blight has been worse than usual this season, but

(Continued on page 750)

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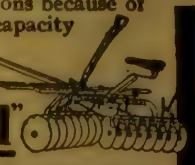
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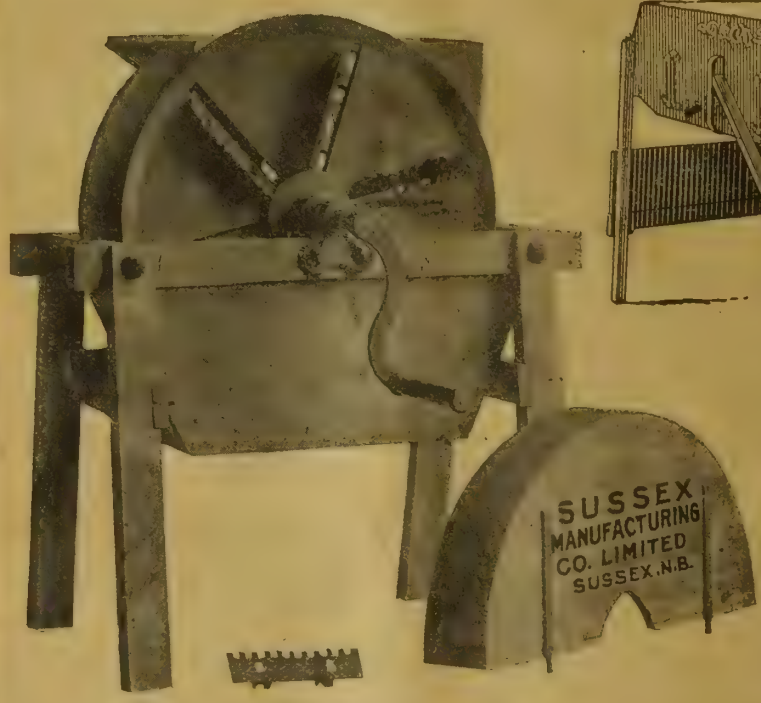

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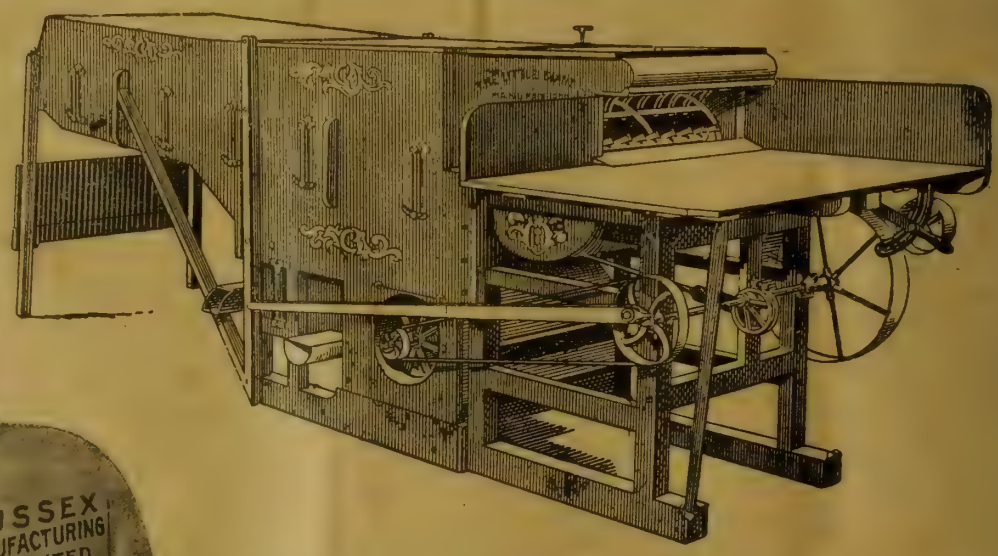
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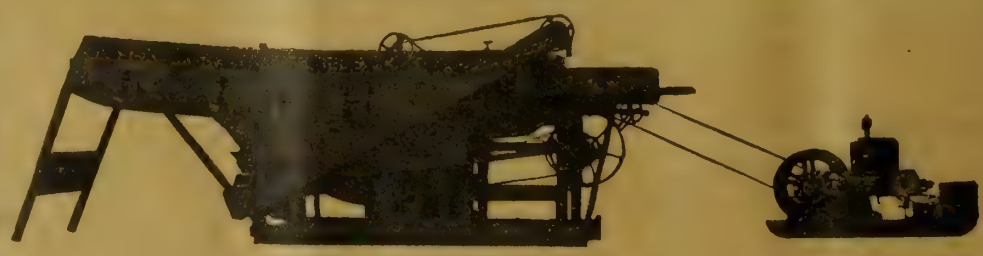
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BUILT low, especially for farm use, a T-A Handy Farm Wagon saves much hard work. It is easier to load and unload, and will haul bigger loads without tiring horses, more than a small load.

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Pruning in June.

For numerous reasons June is one of the best months in which to prune. It is only at that time that it is possible to secure certain beneficial results. Pruning a dormant tree serves to stimulate growth, and the severer it is the ranker the succedding growth.

Stimulating growth is, frequently, just what we don't want to do. Trees are often unfruitful simply because they are growing too fast. All their energies are directed toward the formation of wood cells and in consequence fruit buds are not to be found. Such excessive growth is usually caused by a soil too rich in nitrogen. How can we prune such trees and avoid still more stimulation? By pruning in June, the time of their most rapid growth.

The effect of June pruning is to give a check, a shock to the tree. A tree does not long grow rapidly. May and June mark the most active period, and if limbs be cut off in June the tree seems to realize that it is too late to restore the loss that year. It does, however, heal over a wound at that time quicker than at any other and here is where we find another reason for June pruning. The quicker a cut surface is covered the less risk that germs of decay will find lodgement and work their way into the wood cells. In June the roll of new wood that begins to grow out all around a wound and to cover it, moves faster than at any other time.

Another reason for June pruning is that suckers or sprouts do not form so numerously acound the scars. Heavy pruning in the spring is often followed by scores of these shoots, which should all be removed. This can be done easily and quickly without the use of knife by snapping them off with the fingers when only a few inches long.

Still another and the most important advantage of June pruning is that this is the best way to induce fruitfulness in a tree that has been barren or a shy bearer. When a tree receives a check to growth consequent upon such pruning, it immediately begins the formation of fruit buds. This method is to be preferred to root pruning, girdling the trunk by stripping off sections of bark. Try June pruning on trees that are old enough to bear but refuse to make fruit buds, and you will find it uniformly successful.—L. R. Johnson.

Preserving Fruit to Show.

It is desirable to have it retain the natural color, which is not possible with fruit canned in the ordinary. Of course fruit preserved in the following way is not fit for use as food. The food should be ripe and well colored, but firm and perfectly sound.

For peaches and apples take 95 parts pure water and pour into it five parts formalin. Place the fruit in a jar and pour this solution over it and seal at once, as the formalin will evaporate if left open for any length of time. For preserving grapes use only two parts of formalin and 98 parts pure water.

This rule is not absolute, since very acid fruits will requite an alkali to counteract the acid. A teaspoonful of soda to a two-quart jar will usually be sufficient if the fruit to be preserved contains considerable acid. The regular museum jars can be ordered, though the Mason fruit jars will answer as well, and are usually at hand. —H. F. Grinstead.

REGAL Flour yields the *best quality* and the *utmost quantity* of bread per barrel: white, light loaves, pastry of melting flakiness.

This is simple direct truth.

Unless you find it so, when you try it, your dealer will return your money.

REGAL FLOUR

The New Perfection Heating Plate

has proved a great convenience to all users of the

New Perfection WICK BLUE FLAME Oil Cook-stove

This year we are selling

The New Perfection Broiler
The New Perfection Toaster
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each designed specially for use on the New Perfection Stove.

With these appliances and the New Perfection glass door steel oven, the New Perfection is just as complete and efficient a stove as a regular coal range. Certainly, it is much cleaner and cheaper. Many people use the New Perfection all the year round.

Ask to see this Stove at your dealers. It is handsomely finished. It has fine enamelled chimneys, but-connective. Any cabinet top, drip trays, filler pieces, etc. Made with 2 or 3 burners. Free Cook-Book with every Stove. Cook-Book also given to anyone sending 5 cents to cover mailing cost.

THE IMPERIAL OIL COMPANY, Limited

DAIRYING.

Making Butter.

Butter is produced by churning:—
(1) Ripened or soured cream
(2) Sweet cream
(3) Ripened or soured milk.

PREPARATION OF UTENSILS FOR CHURNING.

1. Churn.—Scald, wash in cold water, scrub with salt, wash salt off, and stand in clean cold water. In summer where ice cannot be procured the churn should be scalded the day previous to churning.

2. Butter-worker.—Scald, wash in cold water, scrub with salt, cover worker with damp muslin, and stand scoop and wooden hands in a bucket of cold water.

PROCESS OF CHURNING.

Ripened or soured cream of .5 to .6 per cent. lactic acid, should have a sharp acid taste and thick velvety appearance. The churning should be done at least twice a week or bitterness is apt to develop.

Temperature of churning.—In winter 58 degrees F. to 64 degrees F. In average summer weather 52degrees F. to 54 degrees F. Cream should be thinned down with water until it runs quite thin off the back of the wooden hand. If cream is too thick it will take a long time to churn because the fat globules are massed together and stick to the side of the churn, instead of moving about freely. Cream should always be strained through a coarse straining cloth into churn and the churn filled only from half to three quarters full. During churning ventilate now and then to allow the carbonic acid to escape. If there is no ventilation the cream will become frothy and difficult to churn. The time usually occupied in churning is from 20 to 35 minutes. Stop churning when small particles of butter appear on the glass about the size of a pin's head, and add one quart of water to every gallon of cream used. The temperature of breaking water in winter should be about 5 degrees below churning temperature, and 8 degrees in summer. After adding breaking water, churn until particles of butter are the size of wheat. Then run off buttermilk through the sieve over which a muslin has been tied. This will prevent the loss of any particles of butter in the buttermilk. Then strain in washing water the same temperature as breaking water, always adding enough water to cover the butter. Revolve the churn several times in the washing water; then run off and add brine. To make brine add 1 lb. salt to 1 gallon of water. The temperature of brine in winter must be 7 degrees below churning temperature, in summer 10 degrees. Revolve several times, and stand for 10 minutes.

ADVANTAGES OF CHURNING TO A GRAIN INSTEAD OF A LUMP.

1. Butter is more easily washed, to remove impurities.
2. Butter can be made firmer, through each granule coming in contact with the cold water.
3. A more even salting is possible as the brine forms a covering over each granule.

After standing 10 minutes in brine remove butter to the butter-worker with a scoop and sieve, and extract moisture.

Pressing, not rubbing, is required when extracting moisture on the butter-worker. To know when the moisture is extracted press the butter between the wooden hands when only tiny globules about the size of a pin's head should appear. The standard allowed is 16 p. c. water. Then weigh in ¼, ½, or 1 lb. lumps; print with the wooden hands, and pack in grease-proof paper ready for market. Making up nicely is a very important part of butter-making, for without good shape and colour and neat appearance, the value will be lessened.

This butter is called fresh butter; for medium and heavy salting salt on butter-worker with dry salt.

Medium salting.—Roll on butter-worker about four times; weigh butter, then add ½ oz. of salt to each lb. of butter roll again; sprinkle salt on butter; roll again twice; cover butter with muslin and stand for 15 minutes. This standing is to allow the water to dissolve the salt, and prevent streakiness. After standing, extract moisture until only tiny globules appear about the size of a pin's head.

Heavy salting.—Roll butter about four times on butter-worker, then weigh. Add salt at the rate of ¾ to 1 oz. to every pound of butter. Roll on butter-worker twice; cover and stand 30 minutes, roll again twice, stand another 15 minutes, then extract moisture.

CHURNING FAULTS

"Cream taking a long time to churn" Causes.—
1. Neglect to ventilate
2. Cream too thick
3. Cream too thin
4. Over-filling the churn
5. Temperature too low or too high.
6. Cream from stale cows.

The remedies are obvious. Thin the cream to the proper consistency; fill the churn only to one-half or at most three-fourths of its capacity. Raise or lower the temperature as required, and do not neglect to ventilate. Cream from stale cows should be mixed with that from fresh cows before ripening.

BUTTER FAULTS.

"Streakiness".—Caused by—
1. The salt being unevenly worked in.
2. Working with the human hand.
3. Churning cream of different ripeness together.

Specks are caused by neglect to strain the cream.

"Rancidity."—Caused by—
1. Under-and over-ripe cream.
2. Overchurning-churning to a lump
3. Dairy utensils.
4. Careless washing of butter.
5. Use of bad salt.

Good butter should be firm in texture, and free from visible moisture, and should present a granular appearance when broken. The flavour should be nutty, and the keeping quality good.

CLEANING UP.

All utensils, churn, butter-worker etc., should be washed in half cold and half hot water, then in scalding water, and dried. The utmost cleanliness must be practised in every operation.

WHOLE OR LOPPERED MILK.

The churning of ripened or loppered milk is very seldom practised since the use of the separator has become so general. Sometimes in small dairies the whole of the milk is set aside daily, and ripened or soured. It is generally kept three days, each day's milking being added to the vessel in which it is being ripened. It should be quite thick and sour before being churned. Owing to the small quantity of fat milk contains as compared with cream it is necessary to churn it 2 degrees higher than cream, or the churning will be greatly prolonged and a loss of fat will take place in the buttermilk. It is always necessary to add butter colouring, as butter from whole milk is much paler than from cream butter. Where there is a great demand for buttermilk, and

Rid Your Cattle of the Fly Pest

With the warm summer days come the yearly torture of domestic animals by flies and other insects—prevent this useless suffering by buying

COW COMFORT

an inoffensive yet powerful liquid preparation that will rid your animals of the flies that swarm about them; destroys lice, ticks, fleas; cures skin diseases, scabs, tetters etc.; cleans, disinfects and removes offensive odors.

You know that animals cannot be healthy when devoured by insects—you know how quickly hogs decline in weight when they are troubled with vermin—by preventing suffering to your cattle you not only perform an act of humanitarism, but assure perfect health to your animals and profit by it in the end.

Sold in gallon cans at $2.00 each, but as the contents of a can is to be diluted in four gallons of water, it makes the price really 40cts a gallon.

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TRADE MARK REG.

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Makes Houses Snug and Warm

"Sovereign" Sheathing Felt compared with ordinary building paper is like a woollen blanket compared with an ordinary cotton sheet.

"Sovereign" Sheathing Felt is made partly of WOOL, saturated and coated with the same tasteless, odorless gum that gives **Ru-ber-oid Roofing** its recognized superiority. It does more than break the wind—it acts like a blanket in the wall, and prevents the heat from leaking out in winter or filtering in in summer. As a result it makes a substantial saving in your winter coal bills and adds to your summer comfort.

"Sovereign" Sheathing Felt is waterproof—will not mould, rot, dry out nor crack, and is strongly fire-resisting.

Get a sample of "Sovereign" from the nearest Ru-ber-oid Dealer, or write us for sample and Booklet.

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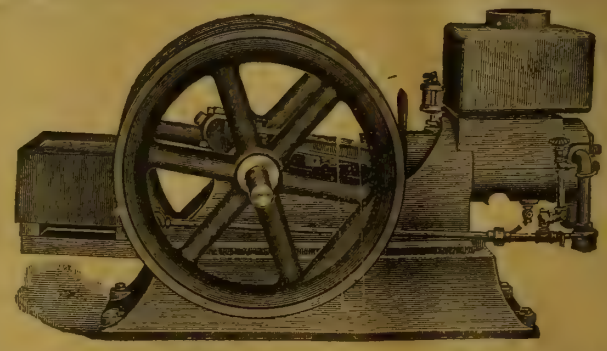

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The secret of good cheese-making is—the salt you use.

The smoothness, richness, color and keeping quality—all depend on the salt you use to salt the curd.

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Makes Smooth, Rich Cheese

For years, the prize winners at all the big fairs, have used Windsor Cheese Salt.

It dissolves slowly, salts the curd evenly, and makes a deliciously flavored cheese that "keeps." 74C

O.K. Canadian Potato Digger

Don't try to plow up the potatoes, or dig them out with a fork or hoe. It's back-breaking, disagreeable work and you always lose a percentage of the potatoes, which are missed. Let the horses and the **O. K. Canadian** dig your potatoes, and save you a long, tiresome job.

O. K. Canadian does all the work—digs **all** the potatoes. Soon pays for itself in the bushels of potatoes it saves that the old method would lose.

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Canadian Potato Machinery Co. Limited. Galt, Ont.

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a good price can be asked, it is sometimer advisable to churn this whole milk, as the buttermilk is much richer than that from cream.

Sweet Cream.—Butter from sweet cream is sometmes preferred on account of its mild cream flavour. It is not advisable commercially as it will not keep; and is only fit for home consumption and where it is made and churned daily. After separating it should be cooled down and allowed to stand several hours before churning. Sweet cream must always be churned at a lower temperature than ripe cream, or a loss of fat will take place in the buttermilk. It must also be washed very thoroughly to free it from buttermilk, otherwise it will not keep.—Jenny Reid in Journal of Agriculture.

Neutralizing Acids in Over-Ripe Cream.

It is customary in some creameries known as "Centralizers," to neutralize the excessive acid which is found in cream delivered but once or twice a week during the hot weather, then pasteurize or ripen with a pure culture or "starter." In order to obtain some data on the effects of various neutralizers, five experiments were conducted at the O. A. C. Dairy School, in August and September, testing the effects of Baking Soda, Washing Soda, Lime Water and Milklime, when added to sour cream before pasteurizing.

COMMENTS ON RESULTS.

1. The addition of the "neutralizer" had the effect of lowering the percentage of acidity in the cream to a marked degree. Pasteurization of the cream had a further effect of reducing the acidity, probably due to a more perfect chemical action as a result of the process of heating, although pastuerization alone reduces the acidity of cream to a slight extent. This latter effect is probably caused by a freeing of some of the natural lime salts of milk by the action of heat. The acidity did not seem to develop afterwards on the neutralized cream to the same extent as in the normal lots pasteurized and ripened with a similar percentage of culture.

2. In all cases except the one where washing soda was used, the cream churned in less time after partial neutralization of the acid before pasteurizing. To some extent this may have been due to less weight of cream in the churn for these lots. There was also a tendency for less loss of fat in the buttermilk from these lots, as compared with the normal lots.

3. There was also a difference in the percentage of moisture and salt in the finished butter from the various lots.

4. The "overrun" was less in the lots where the cream was neutralized, as compared with the "overrun" from similar lots not neutralized. In the four tests which are comparable, the average "overrun in the normal lots was 16.9 per cent., while the others averaged 13.2 per cent The tendency was for a lower yield of butter in the lots where the cream was neutralized before pasteurizing.

5. There was little or no difference in the average scores for flavor, or in the total scores of the four lots.

6. The results by neutralizing with lime water before and after pasteurization of the cream were not decisive. More experiments on all these points are needed before drawing conclusions.—Prof. H.H. Dean, O. A. C. Guelph.

SHE PAID To Escape These Disks!

We have in our office, this very minute, the letter telling how the plucky woman here mentioned paid her hard-earned money to escape washing these disks.

One Difference Between Tubulars and Others

Letters come to us telling how plucky women pay hard-earned money out of their own purses to escape washing disk-filled cream separators. Here is just such instance: A lady and her husband decided to have a cream separator. He thought only of the price and refused to pay more than the cost of a cheap, disk-bowl machine. Like other women, this lady could not bear the thought of washing 40 or more disks twice a day. She wanted the wonderful

SHARPLES Dairy Tubular Cream Separator

She knew that Dairy Tubular bowls contain only the little piece shown in the right-hand pan and are the only easy-to-wash separator bowls. She also knew that Tubulars have twice the skimming force and skim twice as clean as others—thus paying more every year in extra profits than could be saved through buying any cheap machine. So, to what her husband was willing to pay she added enough hard-earned money from her own slender purse to buy a Sharples Tubular. And now she is one of the happiest, most contented separator users you ever saw.

What greater praise could be given Tubulars than the fact that women so greatly prefer Tubulars that they will pay to escape washing other machines? Ask for Catalog No. 194

Do you want a free trial? Do you want to exchange your old separator in part payment for a Tubular? You can do either.

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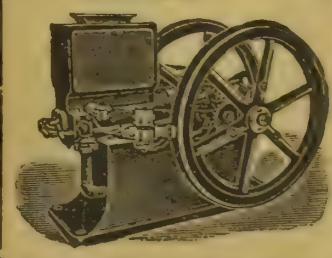

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Every part is true to 1-500 in. or less. Experts work on each part. Material is the best money can buy. Bearings are big and wide, The design is compact, and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name, too :—

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DUNNVILLE, Ont.

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LIVE STOCK.

Rumination, or "Chewing the Cud."

The phenomenon of cud-chewing, to which singular process the ox and sheep alone of the animals of the farm subject their food, is most interesting to any one who cares to take the trouble to watch it, and, needless to say, its proper performance is of vital importance to the health and thriftiness of the class of stock to which the function belongs.

Why a horse has a comparatively small stomach and a long intestine, and the ox an enormous paunch, three other so-called "stomachs," and a short intestinal canal, why one chews its food a second time and the other does not, is not clear; but it is supposed that the function was developed far back in times when graminivorous animals were harassed by beasts of prey. They traveled in flocks or herds to the feeding grounds, bolted their food hurriedly, and then returned to some place of quiet and safety to chew it at leisure.

There are several theories as to the exact fashion in which rumination is performed, and the relation of the several compartments of the stomach to the process, but the most generally accepted is the following:—Grass, hay and other rough food is, as already described, thrust half-chewed into the rumen, where the mass is slowly and deliberately churned, so that a complete mixing takes place. The essential function of the rumen is to retain the food for rumination, macerate all fibrous substances, and fit them for cellulose digestion. Liquid and pultaceuos matters may pass at once into the omasum (third, or "manifold," stomach) as well as into the rumen (first stomach or "paunch") or the reticulum (second, or "honeycomb,'. stomach), in othes terms, food coming down the oesophagus, which in passing through the rumen forms a singular groove or channel, may enter either of these reservoirs, the destination being determined by the condition in which it is swallowed.

At intervals, determined by the fullness of the rumen and the quietness of the situation, the animal lays itself out to subject the roughly masticated alimentary to a second chewing and, judging from the appearance of contentment assumed by the animal, this seems to be a pleasant business. In doing this, a pellet of food is pressed, by a contraction of the rumen and reticulum, into the oesophageal groove and carried up the oesophagus, by its reverse peristaltic action, into the mouth, the act being termed "fetching the cud," where it is chewed, slowly and complacently, until well mixed with saliva, when it is swallowed again.

THE TIME OCCUPIED.

Colin, by whom, with Flourens, in France, the physiology of rumination has been prncipally worked out, and on whose experiments and observations our knowledge of the process is entirely based, estimates the weight of each bolus cut off by the contraction of the extremity of the oesophagus at 3½ oz. to 4 oz.; that its formation and ascent occupies about three seconds, its remastication about fifty seconds, and its descent after grinding as one and a half seconds. On these data he has calculated that at least seven hours out ol tweaty-four are required for the process of rumination (Smith).

There is no doubt, however, that the time occupied, or the number of chews given to a bolus, varies with the character of the food or its artificial preparation, as we shall presently see, and not only do no two cows occupy the same time, but there is no uniformity of rate or duration in the same animal. It is essential to remember that the process of chewing the cud is one which may easily be disturbed, some individuals being very easily upset. Therefore great care should be taken not to disturb or interfere with animals when chewing the cud.

With reference to what happens after the bolus has been masticated, mixed with saliva, and reswallowed, its course deaeads upon ies state of preparation. It may be returned to the rumen—coarse food may be remasticated several times— but if finely comminuted, and always the fluid portion squeezed out before grinding of the solid mass commences, it is passed along the oesophageal groove, the lips of which contract to form a tube leading to the omasum (third stomach), where it undergoes certain changes that have not been definitely determined, until it finally reaches the abomasum (fourth or true digestive stomach), the only compartment secreting gastric juice, and where the proteids are converted into peptones.

It is important to note that one of the most certain signs of health is the regular and vigorous chewing of the cud, and that

CESSATION OF RUMINATION

is one of the earliest signs of a departure from health, and especially where digestive derangement exists. Cessation of rumination is not, any more than loss of appetite, a diaggostic symptom, but "loss of cud" and "dropping the cud" is invariably associated with improper feeding or functional or organic disease of the digestive organs.

One of the most fertile causes of loss of cud is failure to supply a sufficiency of long fodder. Not only can cattle deal efficiently with a large quantity of comparatively innutritious material, and by persistent chewing get the full value out of it, but a certain amount of roughness or length is essential to rumination. It is not possible to feed the cow in tabloid form, or even on the concentrated stuffs essential in the case of the fast working horse.

THE PULPING SYSTEM.

A quarter of a century ago, when the system of pulping, grinding, and chaffing all the food given to cattle minimun—and a good deal of waste was first introduced, it was hailed with delight as reducing waste to a of roots and hay went on—and unthinking people talked of relieving the the cow of much of the labor of mastication and digestion, just as unpractical people do now about cooking food for stock.

Many farmers and dairymen laid down expensive plans for carryiog out these processes—power-driven chaff cutters, corn grinders, cake breakers, and root pulpers—but it was very soon found that cattle so fed suffered from loss of cud, and consequent indigestion— mainly chronic "hoven."

Many dropped the system like the poverbial "hot potato," and allowed their costly machinery to rust, but the wiser sought for the cause, and it was found to be due to an insufficiency of long fodder. In other terms, either the food was too short to permit of its being formed into a

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They [1]

Keep the Children Well

Amatite ROOFING

Why Practical Men Demand Amatite

ROOFING that needs paint every two years can't hold the market against Amatite—which *needs no paint whatever.*

Practical men know the great advantage of a roof that *needs no painting.* They know what a nuisance the painting is. They know how much it costs. They know how liable they are to neglect to paint their roofs at the proper time.

Painted roofings are waterproof only where the paint is. Amatite is waterproof all the way through.

Amatite is sold in the usual convenient rolls of 110 square feet with a smooth lap where the mineral surface is omitted, so as to secure a tight joint. Nails and cement are packed in the center of each roll.

Free sample and booklet on request to nearest office.

THE CARRITTE-PATERSON MFG. CO., Limited

ST. JOHNS, N. B.

HALIFAX, N. S.

Our Guarantee Bond

Signed, Sealed and duly executed, is furnished with every

ENTERPRISE MONARCH STEEL RANGE

certifying that we, as manufacturers, fully warrant and guarantee the Range represented by such Certificate.

Thus back of every MONARCH sold are our years of experience in stove making, and when we tell you that it is the best range we have ever produced, you will agree with us that it is (as the boys say) Some Class.

For Economy, Durability, Beauty of Design and special fitness for the work required, the MONARCH is recognized by stove dealers, housekeepers and Domestic Science teachers, as ahead of anything now on the market.

Ask your dealer to show you this range, or write us direct for illustrated circular.

The Enterprise Foundry Company,

Manufacturers, Sackville, N. B.

Fit Up Your Barn With These Old Reliable Stanchions.

THE farmer of today knows that chains, halters and wooden stalls in the cow barns are expensive, unhealthy, often dangerous makeshifts.

O.K. Canadian U-Bar Steel Stanchions

have replaced them in the modern barns of prosperous farmers. O.K. Canadian Swinging Stanchions are comfortable and easy for cattle—save time in tying cattle—no trouble to latch and unlatch—strong enough to stand rough usage. Used by the leading farmers and stockmen for years—because the best and most satisfactory stanchion on the market. [10]

5 sizes—write for new catalogue. [H]

Canadian Potato Machinery Co., Limited, - Galt, Ont.

International Poultry Food

SAFE FROM CHOLERA

keeps chickens healthy — prevents Cholera —and makes hens lay.

Feed them right and they will feed you right. Give the roosters, hens and little chicks a daily feed of INTERNATIONAL POULTRY FOOD and you will have fine plump Broilers for your own table—plenty of eggs to eat and sell—and vigorous pullets that will develop into good paying hens.

"International Poultry Food" is a grand preparation, and no one raising fowls can afford to be without it, as it is a sure cure and preventative for Chicken Cholera and other diseases and it greatly increases the production of eggs. It does not cost anything to feed it, because chickens will lay more than enough eggs to pay the cost.—V. V. HOLDEN.

International Poultry Food

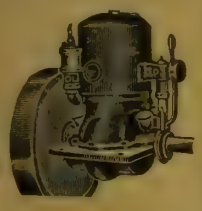
is a true poultry tonic and food. It prevents and cures Chicken Cholera, because it keeps the chickens well. Thousands of farmers, breeders and fanciers depend on "International" to keep their chickens strong and vigorous, and make hens lay.

Sold by dealers everywhere, on our spot cash guarantee, at 25c., 50c. and $1 a box. Write for a free copy of our $3,000.00 Stock Book. 72

International Stock Food

Co., Limited

TORONTO



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Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton Ont.

I bought a horse with a supposedly incurable ringbone for $30. Cured him with $1.00 worth of MINARD'S LINIMENT and sold him for $85.00 Profit on Liniment $54.00.

Moise Derosce.
Hotel Keeper, St. Philiupe, Que.

Thoroughness and Progressiveness are the ideas which have always dominated the management of this college; showiness and superficiality the rocks to be avoided.

Our reward has been ample and satisfying, our last year being by far the best in our history of 45 years.

No summer vacation. Students can enter at any time.

Send for Catalogue.

THE ST. JOHN BUSINESS COLLEGE

S. KERR Principal.

folus for regurgitation, or it was already so finely comminuted as to need very little secondary mastication, and consequently received only a small and insufficient mixture of saliva.

As we have endeavoured to show, digestion is not a simple mechanical process, bou a series of chemical changes brought about by the action of the sectretion of various glands, of which those having their ducts opening into the mouth, and which are excited by mastication, are of great importance.

It was found that the feeding of the chaff in long lengths—not less than 2½ in., easily accomplished by taking a knife out of the machine, or providing one good meal daily of long hay, or straw—enabled the cud to be easily "fetched," and ensured that it was properly "chewed," and effperience goes to show that, employed in this way, the system of pulping and chaffing the food can be practised without the slightest fear of indigestion resulting.

"DROPPING THR CUD."

the equvalent of which in the horse is popularlr known as "quidding," means the dropping from the mouth of partly-chewed food, considerable quantities of which are sometimes found in the crib or on the ground.

This takes place in diseases of the mouth and dental irregularities, rendering mastication painful, and is also one symptom of certain sub-acute forms of indigestion dependent on bad and innutritious food. Sometimes the contents of the rumen are actually vomited, the reverse peristalsis permitted in the bovine oesophagus in "fetching the cud" favouring vomition.

In describing the structure of the oesophagus in the bovine, reference was made to the fact that the tube is composed of red muscle throughout and that it differs from the horse, in which the terminal portion is composed of involuntary muscle, and is so narrow, and always closely contracted, that if cut off close to the stomach the contents do not escape. This is one of the several reasons why horses do not vomit, and conversely why cattle sometimes do.

The first thing in any case of "dropping the cud" is to examine the mouth. In young animals, dental changes, and particularly the persisting crowns of desiduous molars, cause pain in mastication, or there may be disease of the buccal membrane, of the tongue, &c., for example, as commonly occurs in cases of actinomycosis.

In dropping the cud on account of indigestion the animal is generally unthrifty, with depraved appetite, irregular bowels, and hidebound.

A cathartic dose of saline laxative with a change of diet, as indicated in all cases of irregularity in rumination associated with digestive derangement.

Fall Calves Best.

The best skim milk calves are those born in the fall of the year. Their young life is spent at a more favorable season, declares a successful farmer who has worked the thing out.

The milk they get will be in better condition than the milk which the spring calf will get. They will not be annoyed by the flies and the hot weather. They will not have a chance to eat grass when so young.

A calf is like a child; he will eat things he likes, often to the deterriment of his general health. The fall calf, if properly handles, will go onto the grass in the spring and will make good gains and profit for his owner at the end of a year far ahead of a calf born in the spring.

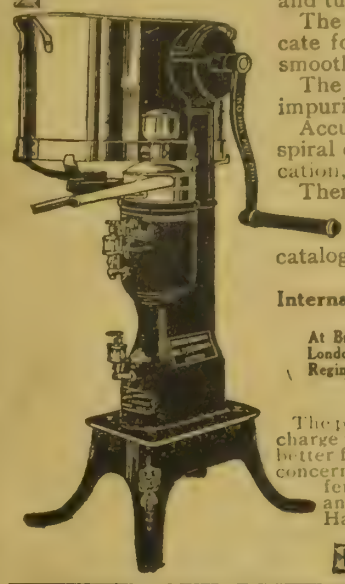
A Close Skimmer and Built to Last

THERE are two features that make a separator a good investment: close skimming and durability. Easy cleaning and easy turning are important, but not as important as the power to get all the butter fat and keep on doing it for many years.

I H C Cream Separators will make good under the most severe skimming test. If you will compare their construction with that of any other separator you will see why. Extra strong shafts and spindles, spiral cut gears, phosphor bronze bushings, thorough protection against dirt or grit getting into the working parts, and perfect oiling facilities, are the features that make these separators good for long service.

IHC Cream Separators Dairymaid and Bluebell

are close skimmers and built to last, and at the same time are easy to clean and turn. The reasons are these:



The interior of the bowl is entirely free from intricate forms of construction. Every part has a plain, smooth surface, to which dirt and milk do not adhere.

The dirt arrester chamber removes the undissolved impurities from the milk before separation begins.

Accurate designing and fitting of all moving parts, spiral cut gears, convenient crank, and thorough lubrication, make these separators easy to turn.

There are many other features worth your consideration. Ask the I H C agent handling these machines or write the nearest branch house for catalogue.

Canadian Branch Houses

International Harvester Company of America

(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

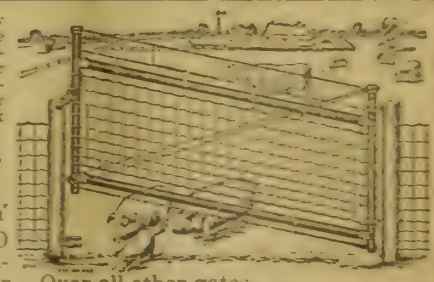
The E. B. EDDY COMPANY, Limited,

HULL, CANADA.

Makers also of Wooden Pails, Tubs, etc.

I GUARANTEE every Clay Gate to be free from any defects whatsoever, in material or workmanship. I will replace Free, any part, or the entire gate giving out for such reasons.

H. RALPH STEELE, Manager.



CLAY GATES CAN BE QUICKLY AND EASILY ADJUSTED TO let small stock through (see illustration) and to lift over snow in winter. Over all other gates

Clay Steel Farm Gates have many advantages

They won't break, bend, sag, burn, blow down, or rot. Positively keep back breachy bulls. Will last a lifetime. Made of high carbon steel tubing of large diameter—better than gas pipe, tee or angle iron. Clay Gates are guaranteed (see above)

60 Days Free Trial We will send you one or a dozen Clay Gates for 60 days free trial, without expense or obligation to you. 2,000 gates sold last year on these terms.

Canadian Gate Co., Ltd.

54 Morris Street - Guelph, Ont.

THE HORSE.

Rope Horseshoes Used in Germany.

Owing to the rapid increase in the mileage of streets paved with asphalt and wood blocks and to the congestion of traffic in the large cities it was found necessary to afford greater safety for horses, to prevent their slipping and enable them to come to a quick stop. This has been attained by fitting them with "rope" horseshoes. These shoes were first manufactured some 25 years ago, but it is only during the last decade that the industry has grown to large proportions.

Various forms and shapes of shoes are used. Some are opened at the back, like an ordinary horseshoe. Others are closed; and often, besides being closed there is a bridge or crosspiece joining the two sides. When this is the case the bridge is constructed like the rest of the shoe, inclosing a tarred rope. There are usually eight nail holes in each shoe; and in order to strengthen the bottom, and especially to make the nail holes more secure, the walls af the groove are sometimes reinforced by braces. The space in the centre of the shoe is often covered over with various kinds of inserts to protect the frog from injury. The latest novelty, which has been adopted by the Royal stables, is the insertion at the back of the shoe of a block of wood into which stiff bristles have been driven. This is an additional preventive against slipping. When the ground is covered with snow a special ice plate is inserted in its stead.

It is customary to use special nails with long heads in attaching the shoes to the hoof. When the long-headed nails are used, it is possible to drive them in and to extract them without taking out the rope. These nails, which are driven between the auter side of the groove and the tarred rope, also help to hold in the rope. The tarred rope wears down simultaneously with the rest of the shoe, and it is only on rare occasions that the rope must be withdrawn and new inserted. This change can be made without removing the shoe. The average life of a rope horseshoe is six to eight weeks.

The advantages and disadvantages of the rope shoes can be summarized as follows:—Advantages—They are light and comfortable for the horse; they help to prevent slipping; they break the concussion and deaden the sound of the hoof. Disadvantages—The driving of the nails requires more care; the blacksmith must have in stock a larger quantity of shoes of various shapes and sizes. Great care has to be taken in the preparation of rope horseshoes not to overheat the iron nor to hammer it when too cold, otherwise it will crack on the anvil.

In addition to the plain tarred rope horseshoes there are shoes in which rope interwoven with wire, wood, rubber, copper, wirework, rush, etc., is used. These are heavier, somewhat more expensive, and less practical than the plain rope shoes, and therefore have not become so well established.

Horses in Summer.

The care of horses during the hot weather has been placed before the readers of the Humane Pleader, the organ of the Toronto Humane Society, because it finds that "more men fail in the care of their horses during the hot weather than at any other time of the year." The substance of the article follows:—

Remember that cleanliness always travels side by side with kindness. The horse, like yourself, is subject to the troubles, diseases and pains of life. Therefore be merciful.

GENERAL RULES.

1. A clean stable. No manure should be allowed to gather. The cleaner you keep the stable, the better for the horse and yourself.

2. Screens on doors and windows. Plenty of fresh air (most important) can thus circulate and flies can be kept from your horse.

3. Sponge your horse oftenest where he sweats the most. Rub him dry. Fluffy towels are good and cheap. Do not use the hose on your horse.

4. Cleanse eyes and nostrils, and occasionally the ears.

5. You cannot be too careful of the hoofs. Never allow yourself to leave the stable at night without thoroughly cleaning the lower portions of the legs and fetlocks. Where clay can easily be obtained, it will pay to pack the hoofs at least three times a week, making the clay into a stiff paste.

6. Watch the shoulders. If, while working your horse, you find the shoulders getting sore, far better for the horse, and yourself, to stop working for a half hour, rub down the shoulders, and apply the following hardening lotion:—Tannic acid, 1½ oz.; powered alum, 2 oz.; carbolic acid, 1 dr.; water, 1 qt.

7. Occasionally, during the day, sponge the head, neck and eyes.

8. Do not fasten a sponge on top of the head, unless you keep it wet.

9. The straw bonnet is of some service, if there are ventilation holes through the sides. If the holes are not there, the use of the bonnet increases the temperature at the top of the head, just where it is leastwanted.

10. Give your horse small quantities of water many times during the day.

11. When your horse comes in from a day's work in the hot sun, give him a chance to "cool off" before putting him into the stable, and give him plenty of water in small quantities. Then put him into the stable and feed. The above is a particularly helpful method during the hot humid weather, such as was experienced in this country for some days last summer. If you fail to treat your horse as just advised, he is liable to start out tired the following morning and may collapse before the day's work is done.

12. Give your horse a chance to roll. It is oftentimes better than a dose of medicine for him.

13. If you are not too selfish, and are not too far away from grass, take your horse out for an hour on Sunday, and let him have a nibble.

14. If your horse is off his feed, give him a few carrots, or a bunch of clover, then two quarts of crushed oats mixed with a little bran and moistened, and add a little salt or sugar.

15. Do not rush your horse in the hot weather.

SUNSTROKE.

16. Watch your horse. If the perspiration pours from his body and he breathes short and quick he is in danger. You must then act quickly. The continuing symptoms are these; The perspirations drys up, the horse staggers, falls down, becomes insensible, and death will take place in about half an hour if he is not relieved. He has suffered sunstroke. Treatment—As soon as your horse begins to show excessive perspiration and short, quick breaths, send for a veterinary, but do not wait for the veterinary to come. Do something for his relief yourself. Get him out of the shafts at once, and into a shady place. Take off all his harness. Give him lots of water in small servings. Sponge him all over, and shower his head, neck, shoulders and legs. (Do not use the hose unless you spray the water from the nozzle, letting it fall like rain.) Give him four ounces of aromatic spirits of ammonia in a pint of warm coffee. It will likely pint of warm *not hot) water, or a be of great assistance to put a bag of crushed ice on the top of his head and neck. If he is so insensible that he will not drink, wash out the mouth a few times. Instead of the spirits of ammonia, a half-pint of whiskey in a quart of water may be given. Give your horse lots of time to recover.

17. Keep the harness in good condition, but be sure that the inside of the harness is free from dirt. Wash it often. The inside of the harness is more important than the outside, in this respect. Pay particular attention to the collar and the pads. The sweat and dust should never be allowed to harden on the surface of the pads. Roughen the surface by using the curry-comb.

18. Keep in a handy box a supply of castile soap, a number of clean towels, carbolic acid (a small quantity to be used as a disinfectant in the water when washing sores or wounds) and borax, also a cleanser and healer.—Advice by Toronto Humane Society for City or Country.

Horsemen Attention!

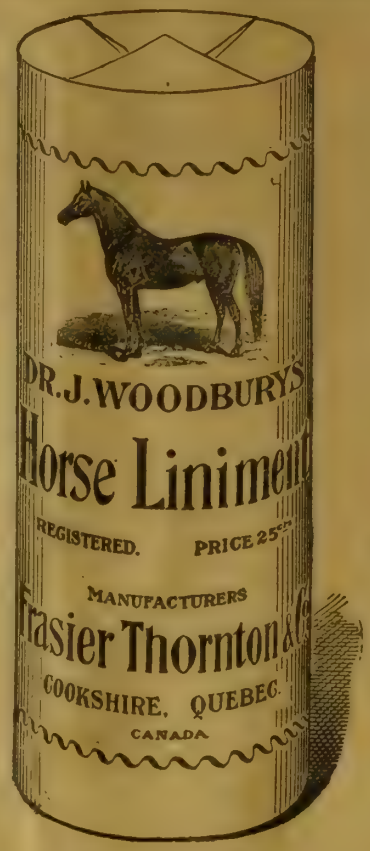
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distempr, Glanders, Spavins, Pink Ey, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain; Cures Spavin Lameness, Allays Pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. Book 1 E free.

ABSORBINE, JR., liniment for mankind. For Synovitis, Strains, Gouty or Rheumatic Deposits, Swollen, Painful Varicose Veins. Allays Pain. Will tell you more if you write. $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

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Hot Water Incubator, holder of Worlds championship in hatching. Awarded 53 Gold Medals. Used by the Royal Families of England, and 95 per cent of the Governments of the World. Twenty years ahead of every other make. Thermometer registers on outside of Egg drawer. Lamp burns thirty days with one filling, self-regulating. Finished like a piano. Will last forty years. Made in London, England. Different from common makes. Canadian customers joyful with results. If you send 5c. in postage for mailing, we will send you FREE our beautiful Illustrated Catalogue 1912 as well as a neat little book on Poultry diseases and their cure.

Freight prepaid on Incubators to any station east of B. C. SEND TODAY TO

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Write us about our co-operative scheme.

We can save you just half of the money you pay for Pure Parchment.

The Maritime Pub. Co., Ltd.

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To The Public

We beg to announce that we have purchased the good will and interest of the EMPIRE LINIMENT CO. Ltd. and will supply the trade for this excellent Liniment from our factory at Middleton, where all orders should be addressed.

C. GATES SON & CO.

What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism when I got EMPIRE LINIMENT advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

POULTRY.

Preparing For Winter Eggs.

The time to prepare for winter egg production is in the summer, when the hens are laying constantly and naturally. The winter egg basket will be empty if the hens are not properly fed, regardless of everything else. It is not reasonable to suppose that proper feeding will produce prolific laying in winter, regardless of everything else, and it will not, but it will largely increase the productiveness of hens of even indifferent qualities, and hens of the right breeding and raised under right conditions may be made to lay well throughout the winter without injurious forcing through the feeding of stimulants, which are not as a rule recommended by experienced poultrymen.

It is essential to winter productiveness that the hens moult in good season, and they will usual y do so after having been on range all summer, without any special inducements, but it is a good idea to confine them for a week about the first of August, and and feed them on half rations during that time, still providing the usual variety of food. This also applies to hens that have been confined in yards. After a week of half feeding, the hens will be given their usual amount of feed, there being a double portion of linseed meal in the dry mash, which will loosen the bowels and start the new feathers to growing, the old ones having been loosened by the previous change in diet. This will produce a quick moult, usually, the hens feathering out rapidly without losing a great amount of flesh. After the double portion of oil meal has been fed a week, the normal method of feeding should be resumed, and a liberal supply of green food and beef scrap should be provided until the moult is completed. All that is then necessary to make the hens lay fairly regularly in winter, providing that the birds are descended from a good strain of winter layers and have been well bred, is to give them the food they need, and enough of it throughout the winter. The essential thing is to provide summer conditions as nearly as possible, throughout the winter season.

This is simple enough, but it requires a certain amount of work every day. There must be plenty of fresh air, fresh water and sunlight in the pens at all times when not prevented as to sunlight by the weather. There must also be efficient substitutes for the bugs and worms and the great variety of green stuff that the birds find on the range in summer, and there should never be a lack of either. These conditions provided and there will be eggs every day in the year. The best quality of commercial beef scrap is the best substitute for the bugs and worms, so-called blood meal and other meat preparations aside from the clear scraps being of considerably less value. Ground green bone, when perfectly fresh and wholesome, is good, but should be used only occasionally, say once or twice a week, when it may be substituted for the scrap. Of course, small pieces of meat from the table and similar refuse will make a very acceptable variation of the meat ration. This may be left in the pens and the hens will not consume more than is good for them.

The variety of green stuff is not as easily supplied, but still there is little difficulty in supplying all the essential elements for egg production. Sprouted oats are very good, but there is no one thing as good for continual daily use as alfalfa meal or the hay cut into short lengths when thoroughly dry. This may be mixed dry with the dry mash, of which it should form one-third, or it may be

(Continued on page 749.)

Buy I H C Wagons for True Economy

YOU cannot farm without a wagon any more than you can keep house without a stove. It is something you need every day. You work it harder than anything else on the farm, and when the old one wears out you have to get a new one at once.

Figure out how many bushels of corn, wheat, or oats, or how many bales of cotton it takes to keep you in wagons, and then see how much you save when you buy a wagon that lasts longer than the average.

It is an easy thing to do, even though all wagons which are painted alike look alike. The difference in wagons is underneath the paint. It is the material and workmanship, as well as the paint of I H C wagons

Petrolia **Chatham**

which make them the best wagon investment for any farmer.

We tell you plainly what material goes into every part of our wagons, and we want every purchaser to convince himself before buying, that when I H C wagons are advertised as having birch hubs, maple axles, and long leaf yellow pine box bottoms, these are the materials actually used.

Such care is taken in the construction of the I H C wagons, and in the culling of the materials which go into them, that when a wagon reaches a farmer's barn, that farmer has one of the best wearing, easiest running farm wagons that skilled labor can make or that money can buy. There is no need to speculate in buying a wagon. Wear and tear and length of service are the points to go by. I H C wagons are made for nation-wide uses, with special features adapted to local conditions. Wherever sold they are right, and ready for use in that locality. The I H C wagon agent in your town sells the wagon best suited to your neighborhood. Ask him to go over the wagons with you. Ask him for I H C wagon literature, or write the nearest branch house.

EASTERN CANADIAN BRANCHES

International Harvester Company of America

(Incorporated)

At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to you, the best information obtainable on better farming. If you have any worthy question concerning soils, crops, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

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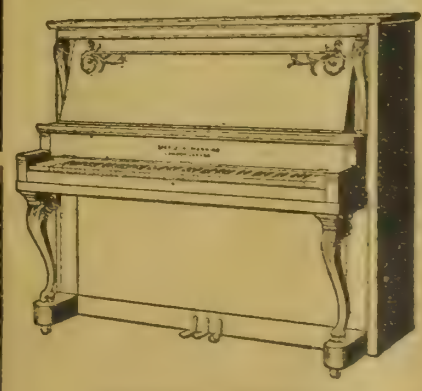

Louis XV.—Style 80.

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LONDON (No Street Address Necessary) CANADA

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

When I Have Gone Away.

When I have gone away, dear heart,
And left the scenes of earth behind
Each link that forms of life apart,
The higher, larger life to find,
Bring spring-time flowers fresh and fair
To lay above my place of rest,
And let them whisper to me there,
The flowers that I love the best.

I know not now, dear heart, the ways
Of that fair land of mystery;
How souls through the eternal days
Grow sweet and strong, and glad and free.
But this I know: That love will last,
Nor ever unresponsive grow,
And precious memories of the past
Will bind me to the hearts below.

Bring flowers for sweet memories' sake
And lay them low where grasses wave,
And they a deathless chain shall make
That reaches on beyond the grave.
And past the torch of blight and chill,
In fields whose fadeless flowers grow,
Living and luring, loving still,
Believe dear heart, that I shall know.—Julia E. Abbott in Maine Farmer.

Out of the House of Bondage.

It was a windy March dusk when Dr. McGruder pushed open the door of Dr. Pemberton's big, cheery, study and stalked up to the fire, pulling off his big driving gloves. His grizzled sandy beard was blown sideways by the wind, and one side of his face was beaten red by it.

"Its a tearer," he remarked. "Been out?"

The little minister had stooped to poke the fire into a brighter blaze; now he looked up, his fine old face, with the delicate humorous puckers about the mouth, illuminated by a sudden leaping flame.

"No, James," he said mildly; "no It was my sermon day, you remember. I never go out upon my sermon day—if the wind blows."

The doctor's eyes twinkled. "Aye, man, ye're canny," he retorted. "Ye almost conveence me, once in my age, that I might be willing to trust my soul to ye. If ye were one of these little whiffets that thought every time a child cuts its finger it was an affleection of Providence that ye were called to pray over, I'd have no faith in ye. But a man that knows enough to keep in when the wind blows—"

The old minister turned, the poker suddenly motionless in his hand.

"James," he asked, "what's happened?"

"There ye go!" the doctor grumbled. "I hoped ye'd outgrown it—at your age! Maybe ye think ye can set a broken limb better than I can! Who's taking care of the sick people in this town—you or I?"

"I reckon, James," the little man retorted, "we're doing it together. Haven't you got that beaten into your Scotch head yet?-"

The doctor laughed and stretched his arms, a huge, towering figure among the shadows. Then he said: "Jane Campell had a stroke this morning. I think she'll get her speech back, but I doubt she ever walks again."

"Jane Campbell!" the minister echoed. "Jane Campbell! Why, she was up here last night about the treasureship of the Ladies' Aid. It wasn't her business, but it had gotten into a muddle, and she was itching to straighten things out. She—James, you can't mean Jane Campbell!"

"What are you up to now?" the doctor growled, his shaggy brows drawing together over his keen eyes. "Leave her alone, man—she's settled for the night. The wind's blowing forty miles an hour' and with your throat—"

"I guess Joe isn't settled for the night, is he?" the old man returned, stamping into his arctics. "And my throat's my own, if half the town does seem to think it has a mortgage on it. Besides"—pulling an old mulberry-colored muffler out of a drawer—"I've got this contraption. Poor Jane it will be terribly hard for her, with only Joe."

"It may be "poor Joe," the doctor said dryly. "Hi, there, Andrew!"

The little minister started guiltily, and, pulling the mulberry-colored "contraption" out of his pocdet, where he had been absent-mindedly stuffing it, he tied it elaborately about his throat.

"Now I'm ready," he announced. "going to drive me down, James?"

"A kind, thoughtful host, it is"—the doctor addressed the fire. "Won't even give a man time to get thawed out when he comes in from a twenty-mile trip—"

But Dr. Pemberton was already out of hearing down the windy garden-path.

Poor Jane Campbell lay in her immaculate room, the light turned low, her eyes full of bewildered struggle, looking out into the strange world in which she had traveled so far since morning.

As Dr. Pemberton entered, Joe rose from a chair at the foot of her bed. He was a big, gentle, broad-shouldered fellow, as slow in every movement as his mother had been swift, and the bewilderment in his honest gray eyes almost equalled the dumb pathos in hers. He wrung the minister's hand silently.

"It—it's awful to see her so," he said, choking over the words.

"Don't you go to worrying, Joe," his friend returned cheerfully. "The doctor will bring her round all right. Probably this was the only way to make her take a rest." He crossed over to the bed and covered one of the heavy, helpless hands with his. "Don't you worry, Jane," he repeated. "You haven't tumbled out of the Lord's care."

There was no answering comprehension in the troubled eyes—only the pitiful dumb terror.

The old man returned to Joe.

"Who's going to sit up with her?" he asked.

"I am," Joe replied.

"But, man, it may be months. You can't take care of her alone."

"There have been a lot of folks over," Joe explained, "but I sent them away. Mother always dreaded having people around her things. I'll make out somehow, Dr. Pemberton."

From that nothing could shake him, and the minister, beating his way home against the wind half an hour later, coat open and mulberry muffler flying like a flag under one ear, meditated wrathfully upon an old, old theme—the obstinacy of the best people.

Joe Campbell's task was lightened of its worst bitterness, however, sooner than any one dared hope. In less than a week his mother's speech came back, and, more slowly the use of her hands. There matters stopped. Jane Campbell, the most indefatigable woman in town, the master-spirit of every enterprise, was chained for the rest of her life, however long or short, to the rack of a sick-bed. And nobody saw the whole situation so clearly, down to each detail of it, as Jane Campbell herself.

"Now, what," the old minister mused one warm April day—"what will Jane do? Human beings don't change their nature by putting in prison. Jane Campbell always was yeast, and yeast she'll be to the end of her days. She can't stay bottled up without something's happening. She's got to find an outlet somewhere. Lord keep Thy servant from presumptious sins; if there's anything more presumptious than thinking Thou hast forgotten how to manage human hearts, I don't know what it is."

But already Jane Campbell had planned her role. Not consciously, of course—that is, not consciously ac. knowledgeing it as a role. Few of us play at the same time audience and stage. So Jane Campbell, gripping with small determined hands a man's life, said with a gentle pathos that so long as Joe needed her she was going to try to live. It was not much living to her, but Joe, poor fellow, would be so lonely after she was gone.

And indeed it was true. Joe had always loved his mother, and now, full of pity over her broken days, nothing that she wanted was too difficult for him. So when the terrible selfishness which is the constant lurking foe of helplessness began to grow upon her, no suspicion of it touched his heart. When Molly Blake made her nervous, Joe instantly declared that Molly must go; and when the two or three other experiments—all that the village possessed in the way of "help"— each in turn proved impossible, it was the most natural thing in the world that he himself should quietly take up the burden of the housework, getting up at five o'clock to cook breakfast before going down to the shop, and hurrying back at noon to get dinner. It seemed to Joe perfectly right and natural that his mother should use his life to fill her own broken measure, and day by day Jane stifled her conscience till she began to believe it too.

Of course all this came about gradually—so gradually that it was some weeks before Dr. Pemberton realized what had happened. When he did, though he had been down only the afternoon before upon his regular weekly visit, he trotted down again the next morning, as soon as Joe had gone. And the moment he entered the door Jane understood why he had come. He began bluntly:

"See here, Jane— what's this I hear about Joe's doing all the work? It isn't right—It isn't right. Joe's too fine a fellow to be turned into a housemaid."

Jane sighed. "I know it, Dr. Pemberton," she said. "Ther's nobody knows so well as I what Joe is. I can't sleep nights worrying over it. But what can I do? There's no one we can get."

"There was Nellie Wright" Dr. Pemberton reminded her, looking down at the toes of his boots.

Jane's eyes filled with tears. "Oh, Dr. Pemberton, wecouldn't keep her! Why, the dishes she brought me my meals in were so dirty that I couldn't eat a thing. I don't ask or expect much now, but I do think I have a right to clean dishes. I'd rather starve than eat anything Nellie Wright cooked for me."

"Well, of course, I didn't know," Dr. Pemberton said hastily. "But there were others. There was Molly Blake, now."

"But Molly couldn't turn around without breaking things," Jane protested plaintively. "She broke one of my Parian vases that Mr. Campbell's aunt gave me when we were married, and an eau de cologne bottle I had from girlhood, and—"

"Well, well!" Dr. Pemberton interrupted bruskly—people always had to interrupt Jane Campbell. "I suppose you know better than I do, Jane and that I'm a meddling old interloper; but there are things that are worth more than all the Parian vases and cologne bottles in the world, and a good son is one of them."

Jane sighed again, but tenderly this

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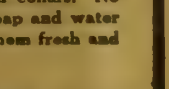

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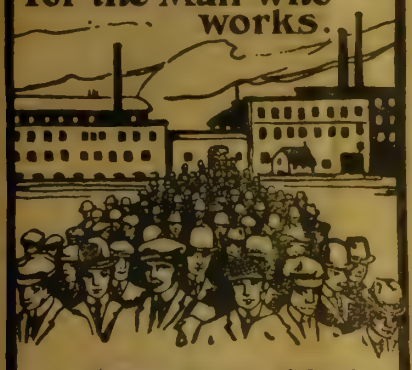

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time. "Joe is a good boy," she said. "He quite spoils his mother." And Dr. Pemberton knew himself worsted, as people generally were with Jane Campbell, and trudged back home disheartened. Even at the parsonage there was small comfort waiting, for when he pushed open his study door Dr. McGruder looked up from the old sleepy-hollow with his wickedest smile.

"Converted Jane?" he asked pleasantly.

"Sometimes," the little minister declared with a fervor that made his friend chuckle under his great beard—"sometimes I think that women like Jane could get around the Angel Gabriel."

But when he pulled up another chair and, sinking wearily into it, stared into the fire in a discouraged silence, the doctor's voice changed.

"Poor Joe!" he commented.

"Poor Jane," Dr. Pemberton answered gravely.

April melted into May, and May into June, and Joe told Dr. Pemberton that they were getting on "first rate." Then, all in a moment, something happened.

Rose Henderson!

It was a late June afternoon, in that loviest hour just before sunset, when the shadows were long across the meadows and bird escasties were rising everywhere, that Joe Campbell, going home from his shop, saw Rose coming down the village millener's steps. Others besides Joe might ve been pardoned for finding the picture an eminently pleasant one, for Rose was tiny and trim, with a face that flushed and paled adorably and eyes like a brown brook in the sunlight, and she wore a ruffled pink gown that made her look like the incarnation of her name. To poor Joe, his soul suddenly summoned to his eyes by this most startling vision, she became instantly She—the One. Of course, after that one startled moment, Joe wrenched his eyes away and went soberly on down the street, with, however, a blush that rivaled hers flaming in his face. But before ty-four hours had passed he had learned that Rose Henderson was an orphan, and had come to be Miss Parson's assistant. Within three days (heaven knows how, for social manoeuvring was not among Joe's acquirements) he had contrived to meet her. Sunday he walked home from church with her.

The news reached Jane the next day. With consummate skill she not only extracted every shred of information from her caller, but left that worthy neighbor quite crestfallen because, apparently, she had brought no news after all. But after she had left, Jane's poor hands twisted fiercely in the bed clothes, and her eyes grew dark with suffering.

"He's all I've got!" she cried passionately to some unanswering One. "It isn't fair to take him away from me. He's all I've got, and I won't let him go!.'

Then she lay still, thinking. It might pass over, of course—going home from church once with a girl isn't a commital. But in her heart she knew that Joe wouldn't get over it. After all, just then there was nothing to do but wait.

The next Sunday it rained, and Joe going hopefully to church, returned grave and absorbed. She wasn't there, Jane divined exultantly. If it would only rain for three or four Sundays! But it didn't; the third was a day full of splendid beauty, and Joe returned looking as if some of the summer glory had been spilled into his eyes, and all of the afternoon he wandered about wrapped in a blissful haze.

For several weeks things went on so; then came a Sunday when, towards twilight, Joe became restless. He fidgeted about the room till poor Jane was almost wild. Finally he spoke.

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The Toronto Fair is the largest and most attractive of annual exhibitions in America, and this year new permanent buildings have been constructed and its extensive boundaries enlarged by new boulevards. Aside from the attraction of the exhibition a visit to Toronto at this season is sure to be enjoyable and with the very low rates prevailing it will be possible for persons of moderate means. The going dates are: August 22, 24, 25, 27, 28 and September 4 and 5. A special rate from all states will prevail on August 23 and 25, and on September 3rd. All tickets are good to return September 11th, Maritime Province travellers will have their choice of two through vestibuled trains, the Ocean Limited and the Maritime Express, both of which connect at Bonaventure Union Station, Montreal, with the through Grand Trunk Railway trains for Toronto. It will be well for intending travellers to apply early for reservations. Particulars will be given by the local ticket agents.

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"Mother, I was thinking if you didn't mind, I'd go to meeting tonight. I could get Amanda Gates to come in and sit with you."

For a second it seemed to Jane that her heart stopped beating, but she made herself speak.

"Poor boy!" she said.

Joe was at her side at once. "Why mother," he cried, "what do you mean."

"Its so hard for you to be tied down with a half-dead mother," she sobbed. "It almost kills me to be such a burden to you, Joe." ...

"Mother, don't!" Joe cried sharply. "You've—you've no right to say that, mother." He actually choked over the words. All the chivilary that was in him was always stirred to a passion of pity whenever he thought of her helplessness.

Jane's small hand found his and clung to it.

"I didn't mean to hurt you, Joe. But to think that I keep you from —rom things! To think that, if the —from things!) To think that, if the time comes when you want to you couldn't ask any girl to take up such a burden! But it may be only a while, Joe, and I know you won't be sorry when it's over. I—I haven't been so well this week.-'

Joe did not go to church that Sunday night, nor did he again go home with Rose. A worn look came into his young face, but he was as tender as always to his mother. It was as a reward, though, in the curious way in which we hoodwink our consciences She ascribed it to quite other motives, that one Sunday evening in August Jane insisted upon Joe's going to church. He needed to get out more, she said; it was worrying her. He could not please her so much as by going.

So Joe, to please her, went. If either of them could have forseen what would happen—

Rose Henderson was there— Joe saw her the instant he went in. It had been three weeks since he had even met her on the street, and the poor fellow's heart gave a thump, and for one blissful moment he forgot; then it all came back, and he knew that he had no right to look at her. Yet in spite of his resolve, his eyes kept wandering back, like homing birds. Rose's pretty little face was grave and full of brooding thoughts, but only Dr. Pemberton was in a position to see, and his kind old eyes were too dim. So the two young things sat through the service and did not hear a word of it, and after it Joe started to hurry home alone. Then Rose turned and saw him, and in a flash the sad, drooping face was all illumined with joy; and Joe, dazed, bewildered, incredibly happy, was at her side.

"May I go home with you, Rose?" he asked.

And Rose, trembling and flushing, answered honestly. "I'd love to have you, Joe."

Out in the darkness, Rose's small hand on his arm, the two were absurdly shy. It was Rose who finally broke the silence.

"I—I was afraid you were offended, Joe."

"Offended!" Joe cried. Logically considered, it was no answer, but it satisfied Rose.

"It—was so long since I'd seen you," she said, with a happy tremulous laugh.

Joe drew a hard breath, "I guess you don't know how I've wanted to see you," he said.

"How," Rose asked in a hurried little voice—"how is your mother?"

But not even the thought of his mother could not stay Joe's delirium then. He answered her, but he did not know what he said—the only things he was conscious of were the face under the wide hat and that timid touch upon his arm. He did not even realize what Rose was saying, though she kept talking—per-

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haps because she was afraid of silences.

When they reached Miss Parson's Joe went up to the door with her. The house had a tiny piazza, hidden from the street by a great syringa bush. As Rose put out her hand to say good-by, suddenly, before either of them knew what had happened, Joe leaned down and kissed her.

They drew apart, Rose trembling, Joe shocked.

"Oh, Rose," he cried passionately, "I had no right!"

But little Rose looked up at him bravely. "I guess—I wanted you to," she whispered.

Joe caught the small fluttering hands and held them fast.

"Oh, I love you, love you, love you!" he cried but there's—mother."

Rose's shining eyes, confident with her joy, met his. "It will come right somehow," she said. "I don't mind any thing so long as we—know."

Yes, they knew, assuredly. And that night, like the straight-forward fellow he was, Joe told his mother.

(Continued in next issue.)

Flour and Breadmaking.

(Continued from last issue.)

QUALITY IN FLOUR.

The various kinds of flour dealt with in the preceding chapters comprise all those in general use throughout this country. They vary very much in strength, due to the circumstances which cause variation in the quality or strength of the wheat, the milling, the grade, and the kind of flour. Unfortunately our knowledge of the ultimate composition of the constituents of flour, or the various intricate changes that take place in the making of bread, is not complete enough to make it possible for us to determine by chemical analysis the best breadmaking flour. Within certain limits it is an easy matter to tell which flour will make the best bread. For instance, the flour from hard spring wheat is usually granular, or gritty; and, when squeezed in the hand, does not readily pack, leaving the imprint of the fingers, whereas the soft flours do. The hard, or strong, flours absorb more water and give a better yield of bread. They also have more gluten, which gives them greater expansive properties. In general, the hard flours are usually spoken of as the bread flours and the soft flours as the pastry flours But when we come to distinguish between tne different kinds of strong flours, the feel, or the appearance, alone is not sufficient to base a correct judgment regarding the merits of the two flours, nor will chemical analysis aid us materially.

The baker likes a flour that will absorb a large amount of water, yield a large loaf of a desirable shape, with good colour and texture. Such a flour is usually spoken of as a strong flour, but if we look deeper and attempt to define "strength" in flour, we find many conflicting views. Jago defines strength as the capacity of a flour for absorbing water, and treats separately the quality of size, shape, colour, and texture. Humphries' and Biffin's definition of strength is the "capacity for making large, well-piled loaves." This definition suggests that the primary factor is the size of the loaf, the other factors being shape and, perhaps, to some extent, texture.

If we try to explain the factors that influence the volume, texture, and shapeliness of a loaf of bread, the conflict of views is even more in evidence. The oldest idea suggested that, because of the tenacity of the gluten, the carbon dioxide produced in the dough by the action of yeast was retained, and caused the dough to rise. No doubt a large amount of gluten is frequently associated with large volume and good texture, but there are apparently other factors

Get Busy With a Baler

IF you have clover, timothy, prairie grass, or alfalfa, it will pay you to bale it. Loose hay is hard to place. You cannot sell it easily and you cannot ship it at all. It is the hay that is baled which is in demand in the high-priced city markets. This is the hay upon which you make your profits.

The difference between what it costs to bale hay and the increase you get in price per ton, gives you a bigger margin of profit on your work than anything else you do on a farm. You can bale easily from 8 to 16 tons a day and under certain conditions, several tons more. Baled hay can be made as much a big cash crop to you as your wheat, corn, or oats. All you need is the right kind of hay press. There is money in owning an

I H C Hay Press

An I H C pull power press in either one or two-horse style, or an I H C motor press with a 3, 4, or 6-horse power I H C engine, will do the work required on any farm cheaper, quicker, and with less attention than any other hay press so far designed.

It has taken years of field testing to make these presses the best that you can buy. They are that now. The horse power presses have greater capacity than any other horse press of equal size. They are lighter draft and easier on the horses. The step-over is the lowest and narrowest made. They have an adjustable bale tension, which insures compact bales. They are equipped with a roller tucker to turn in all straggling ends, thus making each bale neat in appearance.

I H C motor presses consist of a bale chamber and an I H C engine mounted on substantial trucks. The bale chamber of the motor press corresponds in size to the bale chamber of the horse press—14x18 inches, 16x18 inches, and 17x22 inches. No time is lost in setting up the machine. It can be moved easily from place to place, backed to the stack or barn, and started to work at once. The engine does not need a man to watch it and there is no danger from sparks. When not baling hay, the engine can be detached. Two extra wheels, an axle, and a belt pulley are furnished, so that with a little extra fitting, you have a regular portable I H C engine ready for business 365 days each year. You can operate a small thresher or corn shredder, saw wood, shell corn, grind feed, pump water, generate electricity, or run a cream separator. You thus purchase two useful machines in one. There is profit in the hay press and unlimited work in the engine.

Hay time is drawing near. Be prepared for it. Drop in and see an I H C local agent in your town, or write the nearest branch house for a catalogue.

CANADIAN BRANCH HOUSES:

International Harvester Company of America
(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

You may be paid $50 in Cash for improving your walk like this

108 Canadian farmers will receive cash prizes (twelve in each Province) in our big

1912 FARMERS' PRIZE CONTEST

WE held a contest last year in which 36 prizes were offered. This year there will be three times as many prizes (108) and therefore three times as many chances for you to win one of them. You do not have to use a large quantity of cement to win a prize. Many of last year's prize-winners used comparatively little cement.

THE contest is divided into three classes and in only one of these ("Class 'A'") does the amount of cement used count in deciding prize winners. Class "B" is for the best concrete work the same makes of reference. Class "C" is for sending in the best and clearest description of how any piece of concrete work was done.

THERE will be four prizes: First $[illegible], Second $25; Third $[illegible]; Fourth, $[illegible] in each class in each Province. Thus you will compete with other farmers in your own Province, and not with those in all parts of Canada. This gives you the best possible chance to win a $50 prize.

IT COSTS NOTHING TO ENTER—There are absolutely no "strings" to this offer. There is no entry fee or red tape to bother with. You cannot lose, because the improvements you make of concrete in connection with the prizes will more than be worth their cost. We have a book, *"What the Farmer Can Do With Concrete,"* that will give you all the information you need about the use of concrete on the farm. It will be sent to you free, postpaid, on the condition precedent that you enter the Prize Contest. Ask for particulars to-day. Just say "Send me your book and particulars of the 1912 Prize Contest," on a post card and mail it *to-day*. Address Publicity Manager,

Canada Cement Company Limited, 503-561 Herald Bldg., Montreal

Suffered With Nerve Trouble

FOR TWO YEARS

IMPOSSIBLE FOR HIM TO SLEEP

Mr. Chas. W. Wood, 34 Torrance St., Montreal, Que., writes:—"For two years I had suffered with nerve trouble, and it was impossible for me to sleep. It did not matter what time I went to bed, in the morning I was even worse than the night before. I consulted a doctor, and he gave me a tonic to take a half hour before going to bed. It was all right for a time, but the old trouble returned with greater force than before. One of the boys who works with me, gave me half a box of Milburn's Heart and Nerve Pills. I took them, and I got such satisfaction that I got another box, and before I finished it I could enjoy sleep from 10 p.m. until 6 a.m., and now feel good."

Milburn's Heart and Nerve Pills are 50 cents per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by the T. Milburn Co., Limited, Toronto, Ont.

that influence the result, for there are many cases in which the flour with the highest content of gluten does not give the largest loaf. Attention was called to the fact that some glutens were soft and flabby, while others were firm and tenacious, and attempts were made to ascertain the quality of glutens by determining the relation between the weights of wet and dry glutens, their expansion power under the influence of heat, the proportion of gliadin to glutenin, which together make gluten, etc. But none of these methods have been entirely satisfactory. Recently it has been suggested that it is not the ratio of gliadin and glutenin, but the absolute amount of gliadin which gives strength to the flour. This also has been discredited. Finally, an entirely new theory has been suggested, i. e., that the size of a loaf is not so much dependent upon the quality or quantity of the gluten as upon the amount of sugar contained in the flour, together with that formed in the dough by diastatic action, and that shapeliness, and probably gas retention, are dependent on the physical properties of the gluten as modified by the presence of varying proportions of salts.

From what has been said, it is evident that our knowledge, or lack of knowlehge, of the chemistry of flour and breadmaking is another instance of the fact that many of the most common materials and everyday operations around us are the least understood. Frankly, we do not know enough about chemistry of flour, or of the changes that the various constituents undergo in the process of breadmaking, to devise any system of chemical analysis that will give conclusive and satisfactory evidence of the strength of flour for breadmaking purposes. Therefore, the only available method of determining the relative value of flour for bread purposes is by actual baking trials.

In all our baking trials nothing but a little sugar, salt and lard, in addition to the yeast and water, was added to the flour. In order to bring out the full expansive power of the flour, a rather large quantity of yeast was used. The conditions were kept as uniform as possible, but each loaf was placed in the oven when it had risen sufficiently and the general appearance indicated that it was ready for baking.

(Continued next issue.)

FLORICULTURE.

"I have a lot of plants to bring in the house this fall," writes a Chatham inquirer: "When shall I commence to repot and take them in and how shall I water them?"

The last of August or the first of September are the right times to take up and repot plants for fall and house blooming. More care is necessary in watering the plants, especially newly potted plants, as, if overwatered, the soil is apt to get sour at this season and lay the foundation of disease at the same time. Let no plant in active growth dry out. Plants heavily root-bound are not easily injured by heavy watering. Do nor forget to give plants all the fresh air you can. The neglect of this is soon seen in slender drawn stems and lack of color in both foliage and bloom.

Aphis and red spider should be closely looked after now as closed rooms and a still dry air just suits them and if not checked will soon destroy plants. Keep the air moist if possible, by evaporating water or spraying. Moist air is death to red spiders and tobacco smoke or infusion controls the aphis.

Slow growing plants, such as palms, etc., even if heavily root-bound, should not be repotted until spring and any plants that can be safely repotted now should be placed in only one size larger than the pot in which they now grow.

Please tell me what to plant in my garden this fall, to give me bloom before I plant my annals in the spring?

Put in a quantity of hardy plants this fall. They will give you a quantity of bloom next summer without any care and be a permanent fixture in your ground. Peonies, Larkspur, Campanulas, Rudbeckias, Aquiliguias, Pinks, Forget-me-nots, Iceland Poppies and dozens of others, all of which you can find in Goold's Price List, and on his grounds, will be a source of delight for years. They are practically no trouble as they come up season after season. They sow their own seed after they are once planted and will winter well with a very little protection in the fall.

Reader, of St. Stephen, writes: Will you be kind enough to let me know what causes Narcissus leaves and buds, where the plants are well up in the spring, to wilt and give no bloom? I have a young plant of Spirea, will it be difficult to keep during the winter?

I fancy that the Narcissus bed is not well drained. If grown in pots, lack of drainage would cause the same effect. Kindly give particulars of method of cultivation, etc. The Spirea kept somewhat badly last winter where not well protected, but as last winter was so extraordinarily severe that could hardly be taken as a criterion. However, it would be wise to protect with some mulch about the roots and some brush around the top.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he has used Chamberlain's Colic, Cholera, and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an excellent remedy, aad takes pleasure in recommending it. For sale by all dealers.

See Our Exhibits At The FAIRS

You are cordially invited to visit our Exhibits at the Fall Fairs, and to make a thorough inspection of the

Standard

Cream Separator, and learn why it has earned the title of the "World's Greatest Separator."

Toronto, Aug. 24 to Sept. 9	Renfrew, Sept. 18 to 20
Quebec, Aug 24 to Sept. 3	Halifax, Sept. 11 to 19
Sherbrooke, Aug. 31 to Sept. 7	St. John, N. B. Sept. 2 to 7
London, Sept. 6 to 14	Ottawa, Sept. 5 to 16

Charlottetown, P. E. I., Sept. 4 to 7

In the meantime it might be well to get a Standard catalog and learn something about the machine you are going to see. Drop us a post card to-day.

The Renfrew Machinery Co., Ltd.

Head Office and Works, RENFREW, Ont.
Sales Branches at WINNIPEG and SUSSEX.

Learn to Be a Barber At Home for $2.00

Can you beat this offer?

A trade everyone should know.

For those who cannot enter a barber college, we are making this great offer.

For the above sum, we will send you, postpaid, three of the greatest books ever written on barbering, which tell you in simple words how to become a barber at home.

We have a limited number of these books, so do not hesitate, but write at once.

Money refunded within ten days if you are not satisfied.

T. I. PATTERSON,
P. O. Box 2202 - Montreal.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition.
It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

Mercantile Assurance Association
P. O. Box 317
Halifax, Nova Scotia.

Prizes Offered by the Canadian Seed Growers' Association For Selected Seed.

Official notice is given by the above organization that substantial prizes in the form of cash and special trophies, are offered for seed grown in the province and exhibited at the next Annual Winter Fair or Provincial Exhibition. The date of that Exhibition will be made public later.

In addition to the regular prizes offered to members of the Association, special cash prizes are offered to boys and girls between 12 and 18 years of age, for Exhibits of Spring Wheat and White Oats. A sweepstakes prize in the form of a beautiful gold medal donated by Dr. Jas. W. Robertson, is also offered to the boy or girl having the best Exhibit of oats in the Maritime Provinces, Quebec and Ontario and wheat in each of the Provinces of Manitoba, Saskatchewan and Alberta. Each of these exhibits is to consist of a sheaf which must be at least 6" in diameter at the band, and a gallon of threshed grain. The plants of this sheaf should be selected by hand from the field before the crop is cut.

Those proposing to compete for these prizes should arrange at once to make the necessary selections and should always write to Secretary, Canadian Seed Growers' Association, Ottawa, Ont. and obtain a copy of the prize list rules and special arrangements regarding the transportation of exhibits.

Now is your chance boys and girls; even if you don't happen to win a prize the experience you will gain will increase your chances next time.

The Greatest Exhibition of Eastern Canada.

In five weeks, or to be exact, on the 11th. of September the 16th. Annual Exhibition of Nova Scotia will open at Halifax.

Every effort is being put forth by the Commission to make this the best of all fairs held in the Provinces. Special attention has been given to the various departments of the Exhibition and from the large number of inquiries for extra prize lists a large number of entries are anticipated in all classes.

Arrangements have been made with the different railways and the very low rates which have been in force will be continued this year.

The amusement programme can unquestionably be said to be the best that has ever been presented to the patrons of the fair. Seven afternoons Racing Programme, bringing not only our Maritime horses but as well, entries from the United States and upper Provinces. Between the heats of the Horse Racing on three days will be the foot races for the Maritime Colleges, as well as those open to all amateurs in the Province.

Seven of the best Vaudeville acts have been secured headed by "Cedora" in the Golden Globe and the famous "Flying Jordans."

Two aviation flights daily, not a flying machine, but one af the CURTISS Biplanes, concluding the evening's programme with a gorgeous dispaly of Fireworks.

Entries in all classes close on August 24th.

Use only the Best.

Don't breed from any birds that do not come up to the standard quality. The breeders should be best obtainable, and should be strong, vigorous and full of life and stamina. Birds that are deficient should never be used, and all cripples, undersized, puny birds should be discarded. If like begets like, you want the best. Make this your rule and live up to it.

MAXWELL'S

HIGH SPEED CHAMPION

Easiest running and most satisfactory washing machine made in Canada. Can be worked with side crank as well as top lever. Red Cypress Tub and the whole top opens up. Wash day is the easiest day of the week when you wash with the Maxwell "High Speed" Champion.

JEWEL FOOD CUTTER

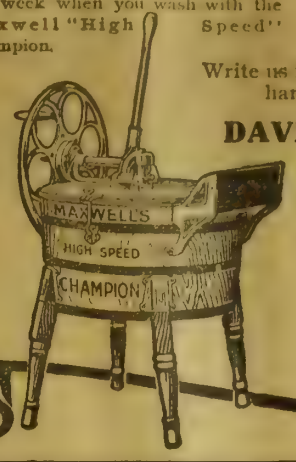
is just what you need for your kitchen. So much easier, quicker and more convenient than cutting up meat, etc., with a knife.

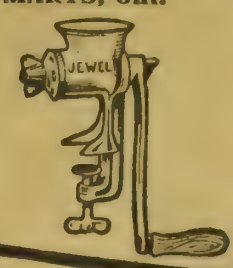
"Jewel" is superior in every way to imported food choppers, and being made in Canada, costs less.

FAVORITE CHURN

makes the most delicious butter you ever tasted. It's real "quality" butter—that is a pleasure to eat.

Both hand and foot levers and roller bearings, enable a child to churn with the "Favourite". All sizes from ½ to 30 gallons





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DAVID MAXWELL & SONS
ST. MARYS, Ont.

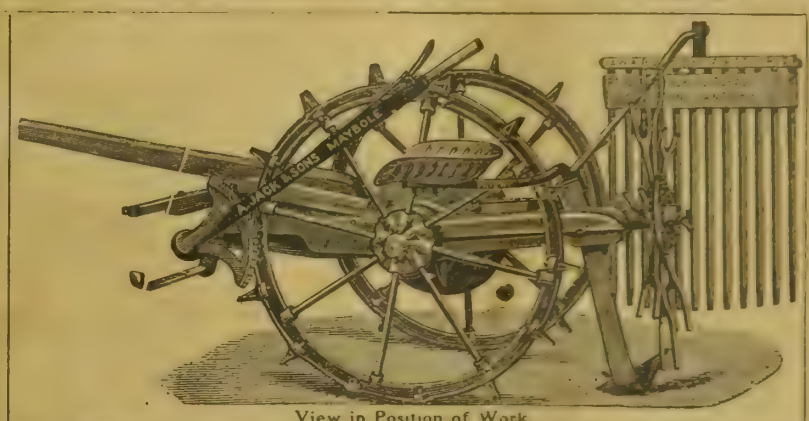
The World's Best Potato Digger

Jack's Royal First Prize New Patent

CALEDONIAN POTATO DIGGER

Fitted With Ball and Roller Bearings

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christana (leading Foreign and English Machines competing). WRITE FOR CATALOG and PRICE.



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APPLE BOXES!

SHIP YOUR FRUIT IN ATTRACTIVE PACKAGES

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550 FEET
(100 lbs.)
MANILLA AND SISAL
BINDER TWINE

FREIGHT PAID IN ONTARIO **7.80**

Price, delivered freight paid in Quebec and Maritime Provinces, add 40c extra.

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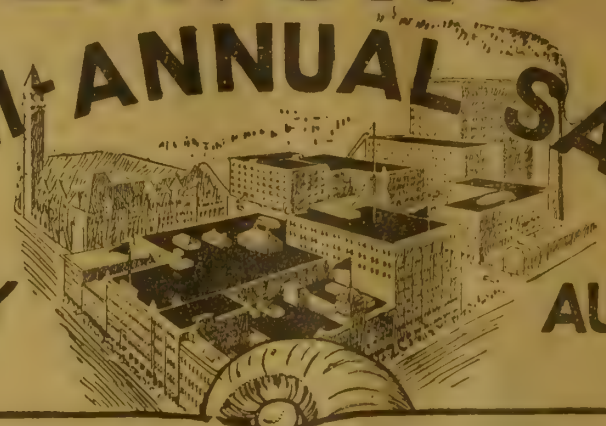

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650 FEET
(100 lbs.)
PURE MANILLA
BINDER TWINE

FREIGHT PAID IN ONTARIO **9.80**

Price, delivered freight paid in Quebec and Maritime Provinces add 40c extra.

T. EATON Co— TORONTO, CANADA, SEMI-ANNUAL SALE CATALOGUE (No. 103), JULY 2nd TO AUGUST 31st, 1912
SAVE AS YOU SPEND—HERE ARE YOUR CHANCES
ONE DOLLAR
A WONDROUS VARIETY OF ALL ONE PRICE BARGAINS
Summer Sale Snap
1.29
A STRONG SERVICEABLE LEATHER HAND BAG
SNAP ONE WHILE YOU HAVE THE CHANCE
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An Exceptional Value
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HAIR CLIPPERS
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26 PIECES FINE NICKEL TABLEWARE
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A CHILD'S FAVORITE
SILKENE SUMMER BAG
1.25
79c
42c
7.15
1.00
39c
39c
39c

Preparing for Winter Eggs.

(Continued from page 741)

steamed and led while still warm and damp, in which case only what the hens will consume quickly should be fed at a time. The dry method of feeding is very satisfactory and saves a good deal of work on the part of the attendant.

Alfalfa may be bought prepared for use, or the thrifty farmer who has the right kind of soil may raise it and prepare it himself at a great saving. Alfalfa will grow readily on dry sandy ground, where the damp soil begins not less than 15 inches below the surface, but it will not thrive in damp, marshy soil. It requires perfect drainage to make a good alfalfa field, and intervale land is entirely unsuitable for it. Clover prepared in the same manner is also very good, and is the best substitute for, although not quite equal to, alfalfa.

The best vegetable food that can be grown is the mangel-wurzel beet, which may be fed whole or chopped, and raw, as may carrots, red beets, raw potatoes and parsnips. Turnips should be cooked, and carrots if fed liberally will affect the color of the egg, as well as the flavor. Cabbages are good, but should not be fed too liberally, and for that matter this is true of all vegetables. Too much alfalfa or clover cannot be given, for the effect is beneficial in whatever quantity consumed, and the hens will not eat more than they want. Liberal quantities of these vegetable foods and grasses should be stored up for the winter, during the summer and fall, and the lawn clippings, if carefully dried and stored away in bags for winter use, will be found of much value.

The thrifty poultryman will also, in autumn, gather as large a store of dried leaves as circumstances will permit, to add to the litter from time to time, in cold weather. No matter how cold the weather, hens will not exercise for the warmth afforded, and the only way to keep them busy, as they must be if eggs are to be numerous, is to scatter the feed in deep litter. This is where the leaves will come in handy. Of course, straw and hay are equally valuable, but the leaves cost nothing but the labor, and the litter is much better if it is made up of a variety of suitable by-products of vegetation.

The condition of the poultry houses is an important factor, both in summer and winter, though it is impossible to take as good care of it in the winter as in the warm weather, for obvious reasons. Whitewashing cannot well be done in winter, but at least one coat should be applied when it may readily be. One coat in the spring and another in the fall is still better. If the floor is of earth, as it may well be where there is a good under drainage so that there can be no moisture, the litter should be entirely removed and the earth deeply spaded at once in warm weather, while the birds are absent on the range. If lice are prevalent or there is a suspicion of red mites, the whole premises should be thoroughly and effectively renovated and disinfected. This may seem like quite a task, but all these things are essential to winter egg production, and the only way to obtain the highest prices and the greatest profits is to attend to all these details, and attend to them thoroughly. Those who go to this trouble, if trouble it is considered, will be well repaid for their work. There can be no success without labor, and this is particularly true with regard to poultry, but as is usually the case the reward amply repays the effort.

The time has arrived when it will be well to look over the growing chicks, separating the cockerals from the pullets, and paying special attention to the birds which will soon be put in the laying pens, that they may in no way be hampered in their growth. The early hatched pullets should lay well all winter, and they will unless adverse conditions retard their development. They will lay earlier when raised by themselves than when subjected to the annoyances of the young cockerals. The birds should be divided into separate flocks as soon as it is possible to determine the sex.—H. L. Goodwin in Maine Farmer.

An Interesting Plow Catalog.

We have just received a copy of the Cockshutt Plow Co's. Farm Implement Catalogue. It contains a full list of illustrations and descriptions of the various styles of plows they manufacture.

The Cockshutt line is handled in the Maritime Provinces by the Frost & Wood Company. See your nearest Frost & Wood agent to show you a copy of the catalogue. It will give you an insight into the various kinds of plows, etc., that the various soils and soil condition require.

Shoe for Trotting Horse.

To induce a horse to trot or to change the gait from pacing to trotting the services of an expert driver are required. It is largely a matter of training, though much depends on the breeding of the animal and the conformation of the leg. Shoeing with a four calked shoe is helpful in some cases in forming the trotting habit. The front shoes must be heavier than the hind and may be from 10 to 15 ounces according to the size of the horse.

7% GUARANTEED 7%

THE SIEMON COMPANY LIMITED

Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year**, on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

NATIONAL SECURITIES CORPORATION LIMITED

Confederation Life Building, Toronto, Canada.

What Profit Did You Make Out Of Your Cattle Last Winter?

Feeds were very, very high. Figure it out now. If your profits were large or small, you will be only too pleased to increase them this Winter.

Mill Feeds will be as high, if not higher this Winter than last. If you are feeding your Cattle say, four quarts of Middlings to a feed, you can take away two quarts of Middlings, add a quart of MOLASSINE MEAL and get far better results. It will increase the flow of milk in your Milch Cows and fatten your Cattle more rapidly. In the same proportion, this applies to any other Animal you are feeding.

A SUGGESTION:— If you have not fed MOLASSINE MEAL, buy some now and convince yourself by trying it on one or more Animals. There is no doubt whatever but you will be convinced and you will use MOLASSINE MEAL in good quantities during the coming Winter. MOLASSINE MEAL is made in England and fed the world over.

L. C. PRIME COMPANY, LIMITED

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This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

POULTRY—All varieties. Send for Catalogue. Box 485, Moncton, N. B.

APPLES WANTED—Carload lots or less. Address "Apples," care of This Paper.

GURNSEY BULLS, all ages from one year down, for sale by WM. COX & SON, Dykeview Farm, Canard, Kings Co., N. S., Phone L. 42, R. 15.

100 POST CARDS FREE if you send 25c. for 50 colored views of the world. Satisfaction guaranteed. FARMER EMPORIUM, Beebe, Que.

FOR SALE AT A BARGAIN—A Farm of 102 acres. Full particulars given on application to C. W. PHINNEY, Bear River, Annapolis Co., Nova Scotia.

FOR SALE OR EXCHANGE—Pure Bred Registered Yorkshire Boar, Baron Lomond, for cash, or in exchange for Sow of same quality and breeding. R. G. MURRAY, St. John, N. B.

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228 acres; the most wonderful bargain in the Valley; good 8-room house; 50-ft. barn, room for 70 tons hay. cellar under all; 40 acres rich loam machine-worked fields; young orchard 200 trees; wood and timber will make a man independent; pasture for 25 head, spring-watered and wire-fenced, near neighbors and advantages; low price for immediate sale is only $1900, part cash; for all details and traveling instructions to see this and another with 15 acres in orchard, see page 62, our New Mammoth Farm Catalogue No. 35, just out, copy free; profusely illustrated and filled with a wonderful assortment of money-making farms throughout many rich farming sections; stock and machinery included with many at big sacrifices to settle affairs quickly. THE MARITIME FARMER, St. John, N. B.

July Fruit Crop Report.

(Continued from page 734.)

even apart from that the 'drop' has been considerable, and the crop will be only moderate. The Kieffer and Bartlett are showing best. In British Columbia pears will be somewhat lighter than was expected last month but yet a good crop.

PLUMS.

The depreciation in plums has been somewhat marked. The prospects this month are for a crop somewhat below the medium, especially in the heavy marketing varieties. On the whole the crop in British Columbia is good, although much better in the Interior than on the Coast.

CHERRIES.

Cherries have not yielded as well as was expected. A fair crop of early cherries is being marketed. Many varieties of the sweet cherries are decidedly short. The Black Tartarian and Windsor show about half a full crop. Sour cherries are a heavy crop in British Columbia; sweets only medium.

SMALL FRUITS.

The dry weather of the last two weeks materially shortened the strawberry crop and emphasized the unfavorable conditions generally. Raspberries are likely to be a short crop, partly on account of the unfavorable conditions last year and partly owing to the dry weather of the present month. Currants, red and black, do not appear to suffer to the same extent on account of the weather. Blackberries will be decidedly short; the percentage for District 1 stand at 49. In British Columbia, small fruits have been a very heavy crop, but unfortunately the berries were soft and prices were extremely low in consequence of overloading the nearby market.

TOMATOES.

Tomatoes started late but are growing well. The depredations of the cut worms appear to be serious in many districts, and it is quite probable that the crop will not be quite up to the average.

INSECTS.

Correspondents continue to report the ravages of the Tent Caterpillar. While the most serious infestation is in eastern Ontario, southern Quebec, and New Brunswick, yet there are sporadic infestations in all parts of Ontario. The infestation is over so large an area that it becomes a matter of serious import as to whether it will be repeated next year. The moths are now flying freely and the egg clusters are being deposited.

Correspondents have mentioned no special infestation of other insects that manifested themselves during the past month. Codling Moth is not feared as much by growers as formerly, and many orchards that have been sprayed systematically for a few years are now practically free from this pest. A few growers in the Niagara district report that the Rose Bug will reduce their crop one half at least. The injuries caused by the Rose Bug are confined almost exclusively to the lighter land.

We have received many specimens of apples with a small portion eaten out of one side. This is in all probability the work of the Green Fruit Worm, and it appears to be particularly prevalent in District 6. The injury itself is slight, but as the apple grows the wound makes a depression, and so the apple that would be a No. 1 becomes a No. 2 or No. 3.

FUNGOUS DISEASES.

Apple scab is beginning to show itself quite freely in District 6, and unless orchardists continue spraying their fruit apples may show considerable scab. The weather is not at all favorable to the development of scab in Ontario. It is mentioned in District 9, but it is not more prevalent than usual.

There's a merchant in your town who sells Sherwin-Williams Paints and Varnishes—the line that includes a high-quality paint or varnish for every use on the farm or around the home. Go to him for paint advice.

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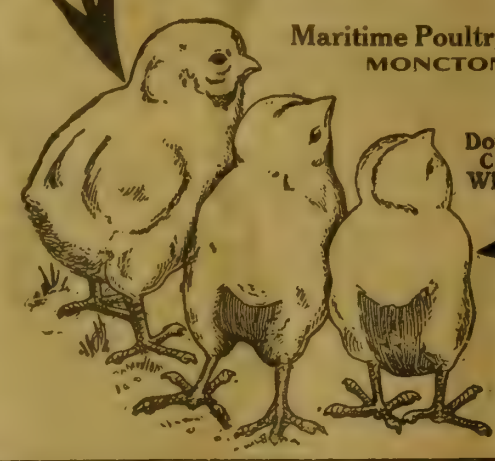

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We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

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One, two and a half, and the other three years old. Both are extra fine specimens of their breed, large and quiet. Extra good mothers, and breeders of fine pigs. Both sows are bred, one to farrow about 1st. Sept. and the other Oct. 1st. Also a five year old boar bred in Ontario. These pigs are all registered. Prices on application.

W. S. POOLE, Box 414, St. Stephen, N. B.

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John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

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Jas. R. Taylor, Upper Dorchester, N. B.
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The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

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At the Winter Fair in Amherst won 2nd Buff Cock, 1st pair Utility Pullets in the hottest kind of competition. In Whites, 1st Cock, 3rd hen. In Blacks, I made a clean sweep, winning also at Halifax, New Glasgow and Pictou. Stock and eggs for sale.

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$180.00 from 1-4 acre in 1911 is record of a grower here. Fall planting is perfectly satisfactory.

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One pure bred Aberdeen Angus heifer guaranteed in calf. Also an Angus Bull, 1 year old in August. They are of different breeding from prize winning stock at Ontario Shows. Also dual purpose Shorthorns.

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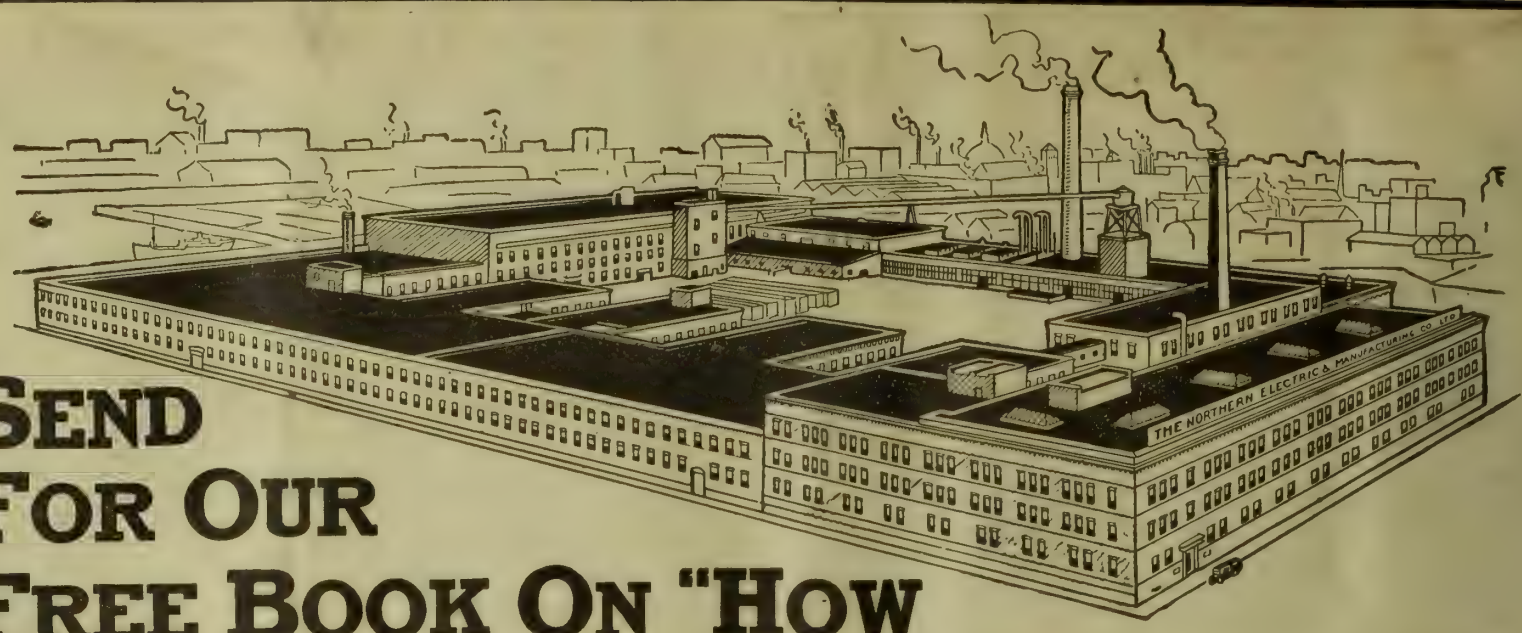

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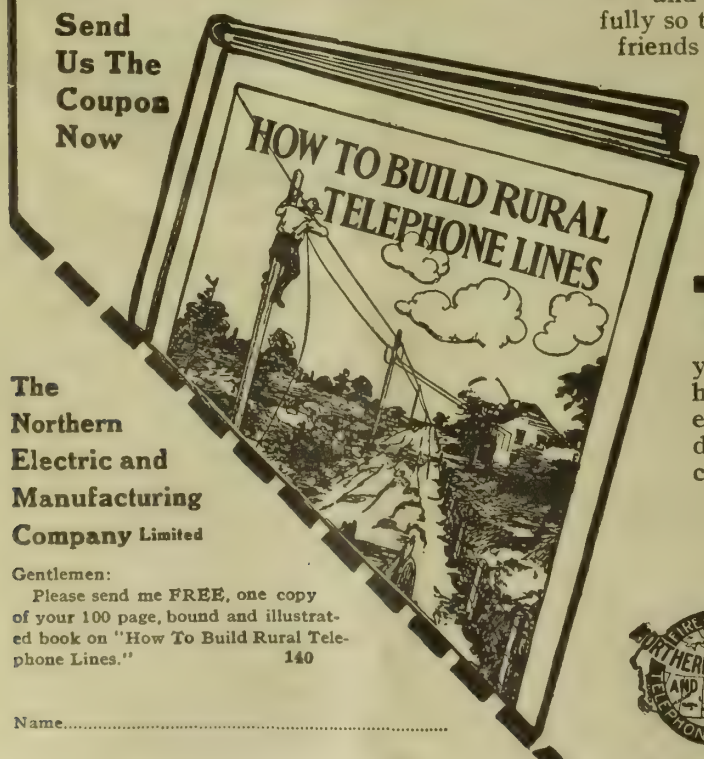

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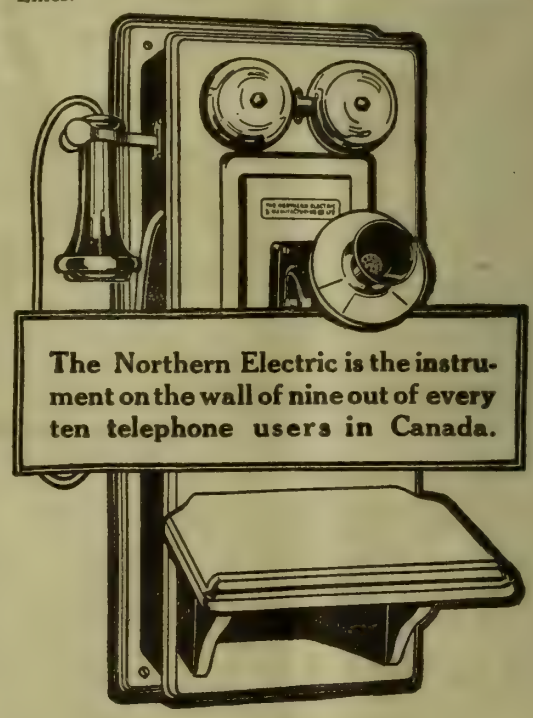

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Vol. 17. SUSSEX, N. B., AUGUST 27, 1912 No. 22

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WE show two excellent Frost & Wood Plows, for swift, deep work. This famous line has been made in Canada for 80 years. Quality and design are in keeping with the prestige and experience behind the name "Frost & Wood.

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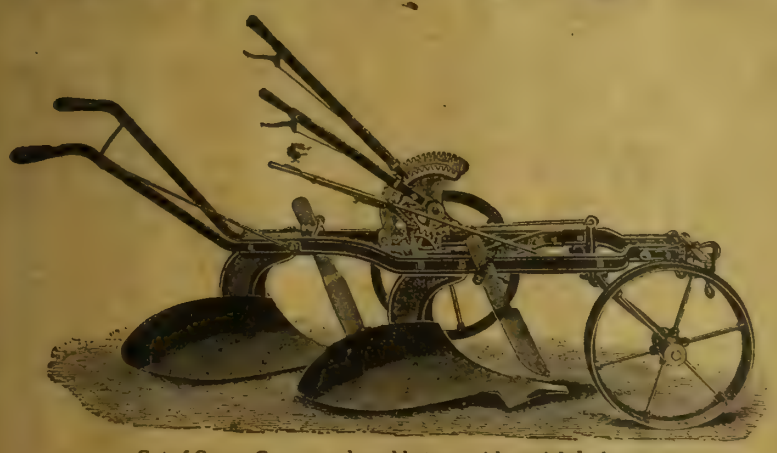

Cut of Crown Gang ong board bottom with straight colters.

This shows the famous "Crown" Gang, fitted with sod bottoms and straight colters. Note the strength of standards, which are bolted to a strong frame of braced channel steel. The "Crown" and two horses only, can often double the work possible with a hand plow in a day on light soil—three horses will handle the "Crown" in the heaviest land. With a "Crown" Gang you can do your plowing in half the time.

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Remember, stubble bottoms or rolling colters can be fitted to your "Crown" Gang, making it perfect for all kinds of work. Write us for full particulars.

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Here is a neat, well finished plow for either sod or stubble work. It is one of the Frost & Wood favorites. Note the strong I-beam with low arch, and the medium-length handles, long enough for heavy sod work to save arm strain, and short enough to make a sensitive, easily-guided implement for fast stubble plowing. Write us for name of nearest agent and other details.

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The Boys' Farm and Training School is located at Shawbridge, Quebec, near Montreal, and Mr. Mathews, the Superintendent, tells us that it now has some 60 city boys that it is training in Farm and Garden work. It is certainly doing splendid work in getting the boys back to the land. The first cut shows the new barn they built in 1911 and equipped with 30 BT Steel Stalls. The second cut shows the ruined barn after the fire. The third cut shows the BT Stalls. They went through the fire practically uninjured.

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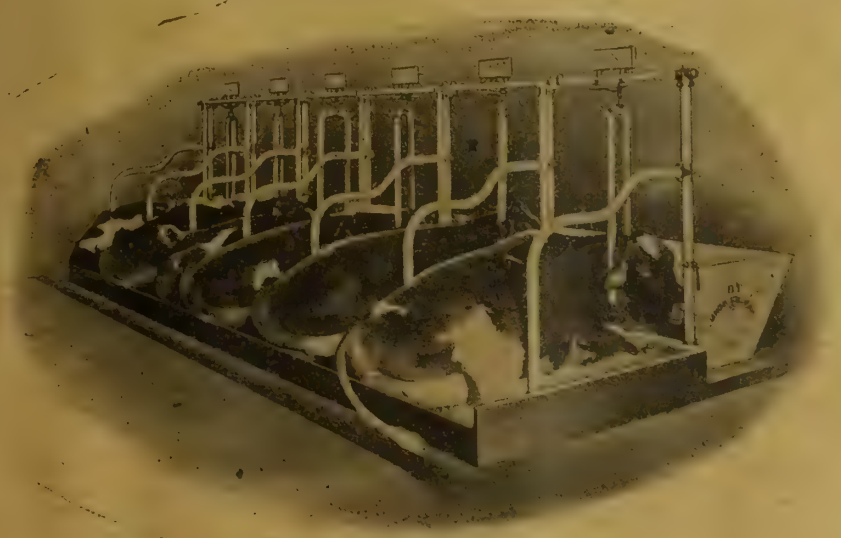

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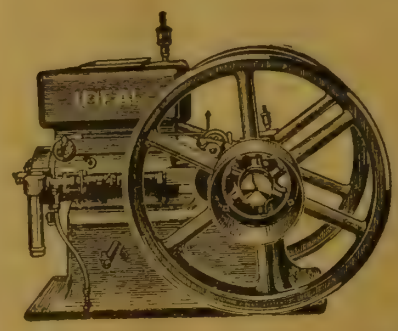

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FLORICULTURE.

In answer to A. A. M., I would say that the rubber plant leaf enclosed has evidently been attacked by insects, either by red spider or trips, although none remain on the leaf, and the portion attacked by them afterwards filled with a fungous growth. Wash the foliage once or twice a week with very weak soapy water using a soft sponge or cloth and then rinse them with clear water. Keep the air of the room in which the plants are situated moist and spiders will not trouble them.

Fancy leaved or Rex Begonias like a night temperature of sixty degrees with fifteen degrees or more higher during the day. They also like a north window with strong light but no sun, moderately moist soil and good drainage. Repot when well root bound and avoid water standing on top of foliage. A light, rich soil is the most suitable, if soil to be used is heavy mix sand enough with it to make it light as the fine, soft roots cannot penetrate a hard, compact soil.

Growers who wish to raise their own annuals from seed and those who wish early blooming plants should always sow about the first of March for plants that will be set out in June. They should be transplanted early from the seed flats into boxes and they will be strong enough to withstand the change of transplanting if given all the sun and air possible. Transplant them from seed flats as soon as second so-called leaves show.

Be sure to press the seeds firmly down after planting and covering and never let them dry out, especially while germinating. Soil for seeds should be light but need not be rich. The soil into which the seedlings are transplanted should be light and rich. If you cannot get light soil and have to use a heavy soil, cover your seeds with dry fine sand instead of heavy soil.

It is a grand idea to pack away some sand and soil in your cellar this fall for spring use.

Very few seeds such as Lobelia petunia can be pressed into the soil lightly and left without any covering material until seedlings are coming up. They do not need light and sixty degrees is about the right temperature for the hardier seeds while germinating. As soon as the seedlings commence to show through the soil give all the light and air you can. Plants thus cold-grown are much stronger and resist disease better than plants raised in heat, unless the warm-grown plants have had a careful hardening off before planting. Some of the hardier seeds may be planted in the ground this fall if correspondent has not room for all these boxes in the spring.

H. A. of Chatham and R. O., of Rothsay send the following inquiry in regard to the rose.

Is it hard to propagate the rose? Can one who is new at garden work do it?

Ans. The propagation of the rose when grown in the home or under glass is very easily done, good judgment only being required in selecting wood that is in a prolific condition. To those who have had no experience I would say that, as a rule, a cutting taken two or three buds below an open rose bloom is a good condition to strike. Cut with a sharp knife in an oblique direction, strip off all leaves except the set attached to the top bud and then insert the cutting in the sand filled cutting box described in these notes. Wood that has made good growth, without producing bloom at the extremity also makes a good cutting and in summer is often the best wood to use as it is not so sappy as the blooming growth. If kept in a temperature of about sixty degrees these cuttings will root in from twenty-five to thirty days.

For roses grown in the open air different methods of propagation must be used as it has been found that cuttings from open ground plants will seldom root when placed in sand or soil to propagate, no matter how well the wood is matured, the cuttings being almost certain to drop their leaves and blacken. Many theories have been advanced as to why they will not propagate, but why is not really known.

If cuttings are taken from open-ground roses, either hardy or tender varieties, after the wood is matured in late autumn and placed in moist sand or soil kept at a temperature of not over forty degrees and not allowed to freeze heavily, a large percentage of them will root in from three to four months so as to be safe to use. By this method of treatment the calloused or rooted cuttings must' if potted or boxed, be kept at a temperature not exceeding forty-five or fifty degrees of heat until they root, it gives a higher temperature they will die. The best method for his stock of out-of-door roses is by the amateur to follow in increasing layering. This process consists of taking a shoot of the rose preferably a well matured one of the year, bend it carefully to the ground and at the point where it will most easily come in contact with the soil, make a cut derside or side of the branch half way through, then draw the knife up the middle of the shoot for an inch. Put a thin bit of wood in the split so the wood will remain separated and then scoop out a shallow place in the soil immediately under the cut place and bury the cut portion of the shoot in the soil and press firm so it cannot move. Then cut a fair sized turf and place it over the layered portion to assist in keeping it uniformly moist. Water it in very dry weather. In from three to five weeks the cut portion will have calloused and will throw out roots so that in autumn, by cutting the shoot from the parent plant the new plant may be removed. By placing a pot filled with soil in the ground under the rose plant and layering in the pot instead of in the ground the plant will be already potted and no check will be received when it is removed. Layering is also the best method for amateurs to follow in propagating all classes of hardy plants and shrubs. Currants and gooseberries may be rooted in the same way.

Many of the hardy and half hardy plants and shrubs will, however, strike from growth but as a rule all the hard-wooded varieties, will fall from cuttings if dormant wood is given the time and cold treatment described.

In propagating tuberous rooted plants such as Dahlias, Begonias, Anemonies, etc. from cuttings the treatment is the same as given in propagating soft-wood plants but care must be taken on making cuttings from those to take off the cutting close below a point or eye. The reason for this is that all plants of this class loose their tops annually and remain dormant as the tubers have no eyes from which to start a new growth but start only from a crown. It is necessary to leave the callous of the cutting form immediately below an eye which will make a crown for the tuber when it becomes dormant. Cuttings taken with the base between the eyes, in this class of plants will grow bloom as well and make a good plant the year they are struck but when they become dormant they can never grow again, as in that case, they lack the necessary crown.

Clemitis also should be cut just below an eye for the same reason. This rule applies to all deciduous tuberous rooted plants, whether hardy or tender that will propagate from green cuttings.

There are many other methods of propagation practised such as budding grafting, inarching, etc. that could not be clearly presented in this article as most of them would have to be practically illustrated in order to be plainly understood. I have briefly given the easiest and best methods for an amateur and if carefully carried out will give satisfaction.—H. E. G.

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Volume 17. SUSSEX, NEW BRUNSWICK, AUGUST 27, 1912. Number 22.

Early, Deep Ploughing and Thorough Cultivation

Control Crop Growing Conditions.

By W. M. Lea, Victoria, P. E. I.

PROBABLY the most import operation in connection with the preparatory cultivation of the soil for crops is the work of ploughing. If ploughing has been properly done, at the right time, we add greatly to our chance of securing a good catch of seed and a full crop. With the single exception of the corn crop I think all ploughing should be done for our crops the previous autumn, and at the proper time and depth according to the nature of the soil, and sod that may be on it.

An old pasture, or field that has been left under hay or pasture for some time, that may be growing considerable red top and weeds should, with our Island soil, be ploughed deep, that is, deep according to what is commonly called deep ploughing. I don't think any number of inches can be laid down as a rule to follow but in a heavy sod such as I have described it should be turned under deep enough to bring up several inches of loose bottom soil on top for a seed bed. If the field is to be seeded out to clover the ploughing should be done in September and harrowed, at intervals, until the frost comes in order to hasten decomposition of the sod. The frost will then put it in proper condition for the crop. If a second crop of grain or roots is to follow, I would not harrow in the fall as we might liberate more plant food than would be desirable for this rotation.

Most of the fall ploughing is done entirely too shallow, and not early enough, especially since the two furrowed plow came into general use. This rushes the work and it is usually worked with three horses, and being often light ones, it is a temptation for a teamster to lighten the work on a heavily loaded team.

I had this brought to my notice several years ago in a sod field we fall ploughed for oats. We took a single plough without a wheel to open up the ridges and finished the same afternoon with this plow. This plow turned a narrow furrow as we had no wheel to keep it out and the ploughing was pretty deep bringing up enough sub soil to give it a pretty highly colored cast. The balance of the field was ploughed about four inches deep with the two furrow plough. The subsequent cultivation was the same. After the grain headed out next summer we were surprised to notice the great difference in the crop on the deeper ploughing, it being several inches higher and much heavier headed.

We aim to plough everything (excepting the land intended for corn) that is to be put under a cultivated crop, in the fall as it saves time which is so important in the spring, and further we don't consider it is possible with spring ploughing to get as good a seed bed by any sort of after cultivation. The fall of 1910 being fairly open we ploughed everything we intended to crop even to our turnip land. Most of our grain follows root and corn land, and the corn land being spring ploughed sod turning under a heavy coat of grass we plough it deeply and leave it in the rough. When springs opens, up this land will be found to dry and warm up much readier than unploughed land. The spring-tooth-harrow, in my opiniun, is the best implement to get it into proper shape for grain and hay or clover seeds. This harrow does not cut as deep as the disc or cultivator but makes a very fine bed as the soil is scraped off fine. I do not like too deep a seed bed for grain. The soil we loosen up dries out and forms a mulch for the moist under soil. This mulch should not be very deep as the oats should be sowed with a disc drill, if possible, in the moist soil underneath leaving the loose mulch over them. Harrow then as late as possible with a light harrow or weeder just as they are coming through.

This was the preparation we gave our land in the season 1911 and although the weather was exceedingly dry and all grain prematurely ripened we had a very heavy crop. The fall of 1911 being also dry and land baked hard we foolishly put the ploughing off with the result that there was not sufficient time to plough either the corn or root land and both were left until this spring. Now, while I do not favor spring ploughing for grain, circumstances sometimes force us to do so, and under the system we follow to grow the corn crop, we must always plough before grain is sown or is seeded out. With turnip land it is not so necessary and, while we always plough it in the fall if possible, (on account of being able to sow it so much earlier in the following spring,) if the land were clear I would have used the cultivator alone.

In the spring of 1912, as stated above, the corn land had to be ploughed pretty deep to get under the sod, and it came up heavy and cloddy and no amount of disc harrowing or any other kind of cultivating could put it in as fine condition for grain and seeding to clover, as the two cuts of a spring tooth harrow did when the land was ploughed in the fall, and the frost, that great thorough cultivator had done its work through the winter. This season being, for the past three weeks, very moist the grain where sowed in the proper season on fairly fertle soil will yield a heavy crop of straw ; but extremes of any sort or condition of weather should always teach us something. While especially favourable seasons for growth give us paying crops on very many and different kinds of cultivation we should always plan to combat the worst conditions that may arise in all our farming operations, so the first and most important rule is to plough early, thoroughly and deep as the depth of your soil will warrant. I cannot agree with the advocates of shallow ploughing. Have everything ready to get on the land as early as it will work properly in the spring and then harrow everything red as fast as possible to loosen up a little surface to mulch the land below. This will dry and the land will warm faster and it will act the same as if one dusted a layer of dry loose clay on top of a moist surface. It will mulch it. Sow the grain pretty early. You can sow too early but you are not very liable to, and it is a safe side to be on, especially if you are sowing clover with the grain. Sow as good seed as you can secure and treat it with blue stone or formation to destroy the smut. This province is going to loose thousands of dollars this season with smut in the oats. Never in my experience have I seen it so bad. While on a ten mile drive through the country the other day I noticed many fields that have at least one third of the heads destroyed by smut, ann one field particularly that I noticed where treated seed was sowd did not contain any. We tried it this year on part of one field and the difference is amazing between the treated and the untreated seed, and while I consider this province grows entirely too great an acreage of oats for export, if we are going to grow them, we should endeavour to give the cultivation and seeding every care necessary to give us the largest possible crop. With this season of excessive rain we certainly should have land in condition to plough early and where oats are to be grown, and land seeded out or where turnips, potatoes or any other root crop is to follow, my advice is to plough early.

The Common House-fly and Its Dangers.

There are a number of different species of flies that enter houses. Some of these species are so much alike in appearance that most people cannot tell them apart, while others differ so much in size and in many other ways that only a glance is required to distinguish one from another. Two common species which are entirely distinct from one another in size, appearance, and breeding habits are the house-fly and the blow-fly.

The females of the house-fly pass the winter in attics, cellars, dark rooms, and various more or less protected places about buildings and perhaps in other locations. It is not rare to observe them buzzing about in warm rooms at almost any time, even in cold weather. The winter season for house-flies for their numbers are much reduced. Only a small percentage of the feamles survive even the first cold weather, and many of those that are left meet death in one way or another. When spring comes only a comparatively small number remain to furnish the source for several generations of flies the following summer. This fact explains why house-flies are rather scarce for a time in the spring.

It is always noticeable that as fall approaches flies become more and more numerous. This condition is easy to understand when the very short life history and their reproductive powers are understood. The females that have passed the winter are ready to lay their eggs as soon in the spring as conditions are suitable. The average number of eggs laid by a single female is stated to be about 120. In warm summer weather eggs hatch in eight hours and the larvae grow to full size in five days. Five more days are required before the adult issues from the pupa. Therefore, under the most favorable conditions of temperature, only ten days are required to carry the insect from the egg to the adult. We now have sufficient evidence to account for from twelve to fourteen generations of the house-fly during a season that is favorable to reproduction.

The house-fly has long been known as a distinct pest about the house, but not until within the last few years has it become known as a prominent enemy of mankind on account of its being associated with the carrying of various infectious diseases, chief among which, in this country, is typhoid fever. Many physicians, as well as careful students of insects, have contributed to the study of this matter and all have arrived at the same conclusion, namely that flies undoubtedly serve as carriers of the germs of typhoid.

Dr. Victor M. Vaughan was a member of the typhoid commission appointed to make an investigation of typhoid fever in the concentration camps of the United States Army in the summer of 1898; he is authority

How can one tell what filth the clean appearing house-flly last visited? Perhaps where there are typhoid germs.

The birth place of house-flies.

They may fall into milk after having typhoid germs or other bacteria on their feet.

One way of carrying bacteria of tuberculosis to foods.

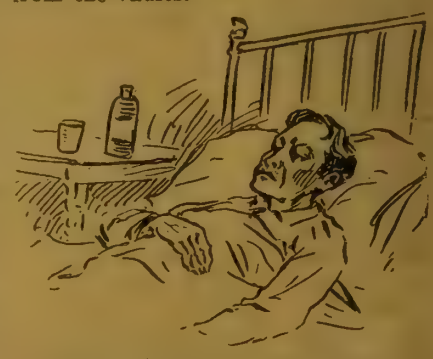
in regard to the ways by which flies aid in the transmission of typhoid: "It is possible for the fly to carry the typhoid bacillus in two ways. In the first place, human excrement containing the typhoid germ may adhere to the fly and be transported. In the second place, it is possible that the typhoid bacillus may be carried in the digestive organs of the fly and may be deposited with its excrement."

House-flies have been observed to lay their eggs on many substanees, among which are horse and cow manure, human excrement, collections of fermenting vegetable refuse, bedding of poultry pens, miscellaneous garbage and the like. The known habits of the flies show that they go from these unclean substances, laden with various germs, to kitchens where they run over the food, dropping the germs promiscuously; then back they ao to the place where the eggs are laid, gather an additional supply of germs, and return again to the kitchens. What a preventative is the door or window screen! Dr. Vaughn made the following statement: "Flies swarmed over human excrement in the pits infected with typhoid germs and then visited and fed upon the food prepared for the soldiers at the mess tents. In some instances, where lime had been recently sprinkled over the contents of the pits, flies with their feet whitened with lime were seen walking over the food."

After gathering the facts concerning the movement of flies and their ability to carry germs from the substances in which they breed to food products, where they may be taken into the digestive system of man, Dr. Howard was led to make the following statement in one of his publications: "Now when we consider the prevalence of typhoid fever and that virulent typhoid bacilli may occur in the excrement of an individual for some time before the disease is recognized in him and that the same virulent germs may be found in excrement for a long time after the apparent recovery of a patient, the wonder is not that typhoid is so prevalent but that it does not prevail to a much greater extent."

Two investigators, Esten and Mason, at the Storrs Agricultural Experiment Station, Storrs, Connecticut, have issued a bulletin entitled "Sources of Bacteria in Milk" in which a table is introduced showing a number of bacteria of all kinds that may exist on a single fly. Flies were caught under different conditions with a "germ free" net, each was placed in a "germ free" bottle and a known quantity of "germ free" water added. Then by shaking the bottle a condition similar to that of a fly that had fallen into a can of milk was produced. Individual flies to the number of 414 were treated in this way and the results counted, showing a minimum of 550, a maximum of 6,600,000 and an average of nearly one and one-fourth million bacteria. Of course not all of these bacteria were injurious, but in case flies are carrying typhoid germs it is easy to understand how these may get into milk.

From the evidence at hand, we are convinced that the fly is a very important agent in the trans fer of bacteria from one place to another and from this standpoint is a menace to public health. Circumstances call for the co-operation of the inhabitants of both country and cty in a general warfare against it. Since horse manure in the proper condition with respect to moisture is known to be the natural breeding place of the insect, certain practices directed toward keeping flies away from this material should be adopted. Several cities have adopted the plan of compelling owners of horses to build tight bins for the reception of stable refuse and requiring the sweeping of stables regularly; noticeable results have been accomplished. On farms in summer this method does not appear to be altogether impractical. It is know that flies do not select dry manure on which to place their eggs; so if the barn and yard are cleaned up systematically once or twice a week and the resultant spread in the fields much will be accomplished in preventing house-flies from multiplying and the manure will be handled in such a way as to give the most satisfactory results as a fertilizer. Approved methods of handling garbage and modera methods of sewage disposal should be adopted. Since the most likely place for flies to pick up typhoid bacilli is about human excrement this substance should not be left in exposed places, and closets should be constructed so as to exclude the flies from the vaults.



A typhoid patient who contracted the disease from eating food to which the germs had been carried by house-flies.

The August Fruit Crop Report.

APPLES.

No marked change has taken place in the prospects for the apple crop. The weather upon the whole has been favorable, except in so far as the damp weather has induced fungus. Nearly all correspondents report the growth as excellent, larger indeed than usual. There does not appear to be any exceptional complaint with reference to insects. The general average of the Dominion stands at 69 per cent for Early Apples, 65 per cent for Fall Apples and 61 per cent for Winter Apples. The average of the Dominion would be 65.

A number of correspondents report that their orchards which have received good attention for a number of years, are giving annual crops instead of the usual biennial crop. That the weather is not the sole cause of alternate years of bearing receives confirmation by one correspondent having a large orchard, practically uniform without, but one-half which bears heavily one year and the other half the next, with scarcely any year a failure.

District 1, North of Lake Erie, Ont. —Early apples are turning out a good crop, but winter varieties have fallen below the average. The orchards in Kent and Elgin are above the average of the district. Shipments are now being made for the early varieties, Yellow Transparent, Red Asracchen and a few very immature Duchess. The quality is only medium. Although the size is fair, the apples lack colour and maturity, and scab is noticeable. The season is yet a week later than usual. The first apples from Ontario landed in Winnipeg August 12, in good order but of low grade.

District 2. Counties on Lake Huron and inland to York County, Ont.— Winter varieties show no improvement, the Spy and King being partcularly scarce. Russets, Baldwins

and Ben Davis show slightly less than a medium crop. The Wagener, though not much grown, promises a fair crop.

District 3. Lake Ontario Counties and North of Georgia Bay, Ont.—Winter apples show for 36 per cent of a full crop. The Spy and King are short. Baldwins, Russets and Ben Davis will furnish the largest portion of the crop. Greenings will be about half a crop. Early and fall varieties ies will be a medium crop.

District 4. Ottawa and St. Lawrence Valley and Southwestern Quebec.—The average standing of the McIntosh Red for this month is 60 per cent of a full crop. This average, however, scarcely gives a fair estimate of the quantity of Red McIntosh that will be offered for sale. In the wetsern part of this district, where the McIntosh constitutes the main variety in the orchards, the prospects are for less than half a crop; in many cases a total failure is reported. In the Eastern Townships and other parts of Quebec, where there are comparatively few, the yield per tree will be much better.

The trees in this district show the effects of defoliation by the Tent Caterpillar, and correspondents report all apples as likely to be smaller than usual. The excellent growing weather of the last two or three weeks, if continued, may do much to improve the size of the apples. Scab will undoubtedly be much in evidence.

District 5. New Brunswick and North Eastern Quebec.—The Duchess and the New Brunswicker in the St. John Valley are only a medium crop, but the quantity of sprayed fruit is increasing.

District 6. Counties of Hants, Kings, Annapolis and Digby in Nova Scotig.—The prospects as reported by our correspondents show some improvement. The winter apples stand at 64 per cent of a full crop. Baldwins and Kings lead with Ben Davis following. Golden Russet, Spy, Fallawater, Greening and Blenheim are all much less than half a crop. Gravensteins maintain the promise of a medium crop. All orchards not exceptionally well sprayed will show some scab. A number of correspondents predict an extra large quantity of No. 3 fruit.

District 7. Nova Scotia Counties not included in district 6.—The orchards are showing for a fair crop, but the aggregate of fruit will not be sufficient to meet local demands.

District 8. Prince Edward Island.—The crop generally will be light, but early varieties show better than late varieties. There has been more spraying done on the Island this year than usual, but the amount of defective fruit will be large.

District 9. Lower Mainland and Island of British Columbia.—The crop will be only fair in quantity. Certain orchards will have very fine apples, and the colour and size will, perhaps, be better than usual. There will not, however, be enough apples to supply the local demands. Aphis is responsible for considerable injury and scab is developing.

District 10. Inland Valleys of British Columbia.—An especially fine crop is promised in this district. The apples have coloured well and, though the season was late in starting, the excellent growing weather has pushed the crop so that the early apples are now on the market, and of fair quality. The Okanagan district will export large quantities of fall and winter apples. The Boundary District will also have a total shipment of about 40,000 boxes. The Kootenay district, including Nelson, will have the grade of the apples lowered very materially through the effect of the hail storm of July 21.

PEARS.

In the inland valleys of British Columbia, pears are likely to be a good crop. The only disease much in evidence is blight. The size and colour appear to be good. The crop on Vancouver Island and on the coast is not quite so good. The varieties showing up best in British Columbia are the Clapp, Bartlett and Anjou, though the Clargeau and Flemish Beauty are well loaded.

In Eastern Canada pears are, on the whole, rather light. The large commercial orchards of District 1 have only about half a full crop. The Bartlett, Bosc and Winter Nelis make the best showing. The Kiefers appear to be rather a short crop. In District 3 the pear crop is very light, almost a failure. The pear crop in Annapolis Valley is a good average one and fairly clean. Correspondents report considerably higher percentages for this month.

PLUMS.

The percentages for the Dominion are higher this month than last.

The crop on Vancouver Island and the lower mainland in British Columbia will not be large nor the quality of the best. The rest of the Province has an excellent crop of nearly all varieties. The Italian prune shows particularly well.

In Eastern Canada the crop is below the average except in Nova Scotia, where practically a full crop is reported. It is quite possible that shipments of Nova Scotian plums may reach the markets of Montreal and Ottawa this year to supply the deficiencies in Districts 1 and 2, which usually have a lrage quantity of plums for shipping. The Japenese plums have proved too tender for many parts of Quebec and Eastern Ontario, but in these districts several native varieties of excellent quality are now grown in marketable quantities and plum growing is not unlikely to take anew lease of life where the European and Japanese varietiez have failed.

PEACHES.

The number of peach trees n British Columbia is not large and the industry has had a severe set-back in the matter of winter killing. Wherever the trees withstood the winter, they are well loaded, a full crop being reported in nearly all varieties.

The crop in western Canada is only medium or somewhat less, especially in the late varieties. District 1 is the only section having a crop that will more than meet the needs of the local market. The completion of the canners will materially affect the amount of fruit placed on the general market. The shortage of canned goods makes it probable that the canneries will use a much larger portion of the crop than usual.

SMALL FRUITS AND CHERRIES.

The small fruit of Canada, as a whole, is in a transition state. At only a few points has the industry developed into anything beyond supplying local markets, and at present the effect of this condition is very noticeable. In all the provinces many of the localities that, up to this time supplied the local markets, are now reporting a possible decline in the industry. The reasons most frequently given for the decline are the difficulty in getting pickers, the inadequate transportation facilities and, in one ot two cases, low prices. On the other hand, in such places as St. Catherines, Ontario, where they have for several years shipped to the Northwest and to other distant points, and where competing canneries have been established, and increase is reported. The extraordinary high prices that have prevailed this year do not seem to be a sufficient incentive to induce larger plantations. The industry has evidently reached a point where organization and efficient leadership would do much to develop it.

The acerage for fruiting next year has not been increased. The stand secured has been good and with average weather conditions this fall and next winter, a crop slightly better than that of 1912 will be produced in 1913.

The prices for strawberries in Eastern Canada varied from 8 to 14 cents per box to the grower. One of the best growers in Nova Scotia contracted for the whole of his crop at 9 cents per box. The price in Prince Edwars Island and New Brunswick varied almost in proportion to the transportation facilities. The Ontario prices in a few cases went as low as 8c. per box to the grower, but usually as high as 10c. and 12c. was received. Prices in British Columbia were the lowest there that growers have ever received. The acreage there is now sufficient to supply the local demand, but the quality of the fruit this season and the facilities for transportation were not such as to permit of long distance shipments. Prices went from $2 to $2.50 per crate of 24 boxes.

Black currants are always in demand, and the market for them never appears to be glutted. The same, however, cannot be said of red currants. The acreage of red currants has been rapidly increased of late years, and this year all demands were supplied at a price in many cases lower than most growers considered remunerative.

For the first time, too, in several years the crop of sour cherries appears to have reached the limits of the demand, and considering the heavy plantations that have been made for the last three years, it would seem that some new outlet must be sought for these fruits if over-production is to be avoided. sweet cherries were not in sufficient quantities to meet the demand, though the crop as a whole was fair.

British Columbia sweet cherries impressed the market most favorably and, no doubt, any obstacle in the way of the industry will be overcome as to make provision for a very large output of this favorite fruit. It is unfortunate that this year the wet weather rendered all the later cherries much too soft to ship. The canning factory at Vernon served the interests of the neighborhood well, and it is said to have taken something over 75 tons of cherries from the growers.

TOMATOES.

Tomatoes are growing rapidly and the prospects are for a large crop, though the acreage is not nearly sufficient to supply the demands. The canners are bidding very high for the crop, so that the shipping stock will not be more plentiful than usual.

CRANBERRIES AND BLUEBERRIES.

Cranberries in Quebec, New Brunswick and Nova Scotia are looking excellent, and there is every prospect, at the present time, of a full crop.

Blueberries are only a medium crop in Quebec, but are much better further east, and Nova Scotia reports 101 per cent of a full crop.

INSECTS.

The Coddling Moth does not appear to be particularly troublesome this year. Nevertheless, there is enough of it to make it still the most serious insect enemy of the apple. Aphis has always been a serious pest in British Columbia, and is quite prevalent this year. In Ontario, District 3 reports an infestation of Aphis, and Nova Scotia is also affected. So far little spraying has been done for the Aphis.

Nursery stock is responsible for a large number of insects, and the new orchards now being planted over the fruit sections of Ontario and Nova Scotia appear to have introduced the Bud Moth and Blister Mite. Until recently we had few complaints of either of these insects. Bud Moth was reported earlier in the season from practically all the principal apple districts. The Blister Mite is now reported from all the districts in Nova Scotia and Ontario, where numerous plantations are being made.

A fair degree of success appears to have attended the efforts to exterminate the San Jose Scale in Nova Scotia. The Rose Bug, although confined to a very limited area, appears to be proof against all remedies. The grape industry in Welland County, Ontario, is suffering severely from this pest.

MARKETS.

The condition of the markets, so far as Canadian apples are concerned, are fairly reassuring. The apple crop in Europe is universally short, and this shortage, though it may be in countries such as Austria Hungary, Switzerland and Italy, to which Canadian apples are not expected, has a direct influence upon the export price of Canadian apples. Germany imports an average of 3,000,000 barrels of apples from the surrounding continental countries annually. The imports from Canada and the United States so far have not been large, but there seems no reason why there should not be a splendid opening this year in Germany and probably in other countries on the continent. The prospect for improved transportation from Canada direct so Germany is good. If the proper commercial connections can be made at once, there would seem to be a possibility of making up by exports from Canada the shortage that Germany will have in her imports from Continental Europe. France may be expected to take fairly large quantities of late winter varieties. Russets and Ben Davis have been favorites for this trade in the past.

The British markets offer more than ordinary attractions this year. There is undoubtedly a general shortage of fruit. The industrial conditions, while not without disturbing elements are not such as to discourage generous buying on the part of the English wholesale merchants.

Some uncertainty surrounds the conditions of the American apple crop. It is undoubtedly only an average crop in any particular locality, but this average crop is so widely distributed that many large markets will be supplied locally with the great bulk of fruit required. The class of fruit that most concerns the Canadian grower is the supply of winter apples or the quantity that will go into cold storage that may come into consumption during the months of December, January, February, and March. This grade of fruit is not abnormally large in the United States this year and if good industrial conditions continue to exist, the greater part of this will be absorbed by the home market at fair prices. Nevertheless, should there be a special demand from European markets, a large portion of this fruit would be immediately available to meet it.

The prospects, therefore, would seem to be for a fair to medium demand in Great Britain for fall and early winter fruit, and perhaps a somewhat better market for winter fruit. Should Canadian apples, suitable for late winter shipments, pass into strang hands prices may rule fairly high in Great Britain.

One of the disturbing elements in the Canadian apple market is the large crop of the American Pacific States. These apples compete at a disadvantage in the English market, but are practically on even terms in the Northwest markets. It is quite possible, therefore, that the Northwest will receive this year a very large quantity of imported apples. It is possible, too, that the British Columbia shippers, having their first large crop for export, may not be so well organized as to meet with advantage the competition of the American growers.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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R. D. Robinson Publishers, Limited,
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AUGUST 27, 1912

DATES OF ISSUE.

September 10-24
October 8-29

LEADERS IN PRIVATE LIFE.

As great as are the opportunities for honest, capable young men in public life, these opportunities are not better than honety, capability and efficiency in private life. The public man is largely a servant for others; his home life is not free and independent like that of the private citizen. The sacrifice of holding public office is greater than most men can afford to make. All honor is due the honest, conscientious, efficient officer; he deserves a greater reward than is available in the emoluments of public office.

But a more fortunate man is the capable, efficient leader in private life. He reaps as he has sown, and sows as he expects to reap. His fellow citizens are made better by his every-day life as he goes in and out before them. The sun never set on his influences, for it lives from day to day and from year to year, gaining momentum as the years pass.

Our heroes are not only men who have held public office, nor those who have defended the country's honor in battle; there are thousands in private life who are leading others to higher and nobler lives, pointing the way to loftier ideals. Every young man may be one of these leaders; it should be his greatest aim in life so to be.

Whealth and fame are legitimate and desirable, if honorably acquired; but no one can afford to sacrifice the higher and holier things of life to acquire them. The greatest asset to a young man in either public or private life is moral character, which qualifies him as a useful citizen and a leader among men for high ideals and lofty achievements.

FAIRS AS EDUCATORS.

Every year the provincial fairs in the various provinces of Canada are emphasizing more persistently and more effectively the educational features for which they were originally founded the line of demarcation between the purely entertaining and the genuinely educational features of the fair is becoming more sharply drawn and more clearly defined. Not only are the instructive exhibits placed where visitors may see them, but attention is drawn to them and the lessons they teach us are more clearly shown than ever before. Demonstration and lecture halls at the fairs are always inadequate to accommodate the crowds who are anxious to see and hear. Machinery in active operation is always surrounded by interested spectators, and the sales of specialized machinery on the fair grounds are astonishingly large. The old-time fair meant to the average mind horse racing and side shows, with a few exhibits of grain, vegetables and live stock, to be viewed in a perfunctory manner should time permit. The big provincial fair of to-day very properly provides amusements and entertainment of the highest possible character for its patrons, but it has also taken its legitimate place as the central clearing house for agricultural information. The boys' schools maintained by several of the largest fairs, show that these institutions are thoroughly awake to their opportunities as educational factors and have grasped that essential principle in all education that impressions upon the minds of boys and girls are more permanent and more lasting in their effects than those gained in after life. These state fair schools are rich in promise for the agriculcural and rural life of the next generation.

THE NEW BRUNSWICK FARM SETTLEMENT BOARD.

The New Brunswick Government has taken another step by the appointment of a Farm Settlement Board whereby New Brunswick initites a new policy for the reoccupancy of vacant farm lands by a prosperous husbandry.

The Government recognized that some material assistance must be rendered by the powers-that be-to keep the sons and daughters of our farmers in the homeland. The ready-made farm, with easy terms for its purchase, will be an allurement that will undoubtedly appeal to those who are looking to better their condition. Instead of the wander lust taking them to the West and across the Border, they will be enabled to secure a start in life close at their doors under conditions which will compare favorably with any to be found on the Continent.

The members of the board are Thos. W. Butler, Milltown, Charlotte County; Wilmot Hay, Woodstock and Jas. Gilchrist, Provincial Superintendent of Immigration.

The first meeting of the board was held in the government rooms, Church street, St. John, on August 25th. Most of the time was occupied with discussing the methods of carrying on the work for which the board was appointed. In addition to the members of the board there were present Premier Flemming, A. B. Wilmot, Dominion Immigration Agent for New Brunswick and Percy Thompson, of the Norton Griffiths Company. Thos. Butler was elected chairman of the board; Mr. Gilchrist is secretary by virtue of the act creating the board.

The board decided to pay a visit to a number of sections of the province where land is available for farm settlement purposes, and to meet again in St. John on September 3rd.

Mr. Thompson on behalf of Norton Griffiths spoke of the intentions of his company in regard to bringing out settlers from England, and made a proposition in regard to taking up some of the ready-made farms which will be established in the near future. He stated that next spring it was hoped to send quite a number of Englishmen to this country.

Mr. Wilmot, the Dominion Immigration Agent, will visit the various parts of the province with Mr. Thompson for the purpose of securing information in regard to lands which may be made available for settlers which will be brought out by the Norton Griffiths Company.

SYSTEMATIC SEED IMPROVEMENT

In the production of the ordinary farm crops of Canada, approximately 40,000,000 bushels of seed are required annually. In view of the enormous extent to which yield is dependent upon the quality and vitality of the seed sown, it is of the greatest importance both to the individual farmer and to the nation that as much of this seed as possible be of a high order.

The wide spread efforts which are being put forth in Canada by the Canadian Seed Growers' Association to encourage a larger production and more general use of pure and vital seed of productive sorts, is the subject of a recent address by Mr. L. H. Newman, Secretary of the above Association, delivered before the Standing Committee on Agriculture and Colonization of the House of Commons.

In this address the speaker traced the origin and development of the Association and dealt briefly with the real nature and extent of the results which are being realized. An instructing exposition is also given of the modern conception of the principles of plant improvement and of the efforts which are being made to take advantage of these principles in the amelioration of our plant races. Finally there is presented the system of Seed Registration and the recently instituted plan of inspecting and selling all sacks of seed before they leave the premises of those growers who grow seed for the trade. This address which is printed in pamphlet is being distributed free by the Publications Branch of the Department of Agriculture at Ottawa.

BE ON THE LOOKOUT FOR NEXT YEAR'S SEED.

Owing to prolonged season of damp weather during the first part of August the grain crops are a little late in ripening. With the splendid growing weather we are now having the various crops are now turning very fast and the harvesting season is here. Now is the opportune time for the careful farmer to go over his fields and pick out a patch of grain which will serve him for seed next year.

A farmer generally has an idea on what portion of his holding his grain grows best, and the section with the most vigorous plants should be selected. This section should be carefully watched and all weeds and other varieties of grain picked out by hand. No machinery can clean seed so well as the two hands, and with a little care and perseverance a farmer may have a plot of grain set aside for seed almost absolutely pure. Then when threshing time comes see that the grain is threshed by itself and put away in a bin by itself, and the big portion of the worry about next year's seed is over.

EDITORIAL NOTES.

Bad luck in farming is usually preceded by bad management. Luck, whether of the bad or the good variety, is a result of our own management.

Young people should feel responsibility if society in the neighborhood is not as elevating as it should be. It is remarkable how changes in moral and social conditions may be wrought by intelligent leaders. If the ideals of the community are too slow, help direct the thoughts and sentiments of the more intelligent to higher and better things. The others will then adjust themselves to the better part.

We should have a tender feeling for the farm that produces our food and makes it possible for us to enjoy life. To rob the farm of its fertility and return nothing is a barbarous custom that should have no place in present day methods of farm management.

Provincial Fair Benefits.

What is going to be the greatest good that you will derive from your visit to the fairs during the next few weeks? This is a subject that you can decide for yourself. It is taken for granted that you will attend and the question is, what department will be most interesting and attractive?

Some will go for amusement and recreation. But even these will be benefited for they cannot fail to appreciate more the vast importance of the Canadian farm after having seen the exhibits that will be displayed at every fair ground in the country this fall. Some will go as exhibitors. To such a fair is scarcely a continuous round of pleasures because the exhibitor has a rather strenuous time of it. But he is in a position to acquire more valuable information than perhaps any other man on the ground.

His stock is being put up in competition with that shown by others and whether he is successful in winning the most coveted prizes or whether he is defeated, he will not have derived the greatest benefit if he goes away without a better knowlege of handling, fitting and showing stock. It is information of this kind that does much to improve the standard of stock on the Canadian farm.

Some will come to learn what they can about some specific line of farm work. It may be that they are interested in buying better breeding stock and it may be that they are seeking information along an entirely different line, but whatever their mission, if they are in a receptive mood while they attend the fair they will return home benefited by their visit.

Sheep in the Maritime Provinces.

There is room for a big boom in sheep raising in the Maritime Provinces and a large part of the country is ready for it. Sheep raising has always been profitable—even when low prices prevailed. With the present exceptionally low prices for lamb and mutton, even if the quotations on wool are lower, the business is more profitable than ever. Of course there are drawbacks—there are to everything in this world.

There is the fencing and there is the dog nuisance. But fencing is not nearly so costly as the extra value of the buildings required for cattle and horses, in comparison with those required for sheep, etc., and the dog nuisance, while very real, is not as great a menace as it is sometimes made to appear, for the facts are that, despite this drawback, there are hundreds of farmers in the Maritime Provinces who are deriving a tidy income from their sheep.

One hears so much talk about the dog nuisance that if not informed, he would think there was no legislation dealing with this question in the Maritime Provinces and yet, in Nova Scotia and we believe in the other provinces, any sheep owner is permitted by law to shoot a dog that is even frightening his sheep. Prince Edward Island has gone a step further and has put a tax on dogs. Nova Scotia and New Brunswick might well follow the example of their smaller sister province and it only requires a few leading spirits, alive to the value of the sheep business, to bring about Legislation that will bring that about.

Nothing is making people of the East think about sheep so much as the present labor conditions, for sheep, of all classes of farm stock make the least demand upon that costly and difficult to obtain— commodity labor. There is danger, however, in this view of economy of labor in sheep raising and the whole question, with which subsequent paragraphs of this article deal, depends upon this. The danger lies in forgetting that, while sheep only require a small quantity of labor they demand a high quality of labor. It is the little attentions to change of pasture, giving salt, keeping the feed troughs clean, providing exercise in winter time, attention to lambing, the weeding out of diseased sheep and those that have lost their teeth, etc., that make the difference between a $28 to $40 profit on sheep and a corresponding loss. In the following paragraphs, we present a few instances of profitable sheep raising in Nova Scotia. We must frankly admit, however, that we could give a number, lesser it is true, but none the less a real number, of those, who, because of failure to pay these little attentions to sheep, have had a balance on the wrong side of the ledger. But for profits.

A few years ago, we secured from a prominent breeder of Nova Scotia an average statement of the returns of a flock of fifty ewes and one pure bred ram. At that time he valued his ewes at $5.00 each and he sold his lambs at $3.00 each. To bring the figures up to date, we are valuing the ewes at $7.00 each and the lambs at $4.00 The following is a statement:

Value of fifty ewes at $7.00 and one pure bred ram at $25.00—$375.00.

Income—	
70 lambs at $4.00	$280.00
300 lbs. washed wool at 27c	81.00
	$361.00
Expenses—	
500 bus. turnips at 6c	$30.00
50 bus. oats at 50c.	25.00
1 ton wheat bran at $24.00	24.00
12 tons clover hay at $7.00	84.00
	$163.00
Net Profit	$198.00

In this statement no allowance is made for labor or pasture, the owner considering that the value of sheep as weed destroyers, together with the manure produced, would offset that item. Granting, however, a liberal allowance of $50 for summer pasture there is still left a profit of $148.00, or a little over 36 per cent. on his investment. To make this statement complete, a further allowance should be made for interest on the value, as well as for the depreciation of buildings used. But as a very cheap class of buildings suffice for sheep, it must be evident to the casual observer that this man could easily figure on a 25 per cent. or higher profit on his sheep every year.

We submitted these figures to a number of sheep men in the province and asked them to make these a basis for comment. In reply, a prominent sheep raiser in Antigonish County wrote as follows: "Most sheep farmers in this county can cut one third off the figures of the expense bill in wintering their flocks. I do not say that but the extra feeding would pay, and is probably practiced by men who raise sheep for stock purposes, and sell accordingly, but the common farmers of this country will substantiate my statement. As an instance of the profit of sheep rearing of this country, I submit the following statement: Early in the spring, I bought at auction, 9 ewes, ranging in age from one to four years.

Income—	
June. 50 lbs. washed wool at 30	$15.00
Oct. 13 lambs at 5c per lb. live weight	52.00
	$67.00
Expenses—	
May. 9 ewes at $5.50 per head	$58.50
Feeding same at 50c per head	4.50
	$63.00
Balance	$4.00

In five months' time this small flock of ewes paid for their cost and for their feed and at the end of that time the owner had a cash balance of $4.00, plus the original flock of ewes. There are not many lines of business that will pay off the capital invested in one year and leave a little to the good besides.

Another sheep breeder in Colchester County wrote me that his cost of wintering sheep was very much below that given in the statement submitted to him. He says: "The following is my own statement of cost of wintering 16 ewes:

Expenses—	
One ton hay	$10.00
8 bushels oats	4.00
	$14.00
Income—	
20 lambs at $2.75 and $3.00	$57.50
Kept 8 best ewe lambs at least	24.00
80 lbs. wool at 29c	23.20
	$104.70

These sheep had the run of a rough, swampy pasture near the edge of a grove of woods. The swamp had not been cut during the year, and therefore, provided food for sheep throughout nearly the whole winter months. One would, however, have to value this pasture at a very high figure before he would reduce this sheep breeders' profit below 50 per cent.

We have heard of many more instances of equally large profits on sheep raising in the Maritime Provinces, but we cannot at the time of writing put our hands upon the exact statements. We would suggest, Mr. Editor, that you ask interested correspondents in the Maritime Provinces to submit other instances of profits made in sheep raising. By so doing, you would give a positive contribution to the sheep raising industry in the east, and thereby add to the interest in farm life in these Provinces.—By Prof. M. Cumming, Agricultural College, Truro.

The Use of Paint on the Farm.

There is probably no one point more neglected by the average farmer than the judicious use of paint, not only on his house and outbuildings, but also on machinery and various agricultural implements. It is perhaps the rule rather than the exception in some sections to see houses and agricultural implements on the farm sadly in need of paint. The idea seems to be prevalent that paint is used solely for ornamental purposes, and its use is regarded as a luxury rather than a necessity. While paint does, of course, serve the purpose of improving the appearance of property, it is far more useful for protection than for ornament. A small amount of money and work expended in keeping a valuable piece of machinery properly painted will add greatly to the length of its life. The same may be said of buildings. Another useful object which is accomplished by painting is the improved sanitary conditions of buildings and outhouses. Any man can do an average job of painting, and can thereby not only improve the appearance of his place, but can add greatly to the durability of all articles painted. The cost of such work is small, the necessary equipment is not expensive, and with proper care will last a long time.

Do not use any paints containing compounds of lead about stables or outbuildings where the fumes from decaying organic matter occur, since these gases are likely to darken the lead paints. Do not use with lead compounds any pigments which may liberate compounds of sulphur. For example, ultramarine blue, which contains sulphur in a form in which it may be set free, is a beautiful and very permanent blue and may be used with zinc white, but should not be used with white lead or any other lead pigments. Prussian blue, on the contrary, does not contain sulphur and may be used with lead pigments.

Remember that turpentine and benzine are very inflammable and as not to bring paints containing these special precautions should be taken substances near any light or open fire.

Many pigments are poisonous, and the workman should be particularly careful to remove all paint stains from the skin and not under any circumstances allow any of it to get into his mouth. A man should not eat in the same clothes in which he has been painting and before eating should not only change his clothes but wash all paint stains from his skin. It is not advisable to use turpentine or benzine in removing paint stains from the hands, but by oiling thoroughly with linseed oil, or, in fact, with any fatty oil, and then thoroughly washing with soap, the paint may be removed, provided it has not been allowed to dry too thoroughly on the hands.—Percy H. Walker, in U. S. Farmers' Bulletin.

The New Veterinary Director General.

Owing to the resignation of Dr. J. G. Rutherford, the important position of Veterinary Director-General was temporarily vacant. This position requires a man of particular skill and executive ability owing to the responsibilities attached to it. The man selected to fill this post is Dr. Fred Torrance, of Winnipeg. Dr. Torrance is a B. A. of McGill, and after graduating he spent one year at the Ontario Agricultural College, but his interest in live stock took him to the Montreal Veterinary College where he obtained his V. S. Later the Faculty of McGill conferred on him the degree of D. V. S.

Dr. Torrance started to practice in Brandon, Man., and for some time held the position of district veterinarian under the Provincial Government. Later on he moved to Winnipeg where he established a large practice and was appointed lecturer and later professor of veterinary science at Manitoba Agricultural College when this institution was established. Dr. Torrance is a member of the International Commission of Bovine Tuberculosis, and also the American Veterinary Medical Association, being one of the first vice-presidents of this latter institution. For ten years he has been secretary-treasurer and registrar of the Veterinary Association of Manitoba.

As well as the position of Veterinary Director-General, he will act as live stock commissioner, which latter position has been for the past few months very efficiently filled by Prof. H. S. Arkell, and later these duties will be divided by the Minister of Agriculture so as to give the respective attention they need.

Messrs. McLean and Nicholson received a communication from the Deputy Minister of Trade and Commerce at Ottawa, stating that in answer to their communication he has arranged to have apples and other freight carried on the Manchester Boats from Charlottetown at the same rates as from Montreal. Last year apples from Charlottetown paid nine cents per barrel more. They also received assurance that all shipments from Charlottetown will be handled as carefully as possible. This should stimulate further shipments to the Old Country from the Island Province.

HORTICULTURE.

A Crop of Clean Fruit by Proper Spraying.

In looking over the apple crop prospects of the Annapolis Valley, one cannot but observe the care the apple orchards have had during the present season. Hardly any orchards are to be found but have been given pruning, fertilization and cultivation.

Regarding spraying, the most essential end of all, sad neglect is in evidence, which can be attributed to the comparatively clean apple crop of 1911, even where spraying was neglected. Besides, several good orchardists this year have failed to get results by not applying the spray at the proper time, or in sufficient quantity.

The part of Prof. Wallace's address at Windsor in 1910 where he said, "It has cost the State of New York hundreds and hundreds of thousands of dollars by not spraying at the right time," can be taken home to a good many staunch growers in Nova Scotia this year. The lack of proper spraying this season will cost the fruit crop of Nova Scotia a good many nundred thousands of dollars. Fortunately, there are a few growers who have been wide awake and have got clean fruit. These orchards should be an example to convert the "doubting Thomas."

If there are any who discredit the truth of this statement, let them visit the orchard of Mr. Isaac Chipman, of Chipman Corner. This orchard, under other management, in 1910 hardly produced a barrel of decent apples. Last year it was sold to another party and thoroughly sprayed, giving a fair crop of apples and this year it has not only one of the largest crops of apples to be found in Kings County, but about as clean as it is possible to get during a spotted year like the present one. One large fruit grower examined it last week and said he had seen over 1000 barrels, and not one spot on an apple.

When one comes to reckon up and find that it cost Mr. Chipman less than 15c per barrel to get such results, the loss to the grower who sends the bulk of his Gravensteins and other varieties prone to spot to the evaporator or cider mill through lack of spraying or not applying at the right time, will be very apparent.

If apples bring a normal price this fall, Mr. Chipman will get in the neighborhood of $2,000 clear of expenses, which will be between 40 and 50 p. c. on his investment, which can be charged up to the profit side of careful spraying.

Mr. Chipman has sprayed five times with Lime-Sulphur and Arsenate of Lead, using a power sprayer at 200 lbs. pressure.

An Orchard Meeting will be held there on 19th August. Every one interested in growing better fruit should attend.—C. O. Allen, Kentville.

A Productive Apple Crop.

The life of an apple tree is generally supposed to be much less than 100 years. Yet there are instances here in our own valley which show that with proper care our orchards will continue to produce after the century mark has been reached.

The Acadians when they resided at Canard and Grand Pre planted orchards and grew fruit. They were deported from Horton in 1755 or one hundred and fifty-seven years ago. Yet some of the apple trees they planted are still standing and still producing fruit. Had those trees received careful attention all through the century and a half they might still be regular producers of frut of good quality.

But the purpose of this article is to call attention to a tree which undoubtedly beats the record in the Annapolis Valley. It is a famous Gravenstein tree on the farm of Mr. Jos. A. Kinsman, Lakeville, Kings Co., which is said to be 113 years old and is still heavy producer and a healthy tree. The history of this tree has been preserved and published in some of our immigration literature.

The trunk of the tree is nearly three feet in diameter, the limbs begin to branch out about six feet from the ground, and the branches have a spread of over eighty feet. The tree was grafted to a gravenstein about forty-three years ago. It bears only on alternate years, as a rule, but in some "off" years, it has four or five

For a considerable period Mr. Kinsman kept a record of it's yield, but this has not been continued in recent years. However, it is now producing almost as large crops as it did in the years given below when records were kept.

In 1878 it produced 15 barrels of saleable fruit; in 1880, 18 barrels; in 1882, 21 barrels; in 1884, 20 barrels; in 1886, 21 barrels; in 1888, 23 barrels; in 1890, 20 barrels; in 1892, 21 barrels; in 1894, 26 barrels; in 1896, 27 barrels; in 1898, 22 barrels, making a total of 234 barrels which, at $2 a barrel, were worth $468.

Mr Kinsman kept no account of the apples that dropped during those seasons, nor did he of the loss in picking, which is very great, owing to the top being nearly fifty feet high on one side, in consequence of its position on the side of the bank. In 1896, he should have had over 30 barrels if it had not been for an accident in the breaking of a large limb from the top, in August. The apples have averaged about $2 a barrel.—Western Chronicle.

Apple Inspection.

As the season for marketing another good crop of ahples draws near fruit growers are anxious to be relieved from the present absurd system of inspection, and last year proved that more falsely packed apples were marketed and markets injured thereby than ever before.

Alter forty years experience in the business I am fully convinced that no system of inspection will be effectual or beneficial to both growers and consumers until we adopt the system used successfully in Nova Scotia for the past fifty years in the inspection of barreled fish, by which the inspector of barreled fish superintends the packing and brands the quality and his name on each package and becomes responsible for its contents.

If the government can be induced to adopt this system and appoint an inspector for each co-operative packing company, and discharge the army who have proved themselves useless as inspectors, both grower and consumer will be benefited.— James W. Bigelow, Wolfville, N. S. in Exchange

The maintenance of organic matter is of the greatest importance to the gardener. Humus is best supplied in stable manure. It is good culture to sow rye, vetch or clover on bare spots in late summer to keep the soil covered over winter. The great fault with many truckers is their dependence on commercial fertilizers.

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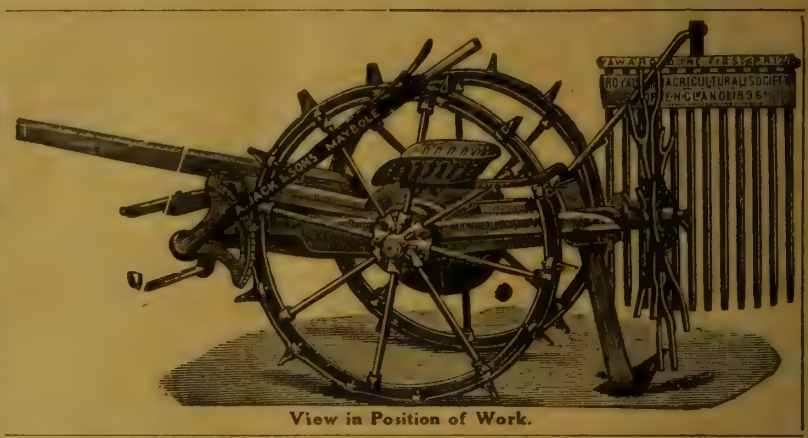

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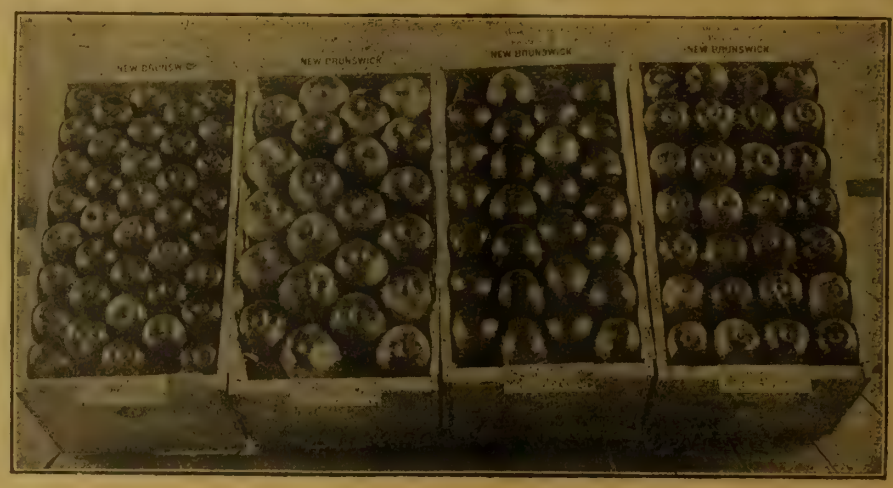

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Orchard Management in Relation to Fruit Farms.

Upon careful examination of fruit at fairs in the fall of the year one can generally tell what kind of treatment the orchard received during the year from which the fruit was collected. It is possible, however, to gather first-class show fruit from neglected orchards, but this is not the rule. The time is at hand when our fruit fairs are more representative of the kind of orchards that we maintain. And this is being more emphasized by the fact that people who win the prizes are those who give much care and attention in caring for the orchard throughout the year. The fruit shows it.

The spring of the year is the proper time to commence to think about and prepare for the fairs which are to be held in the fall. If one tries to grow exhibition fruit on all of his trees the chances are that he will have first-class fruit for market purposes. Competition is growing keener and it is now necessary in order to obtain the highest price to grow only the very best. In order to do this, careful attention must be paid to the various phases of orchard management. Careful individual study of each tree should be made to ascertain its vitality, general condition, etc. The first thing to be considered in the orchard is the sanitary condition, such as proper drainage, soil fertility, and the physical condition of the soil. One should see that the soil contains plenty of humus or decayed organic matter, since without this element plant food becomes unavailable, the soil does not take moisture well and does not hold it when it is applied.

One should look carefully after the pruning to see that the branches are stocky, capable of supporting a heavy load of fruit, allowing plenty of sunlight to penetrate, securing the proper spread and not allowing the tree to grow too high. All these will have much to do with securing a better grade of fruit for the market and the fair. The trees may require a very heavy thinning, this to be done some time during the latter part of June or the first of July. Thinning facilitates selecting and grading the fruit in the fall, as fewer culls and ununiform apples will have to be handled. When thinning, do not look at the apples which have fallen to the ground, but notice only those still remaining on the tree. See that each one is so located that it will not become limb-bruised, caused either by limbs or by wind. All wormy fruit should be picked off and destroyed. All doubles broken, as they often do not obtain the proper size and give the worms a better chance to enter on the side.

Fruit fairs should be patronized by every orchardist and it should be the aim of each to display the representative fruit of his orchard so that the total selection would be a fair representative of the locality. The orchardist should spend but a few minutes in selecting show fruit, but should bear in mind during the whole season that his object is to grow the best fruit possible on every tree, not only for show purposes, but for the market. In a way, every one likes competition, especially if he thinks he stands a show of winning, and it should be the object of every orchardist, not only to win premiums at the fairs, but to put upon the market the very best product that the market demands. Everyone likes to see and hear of honest advertising and there is no better way to do this than to grow show fruit that competes with the best, whether it be for the fruit fairs, or for the market. —R. S. Herrick.

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Essential point:

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DAIRYING.

Losses With Overripe Milk.

For the past four years the dairy department of the Ontario Agricultural College has been conducting tests to ascertain how much loss is sustained by allowing milk to become overripe or develop too much acid for cheddar cheese-making. There are objections to the methods followed in conducting these experiments, but as they correspond with factory conditions they are near enough correct for practical purposes, but are not scientifically correct.

The method followed was to take the milk arriving overripe at various times during the season and make this into cheese in the best manner possible, then compare these results with those on previous or succeeding days when the milk was normal.

There were made during the season of 1911, twelve experiments, seven of which were overripe lots, and five were normal. The seven lots consisted of 21,038 lbs. milk having an average of 3.41 per cent. fat and 2.22 per cent. casein. The five normal lots contained 6,743 lbs. milk, testing an average of 3.43 per cent. fat, and 2.19 per cent. casein—practically the same as the overripe lots. The percentage of fat and casein in the whey from the overripe lots were respectively, .171 and .085, while the wheys from the normal lots averaged .167 per cent. fat and .069 per cent. casein. The overripe lots remained in the whey for an average of 49 minutes, while the normal lots were in an average of 2 hours and 40 minutes.

The remainder of the results are shown in the table following:

	Normal Lots	Overripe Lots.
Lbs. cheese per 1,000 lbs milk	89.94	87.54
Lbs. milk per lb. cheese	11.11	11.44
Per cent. shrinkage at 1 month old	2.76	2.15
Per cent. moisture in green cheese	34.94	34.50
Per cent. moisture in cheese 1 month old	35.10	34.43
Average score for flavor (40)	37.76	35.07
Average score for closeness (15)	14.25	14.28
Average score for color (15)	14.43	14.28
Average score for texture (20)	17.52	16.95
Average score for total (100)	92.06	90.58

The normal lots produced an average of 2.58 lbs. more cheese per 1,000 lbs. milk, as compared with the overripe lots.

The normal lots of cheese contained higher percentages of moisture and the quality of the cheese was superior from the normal lots.

The practical lesson is that patrons of cheeseries should prevent so far as possible, milk becoming overripe, as such milk causes a loss of cheese making material and produces a poorer quality of cheese. The milk can be prevented from becoming over ripe by cleanliness, and cooling it to about 65 degs. F. on the farm.

Thick Cream Advantageous.

One of the problems in the cream gathering creameries is to get the patrons to skim a rich cream said Chief Geo. H. Barr, of Ottawa, Canada, in a recent address. In discussing this question at a recent meeting of creamerymen, several of our prominent buttermakers stated that it would be an injustice to the patrons of their creameries to offer a bonus for rich cream, as many of the patrons had separators which would not skim a 27 per cent. cream and do clean skimming. We regret that this is the case, as these farmers are losing much valuable feed for their stock.

What are the advantages of skimming a rich cream? (1) The buttermaker has a better opportunity to control the quality of his butter. (2) There is less cream to take care of at the farm. (4) There is a greater quantity of skim milk at the farm for feeding purposes.

The following table shows the benefits of skimming a rich cream in a herd of 10 cows, averaging 4,000 lbs. of 3.5 per cent. milk:

Total lbs. Butter Fat	Per cent. Fat in Cream	Extra lbs. Skimmilk on Farm.
1,400	20	—
1,400	25	1,400
1,400	30	2,338
1,400	35	2,996
1,400	40	3,500

It is difficult to get every patron interested in the quality of the butter at the creamery, but every one should be interested in retaining all the skimmilk possible on the farm, and it is simply surprising how indifferent and careless many are in this respect. If all the cream sent to our cream gathering creameries tested 30 per cent. fat, it would mean thousands of dollars extra money in the pockets of the patrons from more and better stock. I am safe in saying that the quality of our creamery butter would be very much improved, as some creamery-men would then pasteurize the cream who cannot do so at the present time on account of its low fat content and high acidity, which is the natural result of skimming a thin cream.

Cooling the Factory Milk.

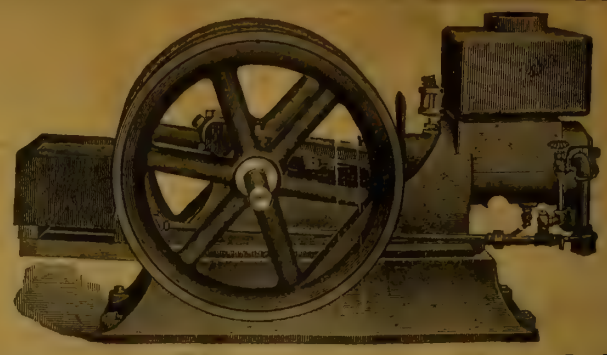
The following resolution has been unanimously passed at recent dairy conventions, district dairy meetings and factory meetings:

'Whereas, in the opinion of this meeting, some definite temperature should be established for milk sent to cheese factories;

"Be it resolved,—That the night's milk for daily delivery be cooled immediately after milking, to a temperature of 65 degrees or under, and that the temperature of this milk should not be higher than 70 degrees when delivered at the factory. If for any reason it is found necessary to mix the night's and morning's milk, the night's milk under these conditions should be cooled to a temperature of 60 degrees Fahr. or under, immediately after milking, and milk so mixed should be delivered at the factory at a temperature not higher than 75 degrees F. To keep milk over Sunday for Monday morning delvery, it is recommended that the milk be cooled immediately after milking, to a temperature of 60 degrees or under, and held at this temperature until delivered at the factory."

Water Supply for Cows.

As a rule cows in the stable get sufficient water during the winter months. In the summer time they need much more owing to the evaporation due to the heat. Often the supply on the farm during the summer is below requirements and the cows are not able to obtain the necessary at their pleasure. It is a safe rule to provide at least five pounds of water for every pound of milk the cow gives. This will mean that at least twelve gallons a day should be supplied. Cases have been known where a cow would drink from twenty-five to thirty gallons in the warmest weather. Such a cow would likely produce 10,000 lbs. a year. Always the water should be pure and in winter shouid be warmed to sixty degrees. It is beter to warm the water yourself than to allow the cow to use up its food in so doing.



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The Good Bull Pays.

Recently a valuable object lesson came to my notice in an account of a year's performance of a farmer's herd of 10 cows. The record of one of these cows is worthy of the careful attention of anyone engaged in dairying.

The ten cows averaged 5,073.2 pounds of milk for the year, with an average of 282.68 pounds of butter. The cow in question, although but two years old, gave 6,310 pounds of milk, and is credited with 372.88 pounds of butter. This increase of almost 90 pounds over the general average suggests an investigation of her breeding. Her dam and granddam were both members of the herd, their production appearing with the others, and so affording an opportunity for comparison. The granddam was a half-blood Jersey. She gave 7,447 pounds of milk and is credited with 312.12 pounds of butter for the year. She was breed to a three-quarter blood Jersey bull and the daughter produced 6,328 pounds of milk and 350.77 pounds of butter for the year. This cow, bred to a registered Jersey bull, produced the cow under consideration.

I have no information concerning the great granddam with which this chain begins. I assume that she was a native cow as good as the average of the herd. If so, the following tabulations show the influence of a pure-bred sire, assuming in these figures butter to be worth 25c a pound, and butter-milk and skim-milk to have a feeding value of 20c per 100 pounds.

312.12 pounds of butter at 25c	$78.03
7,135 pounds of butter-milk and skim-milk at 20c	14.27
Total value of year's production	$92.30

Her daughter should have credit for:

350.77 pounds of butter at 25c	$87.69
5,977 pounds of butter-milk and skim-milk at 20c	11.95
Total value for year	$99.64

The cow under consideration should be credited with:

372.08 pounds of butter at 25c	$93.02
5, 948 pounds of butter-milk and skim-milk at 20c	11.89
Total for the year	$104.91

The herd averaged:

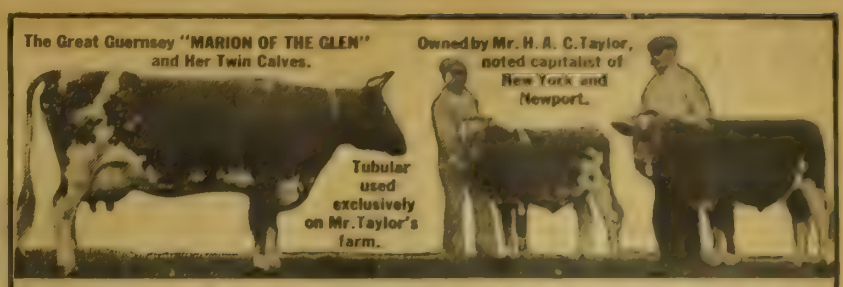
282.68 pounds of butter each, at 25c	$70.67
4, 790 pounds of butter-milk and skim-milk at 20c	9.58
Total average for the year	$80.25

Were the ten cows as good as the subject of this article there would have been an increase in the yearly product of the herd of $246.60. When the ages of these cows are compared, still greater credit must be given this cow. The first-named cow was 10 years old, the second seven, while the cow considered was but two years old and milking with her first calf. It must be admitted that at maturity her capacity will have been materially increased, very likely one-half.

This suggests a scrutiny of the breeding of her sire. In his pedigree appear close up several well-known animals, notably the cow Eurotas 2454, whose butter record of 22 **pounds 7 ounces for one** week, and 778 pounds 1 ounce for a year, stamps her as the great cow of her time.

The importance of breeding to pure bred sires cannot be ignored. The improvement in this case began with a pure bred bull. Taking as a basis the figures assumed, there should be a credit for the years yield of the first cow tabulated of $12.05, while the yearly gain of the daughter of this cow and the bull of mixed breeding is but little more than half this amount. The bull last in use was not only a lull blood, but of potent

(Continued on page 778.)


The Great Guernsey "MARION OF THE GLEN" and Her Twin Calves.
Tubular used exclusively on Mr. Taylor's farm.
Owned by Mr. H. A. C. Taylor, noted capitalist of New York and Newport.

What You SEE You KNOW

That is why we show you these two pans. We want you to SEE and KNOW the difference between the World's Best Cream Separator and less modern machines.

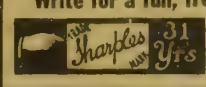
The full pan contains the disks taken from one of the thousands of separators which have been replaced by Tubulars. They tire a woman and try her patience; they rust, wear loose, eventually give cream a metallic or disky flavor, and waste cream in the skimmed milk.

The other pan contains the only piece used inside the marvelously simple, wonderfully clean skimming, everlastingly durable

SHARPLES Dairy Tubular Cream SEPARATOR

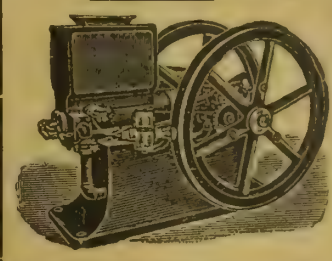
What a difference! Take your choice, of course, but remember that mistakes are unpleasant and costly and must eventually be corrected. Why not ask those who have discarded other separators for Tubulars? Their advice is valuable; they have paid good money for experience—they know the difference.

Write for a full, free trial. Other separators taken in part payment for Tubulars. To get prompt attention, ask for Catalog 194



The Sharples Separator Co.
Toronto, Can. Winnipeg, Can.

A New Name For The Best Farm Engine



Made in Air-Cooled or Water-Cooled Styles. Sizes 11-2 to 20 h.p.. Send for catalogue, prices and buying terms for farmers.

We have changed the name of our famous "CANADIAN" air-cooled and water-cooled engines to a name that also signifies quality.

Hereafter, these engines will be known as the "MONARCH."

It is a Monarch among farm engines. No engine runs better, is more compact, easier started, surer and steadier than this. Always remember the 'MONARCH.'

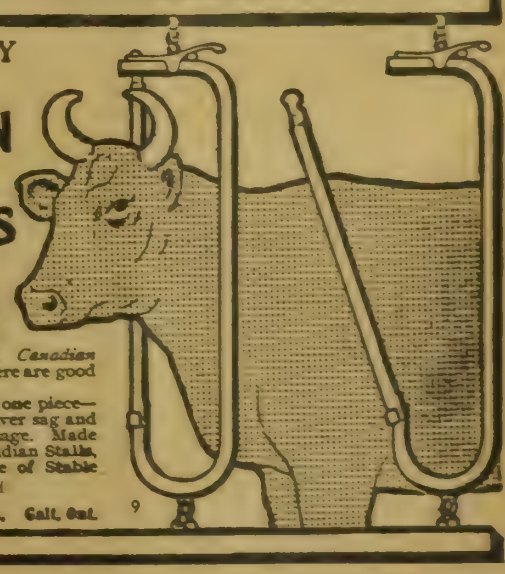
Every part is true to 1-500 in. or less. Experts work on each part. Material is the best money can buy. Bearings are big and wide, The design is compact, and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name, too :—

THE CANADIAN ENGINES LIMITED
Formerly CANADIAN-AMERICAN GAS & GASOLINE ENGINE CO. Limited.
DUNNVILLE, Ont.

FROST & WOOD Limited, Smith's Falls, Sole selling agents for Eastern Ontario, Quebec and Maritime Provinces.

FACTS—NOT THEORY —ABOUT

O.K. CANADIAN U-BAR STEEL STANCHIONS



When big stables like the Central Experimental Farm at Ottawa — the new barn at Silver Spring Dairy Farm, Ottawa—the Erindale Farm at Toronto — are equipped with *O.K. Canadian U-Bar* Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue A

Canadian Potato Machinery Co., Limited, Galt, Ont.

LIVE STOCK.

Sheep Husbandry in Canada.

Coincident with a number of other active agencies designed to revive the sheep raising industry in Canada, there has been issued by the Live Stock Branch of the Department of Agriculture a new edition of that exhaustive and practical treatise 'Sheep Husbandry in Canada' which received such a warm reception some four years ago. This work of 126 pages, which constitutes a report as well as a helpful bulletin of instruction, covers the history and condition of the sheep industry in every province, pointing out the weak points and offering useful information for the guidance of older shepherds as well as those who are just beginning, or desire to begin, raising mutton and wool. In this work the author, who is a trained sheep man, brings out clearly the great advantages of keeping sheep from the dual standpoint of direct profit in cash returns, and the even more important indirect one of cleaner farms and better crops. Then there is a special section, 'From the Block to the Table' designed to popularize the consumption of mutton and lamb. Other sections deal with weed destruction by sheep, diseases, wool, housing, enemies, breeds and breeding, feeds and feeding, and other important matters. Under 'The Industry in the Different Provinces' some startling new facts, concerning the profits made from sheep, are brought out. It is shown that a flock of about 150 ewes worth $6 each, after housing, feeding and care were charged against them, gave in 1911 a profit of more than $600. This occured on a Manitoba wheat farm.

A special feature of this bulletin is its many beautiful illustrations in sepia tints, many of which are worth framing. A large issue has been printed to be supplied free to those who apply for it to the Publications Branch, Department of Agriculture, Ottawa.

Raise the Good Calves.

The calves must be taken care of if the beef and dairy animals are to be raised in sufficient numbers to supply the increasing demand. The practice of selling the calves as soon as they are old enough for beef must not continue if we are to have enough animals on our farms to stock them sufficient to justify mixed farming.

The most progressive dairymen of the country find it profitable to raise their own cows. Many ranchmen get profits from raising beef cattle, then why cannot a farmer who has a fair pasture and plenty of supplementary feeds raise calves economically?

One difficulty with many farmers is that their animals are not worth raising. Under present conditions it is doubtful whether or not scrubs, either dairy or beef type, are profitable to raise. The best of either type would undoubtedly pay, provided, of course, the manager is prepared, having pastures and feed.

There is a great need for the butchers or the packers to get many of the dairy cows now kept on farms. They are fit for no other purpose and would not be taken for beef were it not for the scarcity of beef animals.

The scrub cow and the scrub bull must forfeit their right to a place in the pasture. They have been weighed in the balance and are found wanting. When standard-bred bulls of excellent conformation and prepotency are substituted and standard-bred cows or extra grades used instead of scrubs, the calves may be raised profitably.

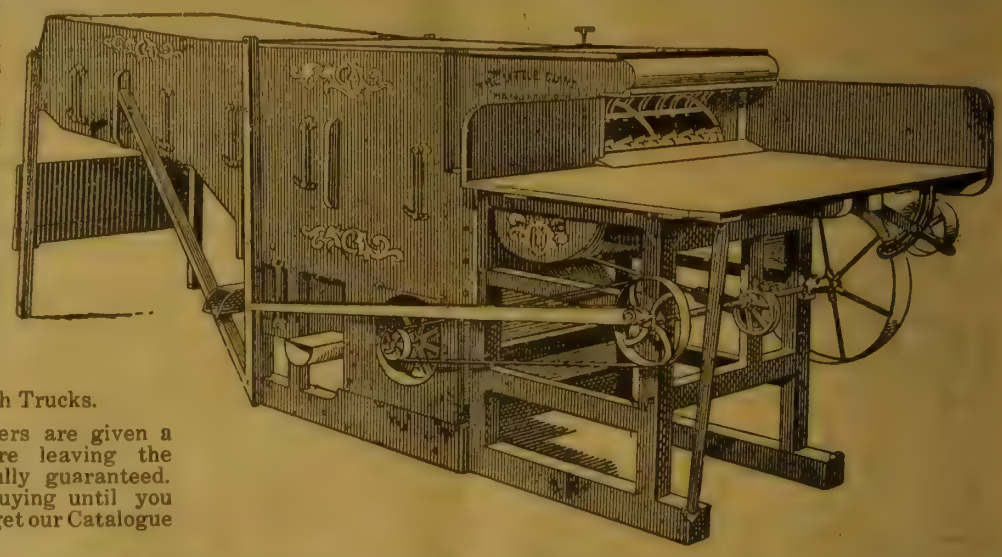
Handling the Bull.

'As a rule, the bull hands back to a man on the points of his horns the exact treatment accorded him at the points of the pitchfork prongs,' pointedly says Dean R. S. Shaw, of the Michigan agricultural college. 'The club has no place whatever in the handling of a bull, and the same is also true of boisterous conduct of any kind on the part of the attendant. Quietness and gentle, but firm, treatment are essential to the proper training of the bull. Never undertake to make the animal do anything without accomplishing the same. If there should be any question about the result do not undertake it. The man who is afraid of a bull should not attempt to manage him, as the bull will detect the first evidences of fear and begin to take advantage at once, finally becoming ungovernable. On the other hand, no man should pursue foolhardiness and expose himself to danger unnecessarily.'

The Indications are that We Will Have a Bumper Grain Crop this Year

THEREFORE IF YOU HAVE A LOT OF GRAIN TO THRESH FOR YOURSELF OR, IF YOU WANT TO MAKE MONEY THRESHING CRAIN FOR OTHER PEOPLE, IT WILL PAY YOU TO BUY ONE OF OUR LITTLE GIANT THRESHING MACHINES.

The accompanying is an illustration of our Two Horse Thresher. Since gasoline engines came in use, the sieves of this machine have been enlarged about 30 per cent. This gives greater cleaning capacity and is very essential for the thorough cleaning of the grain. Many other improvements have also been made.



The Little Giant is in four different sizes; one horse, two horse, four horse, and eight horse power. Either of these machines, from two horse power up, can be supplied with Tailings Elevator, Bagger, Straw Carrier, or with all, if desired, and can also be equipped with Trucks.

All our Threshers are given a thorough test before leaving the factory and are fully guaranteed. Do not put off buying until you require a Thresher; get our Catalogue and prices at once.

Be sure and see our exhibit in the Machinery Hall at the St. John Exhibition, Aug. 31st to Sept. 7th

SUSSEX MANUFACTURING CO., Ltd., SUSSEX, N. B.

This Iron Age Potato Digger

is easily operated by two horses and will please the most critical in its work. It has many advantages over other makes of diggers, such as ease in draft and ease to keep on the row, absolutely no bruising of potato and dig as many as you like before picking up. The machines of Bateman Mfg. Co. have been on the market for 76 years and are warranted to give satisfaction. Write for catalogue and prices.

C. FRED FAWCETT, Upper Sackville, N. B.

Long Distance 'Phone — Eastern Representative.

"INTERNATIONAL FLY WAY"
Prevents the Tremendous Loss from Flies

Flies cost the Farmers of Canada millions of dollars annually by retarding the growth or fattening of animals and by greatly reducing the production of milk by constantly annoying the animals all summer. Every farmer or stockraiser knows this statement to be true from his own experience.

Flies also cause a great loss of life by Spreading Diseases from farm to farm. "International Fly Way" will keep flies off your animals and give them perfect rest from these pestiferous insects, which will make you more money in a larger production of milk or much quicker growth of all animals.

SAVE YOUR STOCK
By Using
"INTERNATIONAL FLY WAY"

It is positively guaranteed to be effective in Driving Away Flies, Mosquitos, and other insects which worry stock and reduce their earning capacity. It is harmless to the hair and skin and will be found perfectly satisfactory when used according to directions.

We place our twenty years of reputation back of "International Fly Way," and ask you to test it on our positive guarantee.

FOR SALE AT ALL DEALERS.

INTERNATIONAL STOCK FOOD CO. Limited, TORONTO

No. 74

Sheep Breeding.

The first factor to consider in this connection is the environment. If the stock grower aims to secure the maximum profits from his investment he will, when laying the foundation of a flock carefully consider the adaptability of the different breeds to his locality or to his own farm. The principle indicated has, perhaps, received more attention in Great Britain than else where, with the result that the breeds developed are the best suited to their respective districts. Evidently the British farmer is not governed by whims. He has chosen families bred in his section that are the most suitable for his soil, proved these by selection and the proper sort of males, never losing sight of his environment. Hence in Shropshire we find nothing but S Stropshire we find nothing but Stropshire sheep. In the North of England and in the South of Scotland the Leicester families prevail. Farther up in the hill country we find the Cheviots and again in the higher and more barren hill country we find the Highland or Blackface Sheep. In the southwest of England are the various classes of Downs and other breeds which have proved through succeeding ages the best suited to the districts. Unfortunately the wisdom of this practice has been largely disregarded on this side of the Atlantic and the beginner allows his fancy for a certain breed to guide him in making a selection which after a few years' experience he perhaps discovers is entirely unsuited to his environment and in order that his flock returns be satisfactory is forced to change breeds and start all over again.

Another important factor in successful sheep breedng is continuity. Having obtained the breed that is best adapted to local conditions, don't change. No breeder should be content with merely holding his own, for in nine cases out of ten if he doesn't advance he will retreat. As in any other business, the most aggressive man is the successful, other things being equal. The breeder should have an ideal of perfection raised sufficiently high to give zest to his ambition and then strive to get there. By a rigid system of selection he can gradually raise the standard of his flock and find himself engaged in an interesting and useful work to which a life time may be devoted. The history of breeding in Great Britain furnishes many examples.

There it is a common thing to find a farm on which Leicesters have been bred from 60 to 100 years. Messrs. Mansell, of Shrewsbury, who are famous as breeders of Shropshires, have continued in the same family on the same farm for 60 years.

But even supposing a breed has been wisely chosen and the owner continues in his efforts along the same line for a considerable period there still remains a possibility that the standard of perfection towards which he is working is not the most desirable. He may be paying too much attention to lads and neglecting the utility of the animal. This is one point that should always be foremost in the mind of the stock breeder. The power behind the whole business is the market requirements. We breed sheep to supply the consumer with the particular quality of wool and mutton that he demands. The next consideration is to supply this demand in the greatest quantity and the best quality for the food consumed and the care given.

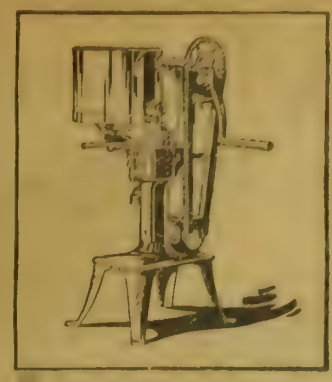
While hundreds of years of experience has proved that nothing but pure-bred animals are suitable for breeding purposes, it frequently happens that "crossing" is resorted to in order to produce market lambs. This is a feature of breeding that is very much misunderstood by many farmers. In Great Britain it means the selection of ewes of a certain breed which are crossed with the male of another breed in order to produce lambs of better feeding and selling qualities than is the case with some pure-breds. For instance, Cheviot ewes are sometimes crossed with Down rams and sometimes with Wensleydales and others of the Leicester families. To keep a constant supply of Cheviot ewes a number of the best animals are mated with best Cheviot rams. These are kept for breeding purposes while the cross-bred animals are sold to the lowland farmers for fattening. In America crossing has too often been abused. Frequently when a breed has been given no consideration as to its adaptability to a certain environment and does not come up to expectations it is crossed with another breed; not producing satisfactory results it is crossed with still another breed, and so on, until finally the flock is of such a nondescript and irregular character as to be of no value to the breeder or feeder, and an absolute injury to the market where it may be sold. Hence the best results can only be obtained by a study of envirobment, continuity, utility and crossing which, if applied to the operations of every breeder would soon give this continent a reputation equal to that already won by the shepherds of Great Britain.—J. Hugh McKenney

Minard's Liniment Co., Limited.

Gentlemen,—In June, 98, I had my hand and wrist badly bitten and badly mangled by a vicious horse. I suffered greatly for several days and he tooth cuts refused to heal until your agent gave me a bottle of MINARD'S LINIMENT, which I began using. The effect was magical; in five hours the pain had ceased and in two weeks the wounds had completely healed and my hand and arm were as well as ever.

Yours truly,
A. E. Roy,
Carriage Maker.

St. Antoine, P. Q.



IHC
Cream Separators Have Trouble-Proof Neck Bearings

GRANTING that a cream separator is a money making necessity on every farm where three or more cows are kept, there are two points to make sure of when you purchase your machine—close skimming and long life.

There is very little skimming difference between separators when new but there is a tremendous difference in the length of service they will give. The difference is due to design and mechanical construction. To take one example of mechanical efficiency

IHC Cream Separators Dairymaid and Bluebell

have trouble proof, self aligning, bowl spindle bearings. The bowl spindle bearing or neck bearing is an extremely important part of the separator mechanism. Its business is to reduce to the lowest possible point the vibration of a heavy bowl whirling at the rate of 6,000 or more revolutions per minute. A rigid bearing in such a place is impossible. To make a flexible bearing capable of withstanding the terrific strain requires the most accurate balance of strength, firmness, and elasticity. In I H C cream separators this balance is acquired by the use of one spring. There is only one wearing part, a phosphor bronze bushing. The entire bearing is protected from dirt or milk by steel cases. There is but one adjustment and that easy to make.

Go to the I H C local agent who handles these machines and ask him to show you how successfully this bearing meets all the difficulties imposed upon it. He will also show you many other reasons why I H C cream separators, made in four sizes, are the best. Get catalogues and full information from him, or write the nearest branch house.

CANADIAN BRANCH HOUSES
INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of expense, information that will help to better farming. If you have any worthy question concerning [illegible] fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

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Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year**, on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

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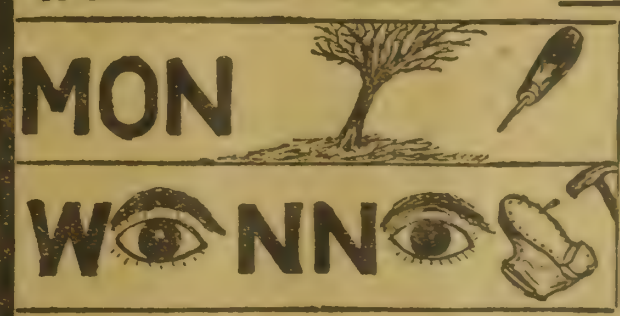
WORK THIS PUZZLE ! SEND NO MONEY ! !



$50 CASH PRIZE

ALSO A PRIZE OF $10 for NEATEST SOLUTION. Somebody who sends for particulars of this Puzzle
Contest telling us WHAT TWO CITIES ARE REPRESENTED by the above Two Sketches, will receive a $50 GOLD WATCH or .. .. ..
$50 IN GOLD MONEY! Try it at once. It may be you. Write the names of the Cities
In a letter or postcard, giving your Name and Address plainly.

DOMINION WATCH CO., MONTREAL, CANADA DEPT. No. 10

THE HORSE.

Treatment of Sprains.

Lecturing before the Eastern Counties Veterinary Medical Association, Mr. Wm. Hunting, F.R.C.V.S., gave some useful information as to treatment in cases of sprain in horses. In regard to sprains of the ligaments of joints or inflammation resulting from bruises, there was, he said, tearing or stretching of ligaments with synovitis. Effusion took place into the joint and surrounding tissues. The object in treatment was to check, if possible, the effusion, and then to allay pain and promote absorption. Repair took place when the inflammatory process had subsided, and the less the effusion among the tissues the more thorough was the repair.

In the very ealiest stage of a sprain, cold in the form of continuous irrigation, may check the effusion, but this stage was seldom or never seen by the veterinarian, and could not last many hours. When inflammation had reached the stage at which the blood in the vessels is almost stationary and effusion plentiful, cold was likely to do more harm than good. This stage of the case required warm fomentation, to allay pain and to establish an active circulation in the surrounding blood vessels of the damaged part. For a day or two that might be continued, and then resort should be had to dry even pressure, with gentle massage. Pressure was applied by means of a linen bandage with a good thick layer of cotton wool between it and the joint. The bandage should be removed at least every twelve hours, and left off an hour or two. The massage should be done with the hands—a gentle firm pressure in one direction—with the hair. As soon as the horse could stand fairly on the lame leg walking exercise should be commenced, with a duration, say, of ten minutes at first, and gradual extension every day unless pain is increased. The horse should, of course, be in a loose box, not tied up.

Where some enlargement remained and the motion of the joint was limited, the worst thing to do was to limit active motion by not exercising the horse, and the next worse treatment was to blister. To blister the swelling caused by a bruise or a sprain was almost certain to render it permanent. In addition to massage, a joint that is limited in its motion by effusion or by fibrous thickening should be forcibly, but not violently, flexed and extended for some minutes every day.

Bruises.

Bruises are nothing but contused wounds, where the skin has not been ruptured. There is often considerable solution of continuity of the parts under the skin, subcutaneous hemorrhage, etc., which may result in local death (mortification) and slough of the bruised parts. If the bruise or contusion is not so severe, many cases are quickly cured by constant fomentation with hot water for from two to four hours. The water should be allowed about this time to become gradually cool and then cold. Cold fomentation must then be kept up for another hour or two. Dry the parts thoroughly and quickly, and bathe them freely with camphor 1 oz. sweet oil 8 oz., or with equal parts of lead-water and laudanum. A dry, light bandage should then be applied the horse allowed to rest, and, if necessary, the treatment may be repeated each day for two or three days. If, however, the wound is so severe that sloughing must ensue, we should encourage this by poulticee made of linseed meal, wheat bran, turnips, onions, bread and milk, or hops. Charcoal is to be sprinkled over the surface when the wound is bad smelling. After the slough has fallen off the wound is to be dressed with warm antiseptic washes of carbolic acid, chloride af zinc, permanganate of potash, etc. If granulating (filling up) too fast, use burnt alum or air-slacked lime. Besides this local treatment, we find that the constitutional symptoms of fever and inflammation call for measures to prevent or control them. This is best done by placing the injured animal on soft or green food. A physic of Barbadoes aloes, 1 oz. should be given as soon as possible after the accident. Sedatives, such as tincture of aconite root, 15 drops three times a day, or ounce doses of saltpetre every four hours may also be administered. When the symptoms of fever are abated, and if the discharges from the wound are abundant, the strength of the patient must be supported by good food and tonics. One of the best tonics is as follows'—Powdered sulphate of iron, powdered gentian and powdered ginger, of each 4 ozs. Mix thoroughly and give a heaping tablespoonful twice a day, in the feed or as a drench.

Practical Breeding Principals.

The substance of a paper by J. Cossar Ewart on the "Origin of the Clydesdale and other Heavy Breeds of Horses" published in the Transactions of the Highland and Agricultural society of Scotland is given in the Canadian Bulletin of the International Ageicultural Institute, as follows:

From anatomical studies of fossil and living races of horses, it seems evident that our modern heavy breeds are not descended from a single prehistoric race but are a blend, in most cases, of three perfectly distinct wild races.

If Clydesdales, like thoroughbreds, notwithstanding domestication and artificial selection, are really a which refuse to blend to form a pure-mixture of several distinct types breed, it is evident that breeders of Clydesdales, like breeders of thoroughbreds, should avoid having too many "free generations" between the sire and dam; in other words, they should, unless for special reasons, avoid crossing distinct types.

Having by accident or design secured a good strain, they should endeavor to maintain the strain in all its purity. On the other hand, breeders who have indifferent strains should bear in mind that it is possible, by working on Mendelian lines, to engraft on their strain the points (e. g. good shoulders) which appreciably increase the value of other strains. By mating unrelated mares with a stallion having the points desired, and then interbreeding the offspring or mating their fillies with a half-brother (out of an unrelated mare of the right type) from another stud, they will have a good chance of obtaining what they desire.

It may be added that breeders of heavy horses might well bear in mind that animals with hoofs and limbs of the "steppe" or "Siwalik" type are more likely to stand the wear and tear of city life than animals with broad hoofs, round cannon bones, and hairy heels, inherited from a "forest" race, adapted for the moist pasture lands and peat-bogs which prepailed in Central Europe in prehistoric times.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'SCONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevets the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR:—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

Hillsboro, N. S.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN:—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

DEAR SIR:—I have used Dr. J. Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of theshoof.

W. A. C. RANDALL, M. D.

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS:—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

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ABSORBINE

will reduce Inflamed, Swollen Joints, Bruises, Soft Bunches. Cure Boils, Poll Evil, Quitor, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle, delivered. Book 7 E free.

ABSORBINE, JR., liniment for mankind. Reduces Painful, Swollen Veins, Goitre, Wens, Strains, Bruises, stops Pain and Inflammation. Price $1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by

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VIGORA

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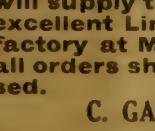

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POULTRY.

Washing Fowls.

Most fowls, black, white, blue, yellow, or parti-colored, are the better for a wash occasionally before being exhibited. It produces at the time a soft, feathery look, which should determine whether, in the case of colored fowls, washing would be an advantage or not. A black hen, such as a brown red game Bantam hen, would, if she had knocked about a great deal, be brightened up by a wash, but in the case of a cockerel of the same breed, it would mostly be shown unwashed, as we want its saddle and other similar feathers to look as close and hard as possible. Pyles, however, are always washed, and it cannot therefore hurt any game bird to have an occasional dip. And as for soft-feathered birds, especially those where fluff is a feature, they are certainly improved by washing, no matter what color they are, unless they have been carefully kept up from show to show in plenty of straw or similar material. The fact, however, remains, that thousands of birds are exhibited unwashed, except as regards their feet, legs, heads, etc.

At this season of the year it must be remembered that the birds have about them (the chickens, I mean) quite a large quantity of pin feathers. And if the scrubbing in the tub be too roughly done these feathers will be left behind in the water, and more or less thin places or altogether bald patches will be seen on the birds. So that hand-washing is preferable to much scrubbing with a brush. The head will generally stand a little more rough work than the other parts. A good brushing brings up the coral of the face, but care must be taken that white lobes are not too severely treated.

If, then, the washing be continued down from head to tip of tail, getting the dirt out by hand massage, all will go well. A beginner seldom gets over the lower breast, thighs and rump as clear as does the old hand. He allows the dirty water to settle down into these parts. And when the bird is dry and the evil is palpable he comforts himself with the reflection that the dirty perch has worked the mischief.

Another evil is failing to get the soap out. This completely ruins the bird's appearance. Crude soap should never be rubbed on the feathers. A good lather is all sufficient, and it comes away well with three waters. But an absolute beginner is well warned if he be told to use four waters, and see that his tubs, bowls, etc., are well rinsed out between the emptying and refilling. Better far to use one water too much than one water too little. For white fowls don't overdo the powder blue. Tie a little up in thin cloth or muslin and just move the bag about in the water till the water is nicely blue. In this way no more blue dissolves out than is necessary.

Squeeze all water out of the saddle and rump feathers with the hand. Dry off with towels, but before a reasonable fire. If too scorching, screen with a newspaper or sheet. Aim at a gradual moist heat, not a brisk dry one.—The Poultry World.

The Moulting Process.

The process of moulting—that is, growing a new coat of feathers— is common to every bird, consequently it is apt to be taken as a matter of course, and the owner of the fowls is not always aware that it can be delayed or hastened, made easy or difficult, dangerous or the reverse, according to the way the fowls are treated. It is quite true that when wild in the jungle, fowls moult without any other aid than that of Nature; but fowls in the jungle and fowls under domestication are so different as to conditions of food, shelter, and climate, that they must almost be different species. Under ordinary circumstances an adult fowl grows an entirely new coat of feathers once a year. The younger the fowl the earlier and more rapid the moult.

For farm birds an early moult is highly desirable, as only birds that moult early can be expected to lay during the time prices are highest.

If for any reason it is desired to delay the moult, this can be brought about by giving the birds food very rich in albumoids or flesh-forming matter, such, for example, as pea-meal, malt sprouts, or cooked liver, in addition to the ordinary food, and avoiding foods of a starchy nature, such as maize or maize-meal, potatoes and barley meal. The house in which they are kept must be as airy as possible, and, if trap nests are used, care must be taken not to allow the hens to remain in them longer than necessary, as nothing so quickly induces broodiness, and if the hens are allowed to go broody, the moult soon begins.

On the otaer hand, it is often desirable to hasten the moult, and although it is unwise to interfere too much with the ways of nature, a good deal can be done to help the moult without any injurious effects following. The safest plan is to get the birds into very lean condition by reducing the usual quantity of food by about one-half, as lean birds moult much more readily than those that are fat. The process may, however, be still further hastened by shutting the birds up in a small house, which is very hot owing to the number kept, and it will be all the better if it is exposed to the heat of the sun. This is a very favorite practice with exhibitors when they want their birds ready for any particular show that might occur in autumn before the natural moult was quite over. By far the most effectual way, however, is to allow the birds that are broody to sit on the nest for a fortnight or three weeks, giving them first a handful of corn a day during that time. They will moult after two or three weeks, and be ready to lay quite early in the autumn.

As soon as the birds are pretty bare of feathers, and the pin feathers are seen coming through the skin, the food may be gradually increased until the birds are on full rations again. They will be found very hungry—quite as hungry as hens in full lay, and the food should be of a nutritious nature, and not too fattening If fattening at this period, a poor winter egg supply will be the result. A handful of linseed in the soft food is a help, but this must be withheld from white plumaged birds that are wanted for show or sale, as it makes the plumage quite yellow. Iron, which is a valuable tonic at this period must be avoided for the same reason. In the case of birds that will

(Continued on page 778)

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Selling the Farm.

Well, yes, we settled, ma and I, that
we would sell the farm;
We are getting on in years, and it
has somehow lost its charm.
So we said we thought it time to let
some of life's burdens down,
And the married children thought we
ought to buy a home in town.

Well, a purchaser come right along,
for I'll own, I'm free to say,
That a better or a prettier place you
might search for many a day,
With it's fertile fields and wooded
hills and meadows lush and green,
And buildings snug and neat and trim
as any ever seen.

But it's strange how old familiar
things will twine around the
heart,
And we never dream how close things
cling till we sense that we must
part,
And when it come to business, sir,
that's what I meant to tell,
We found a precious lot of things that
somehow wouldn't sell.

There's that willow that ma planted
some forty years ago;
It has grown into a mignty tree w th
branches drooping low,
And the children played beneath it's
shade when the days were long
and warm—
Now I wouldn't sell that willow tree
for the price of this old farm.

And its curious how we grow to love
the things we plant and tend—
Every tree in that old orchard seems
just like a human friend.
And I couldn't help but meditate how
we'd miss them, ma and I,
The tree of Golden Pippins and the
hardy Northern spy.

And then the preeious memories that
cluster 'round the place.
They seem to fill these homely rooms
with beauty and with grace.
We could seem to see the children flit-
ting blithely here and there,
And to hear their merry voices caling,
calling everywhere.

Then one day I found ma sitting by
the rose bush at the door
With the wistful look upon her face
I'd noticed there before,
And I just dropped down beside her
and she looked up at me,
And something blurred our dim old
eyes till somehow we couldn't see.

And then we settled, then and there
that we'd stay on this old place
Till the Lord sees fit to call us to
stand before his face,
And we're mighty glad to tell you,
sir, we have no desire to roam,
For we think we know just what it
means to sell the old farm home.
—Elizabeth Clarke Hardy.

Out of the House of Bondage.

(Continued from last issue.)

There were three people to whom sleep did not come that night: Rose Henderson, because she was too happy, Joe Campbell, because he was too perplexed; and his mother, because she had to think things out. She had thought before morning; the next day she sent a message tp Rose.

Rose came at once, timid and trembling, yet blissfully happy. Jane Campbell, propped up against the pillows, her sharp eyes full of inscrutable purpose, held out her hand.

"Come here, child," she said. "How pretty you are! I don't wonder Joe fell in love with you."

Rose, blushing, went to the bedside put her hand in the small one which closed about it like a trap.

"I suppose," Jane Campbell said, holding her fast, "that you think you love Joe."

"Oh, I do!" little Rose cried earnestly.

Joe's mother shook her head. "You're too bright and pretty for a sober, plodding fellow like Joe," she said. "Don't you know that, child?"

Rose's slender figure stiffened, and her brown eyes flashed.

"I'm not half good enough for him!" she cried. "There isn't anybody good enough for Joe."

Jane Campbell laughed softly.

"There, child I was only joking. Do you suppose his mother doesn't know what he is? Think what he's been to me these six months! It—it almost kills me to be a drag upon happiness."

Rose looked at her in perplexity, half upon the defeasive still, half yielding to pity. Jane's face had softened, and the whole small, helpless figure was full of pathos.

"For his mother to chain him down!" she murmured.

It was too much for Rose. "But you don't!" she cried. "You couldn't. Joe loves you better than anybody!"

"You generous little thing!" Jane said, smiling bravely. "And it's only a little while—I'm sure it can't be long—and he— both of you—will be glad afterwards. But to have your engagement put off even for a day, for me—"

Rose's pretty brown eyes met the keen blue ones with wide wonder.

"That isn't anything when—we know," she said. And, poor child, she really supposed that it wasn't.

They had a long afternoon together—Jane affectionate, sorrowful, appealing; Rose loving and pitiful. Yet when she left she was somehow sure, though she could not have told why, that it was not right for her and Joe to be engaged. She told him so when he came around to see her that night.

"But we can't help being!" Joe cried. "We know, and its the knowing that makes us."

Rose sighed, and a shadow fell across the brightness of her face.

"Nothing can ever change that; Joe," she said wistfully; "but, somehow I felt sure this afternoon that it wouldn't be right. Your mother needs you so, Joe, and it would seem like taking you away. She may grow better soon, and we're young—we can wait."

"But when shall I see you?" the poor fellow cried.

"There's Sunday," Rose said steadily.

"Sunday!" Joe retorted passionately. "A ten-minutes walk one a week! Rose, I must come over one evening, any way. It isn't fair to either of us not to—mother herself would be the first to say so."

"Are you sure?" Rose asked, brightening.

"Sure," he returned positively.

Jane Campbell was very thoughtful when she learned of the arrangement, but she did not try to interfere. And so for two years—nearly three—Rose and Joe lived upon their one evening and ten minutes a week, with an occasional stray gift of fortune in the way of unexpected meetings. Then Joe grew restive. Jane saw it coming. She clinched her small hands underneath the bed cloths and waited.

"Mother," Joe said, "I want to get married next month."

"I—I wish you could, Joe," Jane faltered.

Joe strode across to the bed and stood looking down at her, half pitiful, half triumphant.

"But I can, mother. I know it seems a great deal in one way to ask of a girl, but Rose loves you so—why, mother!"

"It's—its nothing," Jane declared fiercely—"nothing. Go on; you were saying—?"

But Joe would not go on. He quited her and then ran for Dr. McGruder. The doctor looked troubled when Joe explained.

"Has anything happened to excite her?" he asked.

"No—yes—I was speaking of getting married," Joe confessed.

The doctor frowned and pulled his heavy red beard.

"It's hard on you, Joe," he said—"confoundedly hard; but I'm afraid she'll have to be kept quiet for a while. You and Rose can wait a little longer, can't you?"

And Joe answered instantly, "of course we can," but suddenly all the light went out of the day.

He and Rose had a long talk the next night, though it wasn't their evening, and Rose at once declared that they must wait until the doctor said Jane could bear the excitement.

"If she'd only let me do things for her!" Rose sighed, with quivering lips; but she knew—they both knew—that Jane would not.

So they waited a year longer, and when the year was over it still seemed necessary to wait a second year. Then at last they set another day. Rose's clever little fingers began to dream over the wedding gown (begun four years before), and finally, one glorified morning, Joe went over to Canaan for the license. The day was still nearly four weeks off, but it made it seem nearer to have the license. He stopped at Miss Parson's on the way home, and in the little, stuffy, hair-cloth parlor the two of them read it together.

"It doesn't seem possible, does it?" Joe asked. He was almost trembling himself, big fellow though he was,

But little Rose looked up at him bravely, ignoring the color that flooded her face under his shining eyes.

"I told you it would come right, Joe," she said.

Joe went on through the summer afternoon. The air was full of swarms of tiny, gauzy-winged creatures, flecks of rainbows, whirling through their dizzy hour of life; but Joe never saw them, so much more dizzy, so infinitely more radiant, was the whirl of joyous hopes and plans within his heart. Half-way home he met Dr. Pemberton, trudging down the opposite side of the street. He stopped short when he saw Joe's face, and then crossed over.

"Hello, Joe!" he said. "You look as if you'd fallen heir to a cottage in paradise.."

"I guess I have," Joe answered. "It's only three weeks and five days —I got the license today."

The old minister pulled off his hat and waved it boyishly around his white head.

"That's the talk!" he cried. "Come up and tell me about it tonight, Joe I've got to go and see Martha Davis now. Her constitution requires a minister once a week."

But Joe did not go that night; it was the next evening, just at dusk, that he walked heavily up the path. Theold minister called out a cheerful bidding to enter, but when he saw Joe's face the welcome died on his lips.

"What's happened, Joe?" he cried.

Jee dropped into a chair; his eyes were hard and dispairing.

"It's mother again, somehow, yesterday she fell over the edge of the bed and dislocated her shoulder. Doctor says it will be a slow business. Mother is suffering badly, though she doesn't complain a bit. She—she feels so badly about putting off the wedding. Joe said it steadily, not looking at his friend.

"But, Joe," Dr. Pemberton cried excitedly, "it's got to be! You and Rose have waited too long—you've waited five years too long already. Tell Jane it's got to be—bolster her up and get married anyhow."

Joe shook his head. "She wants you to come down and see her," he said dully.

"Come down? Of course I'll come down," the little minister stormed.

"I'll come down and say things—that's what I'll do. You just hold on a minute, Joe."

Joe waited while Dr. Pemberton pulled off his old flowered dressing gown and put on his coat, and then the two set off down the hill together in a silence that was the heart of comradeship. Only when they reached Joe's gate the old man turned and wrung his hand.

"Don't you worry Joe," he said. "We'll fix it somehow."

But he didn't. When he saw Jane Campbell's pain-drawn face, he knew with a sinking of the heart that,

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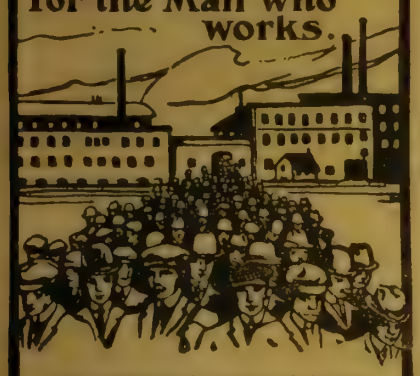

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whatever it may have been other times, there was no "fixing it" then. So he only sat by her bedside a few minutes and talked cheerfully, and then carried her with her suffering up the path to a throne where his old feet went many times a day with his people.

Joe was getting supper in the kitchen, and disappeared into the pantry as the old minister opened the door; by which sign his friend knew that he had reached one of the ways that one must walk alone, and, closing the door, the minister softly stepped out into the dusk. A little way down the street the doctor picked him up.

"Been down to Jane's?" he asked. The minister nodded; he looked old and tired.

"James," he asked suddenly, "did she do it herself?.'

"Heaven unows," the doctor answered gravely.

"She's paying for it if she did," Dr. Pemberton said slowly.

"She's making Joe pay," the doctor retorted grimly.

The little minister turned sharply. "She's paying for it," he repeated. "Man, did you think I meant her body?"

"I wish Joe would pick Rose up and elope with her," the big doctor grumbled. "It would be the only way."

"I think Joe would be willing to,' the minister returned, "but—there's Rose."

Yes, there was Rose, and as the weeks wore away, Rose's two old friends began to watch her anxiously; for the pretty sparkle had all died out of her eyes, and a quiet hopelessness dwelt in them. Rose indeed had given up hope. She came slowly up the hill to the old minister one afternoon, but when she got there she only sat beside him on one of the garden benches, staring heavily down the row of four o'clocks. Suddenly she looked up into the grave, loving eyes.

"It—it isn't for myself I care!" she cried passionately. "Oh, don't think that! It's Joe. He's getting so worn, and it's so hard on him doing things at home. It isn't right for a man to. I wouldn't care how his mother treated me if only I could go and make things easy for Joe."

"Who," the minister said cheerfully, "is coming in the gate this minute. I wonder if you can take care of him while I finish a bit of work in the house. Keep him till I come back—tell him I want to see him."

Joe came slowly up the path. He did look badly; his broad shoulders had lost their old confidence and were beginning to sag a little; but when he saw Rose his listlessness vanished. Troubled as they were, neither of them could deny joy for a few blissful moments in a summer garden. The old minister waved his hand to them and disappeared into the house; a curious excitement had come into his manner.

"Lord," he said, "Thou knowest we are meddlesome by nature, and prone to take Thy tasks upon ourselves as the sparks fly upward; but I've been praying for light five years and—I'm going to do it!"

He gave an order or two in the kitchen, puttered about a little, and then went back to the garden. The young people rose as he came down to them, and he stood looking at them, a queer, wistful smile on his old face.

"Aren't you and this little girl about ready for me, Joe?" he asked.

"Ready!" Joe groaned. "Sometimes," he said fiercely, "I think I'll pick her up and bring her to you, whatever happens."

The old minister's face grew more earnest. His sister and Molly were coming down the path with a tray of cakes and raspberry wine, but he did not notice them.

"Would you go, Rose?" he asked.

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"It—it might be easy, child. Would you go?"

Rose looked up at him, her eyes darkening into sudden tears.

"Do you remember what I said half an hour ago?" she cried, her voice breaking suddenly.

The old man put a hand—a wise, tender old hand—upon each of theirs, and his voice strengthened and filled with solemn joy.

"Then," he declared solemnly—"then, Joseph and Rose, I hereby pronounce you man and wife; and whom God hath joined together let no man put asunder."

There was a moment when the buzzing of a bee in the hollyhock beside them sounded loud across the startled silence. Then the old minister said gently: "Let us pray."

The cake and wine that followed was to them all a sacrament. They could not speak at first, Rose and Joe, but Dr. Pemberton began chatting cheerfully, and gradually they found their way through the wonder of it. Finally the old minister rose.

"I'm going to ask you to excuse me while I make a bit of a call. I'm going to your mother, Joe."

Joe started up, but his friend waved him back. "This is my business," he said. "I forbid you to come for an hour. You've got to make your peace with Rose first—or mine." And he was gone.

He went straight to the docror's. His old friend sprang up with an exclamation of alarm as he saw him. "Are you sick, man?" he asked.

The little minister looked up at him whimsically. "I've just married Joe and Rose," he said, "before they knew what was happening. Now I've got to tell Jane. You must come with me. If anything should hap-pen—"

The big doctor was upon him. "Ye've married Joe Campbell and Rose—married them! Man, it's the grandest thing I've ever heard! Ye've married them in spite of themselves! I wouldn't miss going with you for a thousand dollars! Ye've saved those children, Andrew man, and nothing else in the world would have done it. Eh, but I'm proud of ye!"

The big doctor still shaking with delight, the little minister grave and preoccupied, the two went down to Jane Campbell's. She was lying alone in the dreary, silent house, her knitting in her hands. She put it down as her guests entered. Suddenly she grew pale.

"You've come to tell me something!" she said.

Dr. Pemberton went up to the bed. "I've come to bring you good news, Jane," he said, his kind eyes looking straight into hers. "You've worn yourself out, poor child, beating down your own soul. You can stop now—you've got to. I married Joe and Rose this afternoon."

For a moment there was silence in the room, while the doctor watched keenly. Then Jane spoke.

"You'd better send some one in. I suppose it will have to be Amanda Gates. The wedding fruit cake's in the best room closet. I hate to have any one mussing round, but I suppose Amanda'll be the best."

As they reached his gate again, the doctor spoke.

"There's a woman for you! How many years d'ye suppose she's had that wedding cake ready? Won't ye bide awhile, Andrew, and talk it over?"

But the old minister shook his head.

"Not tonight, James," he said. "The children will be waiting up at the house."

He trudged off alone, facing the sunset, but the light in his eyes was that of one who had helped a soul out of bondage.

Flour and Breadmaking.

(Continued from last Issue.)

QUALITY OF THE DIFFERENT KINDS OF FLOUR.

It is impossible to bring out here all the differences in quality of the bread of the various kinds of flour. Fig. 1 shows the average size of the loaf of bread made from equal weights of the Western hard spring wheat flour and our soft Ontario winter wheat flour. The former is a good bread flour; it has more and better gluten, greater water absorptive power, greater expansion, and, in every resect but that of flavor, produces amore desirable loaf than the latter. Good bread can be and is being made every day from the soft wheat flour; but, while it may be preferred by some people, it will not make bread that will supply the demand of the bakers' customers so well as the stronger flour.

Fig. 2 shows loaves of bread from several of the grades of flour made from one stream of the Manitoba wheat, while the accompanying table gives the figures showing the percentage of gluten and the water absorption of the flours, the weight and size of the several loaves, and the quality of the bread. Exactly 12 oz. of flour was used in making each loaf. To secure figures showing the comparative quality of the bread, that made from the patent flour was taken as a standard and given 100 points for color, texture and appearance, and the other loaves were marked in percentage of the standard. The quality of the bread from the low grade and red dog was so poor that it could not be compared with that from the patent flour.

Flour	Per cent of wet Gluten	Per cent of water a'sorb'd	Weight of Loaf *Grams	Size of Loaf Cub. in.	Quality of Loaf		
					Color	Texture	Appearance
Patent	32.16	66.5	522	162.26	100.0	100.0	100.0
Bakers'	34.46	65.6	515	160.43	97.0	99.0	100.0
Straight Grade	34.09	65.9	517	160.43	96.0	99.0	100.0
Low Grade	41.13	72.4	530	145.18			
Red Dog	30.68	78.2	524	145.18			

*28.34 grams in 1 ounce.

The first three loaves are very similar in appearance, but, although the patent flour contained the less gluten, it was able to absorb the most water and give a slightly heavier and larger loaf of bread that was superior in color and texture to that obtained from the bakers' grade. The straight grade is, as might be expected, a fairly strong flour, but darker in color than the patent of bakers' grades. The low grade flour made a loaf of fair size, but in color and texture it was so poor that no strict comparison could really be made with the higher grades. The water absorption of the low grade flours, especially of the red dog, is very h gh and the weight of the loaf is correspondingly high. The patent flour made the largest loaf, and the red dog the smallest. The dark, branny flours are always high in absorption, but produce a very small, sodden loaf of bread which does not give much surface for evaporation of water, and is, consequently, very heavy and of poor quality.

It is evident that the first three flours are of good quality for mak- bread, while the fourth, grade, is poor in quality, although it contains fully as much food materials as that from the higher grades. The red dog flour may be used in making dog biscuits, or sold for cattle feed, but is seldom manufactured into bread.

In Fig. 3 we have a photograph of seven loaves of bread from seven different varieties of wheat grown on the Experimental plots of the Ontario Agricultural College. This cut illustrates the wide variation in the quality of the bread that the different varieties are capable of producing. The comparison is more fully brought out by a study of the figures given in the following table;

Fig. 1. Bread from straight grade flour made from, 1st, Manitoba wheat; and 2nd. Ontario Winter wheat.

Flour	Per cent of Gluten	Per cent of water a'sorb'd	Weight of loaf *Grams	Size of loaf Cub. in.	Quality of Loaf.		
					Color	Texture	Appearance
Bulgarian	26.87	47.4	458	128.71	97.0	97.0	100.0
Early Red Clawson	25.87	48.8	464	100.04	97.5	96.0	93.0
Kentucky Giant	27.10	48.8	460	120.78	99.0	101.0	95.0
Early Genesee Giant	26.87	48.8	459	132.37	100.0	100.0	100.0
Geneva	28.40	47.4	462	115.90	98.0	97.5	98.0
Dawson's Golden Chaff	22.50	48.8	473	111.63	90.0	94.0	96.0
Egyptian Amber	27.50	48.8	475	127.49	99.0	7.90	100.0

*28.34 grams in 1 ounce.

Egyptian Amber gave the best yield of bread, the Early Genesee Giant the largest loaf, and the best quality of bread, while Dawson's Golden Chaff and Early Red Clawson gave the smallest loaves and the poorest quality of bread. In Fig. 4 the cut loaves of Nos. 2 to 6, inclusive are shown. Note the coarse, open texture of Dawson's Golden Chaff and the Early Red Clawson, and the nicely rounded shape of the loaves from Early Genessee Giant and Geneva.

Previous mention was made of the fact that some localities produced a better quality of wheat than others. Fig. 5 shows the difference in size of two loaves of bread made from Ontario winter wheat grown in two different localities. The larger loaf was also much superior in color, texture and general appearance. It is evident that the millers in the locality in which the stronger wheat is grown or those who buy from this district, have an advantage over the unfortunate ones who have to use the weaker wheat.

Again, as is shown in Figs. 3 and 4, the gemeral quality of the wheat in any section will vary as the predominating varieties are of the stronger or weaker sorts. The miller grinds a mixture of varieties, usually striving to use enough of the stronger varieties with the weaker sorts to keep up a good quality of flour; but, unless he is catering to some special trade, he does not pay so much attention to uniformity of grade as when the stronger and usually more expensive flours are being made. In the case of the Western wheats, the same difference exists between varieties, localities in which it is grown, and the condition of the soil producing it, etc.; but most of this wheat is graded and passes through the elevators where all the wheat of the same grade is mixed together; consequently, unless the miller can buy from graded districts and ship by car directly to his own mill, he cannot control the selection of the wheat very much.

This mixing of varieties of wheat from different localities is blending to secure certain results; but, what is usually cheaper than the hard, and partially to secure the flavour of the one and the expansion and texture of the other. They are usually spoken of as "general purpose" flours, or as "household" flours.

Fig. 2. Bread from five grades of flour made from one stream of Manitoba wheat. No. 1, Patent; No. 2, Baker's grade; No. 3, Straight grade; No. 4, Low grade; No. 5, Red dog.

Fig. 3. Bread from seven Winter wheats grown on Experimental plots, Ontario Agricultural College.
No. 1, Bulgarian; No. 2, Early Red Clawson; No. 3, Kentucky Giant; No. 4, Early Genesee Giant; No. 5, Geneva; No. 6, Dawson's Golden Chaff; No. 7, Egyptian Amber.

Fig. 4. Cut-surface of loaves shown in Fig. 3.
No. 1, Early Red Clawson; No. 2, Kentucky Giant; No. 3, Early Genesee Giant; No. 4, Geneva; No. 5, Dawson's Golden Chaff.

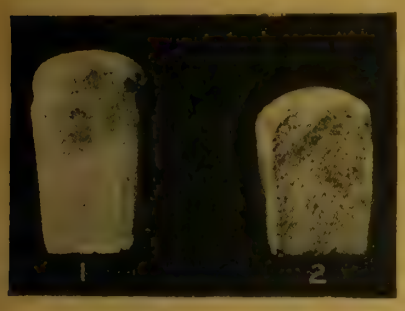

Fig. 5. Bread from Ontario Winter wheat grown in different localities.

In Fig. 6 we have an illustration of the effect of blending different proportions of the hard with the soft. Loaf No. 1 is made from an 85 per cent. Manitoba flour, and No. 7 is made from an 85 per cent. soft flour. No. 6. contains 20 per cent. of the Manitoba flour and 80 per cent. of the Ontario flour. No. 5 contains 30 per cent. of the Ontario flour, and Nos. cent. of the Ontario flour, and Nos. 4, 3 and 2 contain 40, 50 and 60 per cent., respectively, of the strong flour. Note the increase in size with the increased proportion of the stronger flour.

BLEACHING.

Every experienced baker knows that newly made flour does not give so satisfactory results in breadmaking as flour that has been aged by storing in a suitable place for two or three months. Why this should be so is not definitely known. There is probably a slight drying out of the flour which would naturally increase its water absorptive capacity. The expansive power is also increased and the flour is improved in colour. Bleaching the flour by chemical means appears to have a somewhat similar effect as that brought about by ageing; but, while a freshly milled bleached flour is better for breadmaking than the fresh unbleached article, the artificial bleaching will never make a flour equal in quality to that obtained under the ordinary conditions of ageing.

The results of bleaching are most plainly seen in the change of colour; the flour becomes whiter or bleached in appearance, but it has not the same desirable creamy shade that is obtained by natural ageing. However, because of the general preference for the whitest bread, a freshly made

Fig 6. Loaves of bread made from Manitoba and Ontario flous blended in following proportions:

No. 1	100	p.c.	of	Manitoba						
No. 2	60	"	"	"	and	40	p.c.	Ontario	soft	flour
No. 3	50	"	"	"	"	50	"	"	"	"
No. 4	40	"	"	"	"	60	"	"	"	"
No. 5	30	"	"	"	"	70	"	"	"	"
No. 6	20	"	"	"	"	80	"	"	"	"
No. 7					"	100	"	"	"	"

The following table gives figures showing the change in yield of bread, the size and quality of the loaf of bread produced in each case. Twelve ounces of flour was used in making each loaf.

Flour	Percent of Gluten	Percent of water a'sorb'd	Weight of loaf *Grams	Size of loaf Cub. in.	Quality of Loaf. Color	Texture	Appearance.
No. 1	34.09	68.8	523	167.0	100.0	100.0	100.0
No. 2	32.31	66.2	507	162.9	99.0	99.0	98.5
No. 3	31.86	64:6	495	146.4	98.0	98.5	96.0
No. 4	31.41	62.5	496	145.8	97.0	98.0	95.0
No. 5	28.97	61.4	489	125.7	96.0	96.0	92.0
No. 6	30.52	60.9	490	115.9	95.0	95.0	90.0
No. 7	29.63	52.3	477	111.6	94.0	94.0	87.0

*28.34 grams in 1 ounce.

A common blend used by the millers is 40 per cent. of the strong flour and 60 per cent. of the weaker Ontario flour. It will be seen that while the bread from this blend is not equal to that from the all strong flour, it is a good loaf in every respect.

bleached flour will usually sell for more money than the same flour unbleached. As a general rule only the better grades of flour are bleached. The cost of treatment is small and the action, while not instantaneous, is rapid.

(Continued in next issue.)

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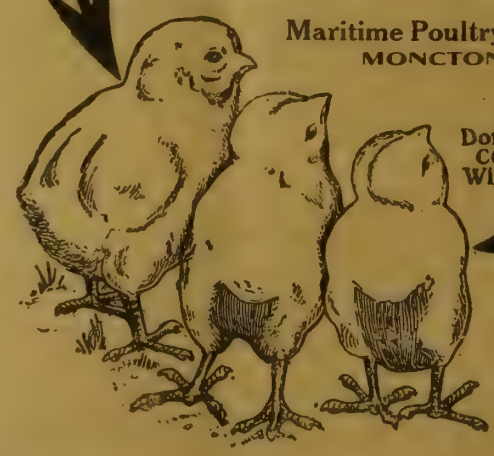

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DeYOUNG,
Box 120 Dartmouth, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister. for Spavins, Ringbones, lumps or bunches of any kind.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

RIVERSIDE HOLSTEINS

We have for sale a splendid lot of young stuff both males and females that we are showing this Fall. We can fit you out with an ideal foundation herd or individuals of great merit at a very reasonable figure.

LEA & CLARKE, - Victoria, P. E. I.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old.. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

Lawndale Stock Farm

offers for sale the following pure bred Shorthorn Stock.

Our herd bull "Prince Mistletoe," color roan, aged 3 years good size and in good condition, bredby N. S. Agricultural College. Also three of his sons, viz:—1 roan bull, 14 mos. old, out of a good milking cow and 2 bull calves, 5 mos. old; color roan. Prices very reasonable, write or call.

J. M, LOVETT, M. D., Prop.
Yarmouth, N. S.

FOR SALE

AYRSHIRE HEIFERS

2 Dropped Nov. 1911
1 " May 1912

Write for prices or come and see them.

ALLANDALE FARM, Hampton, N. B.

FOR SALE

25 S. C. Brown Leghorn Hens at $1.00 each. 100 S. C. Brown Leghorn Chicks, 6 weeks old at 50c. each. 1 Cyphers incubator 244 egg capacity. Price $20.00.

W. H. HENRY,
Shubenacadie, N. S.

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

FOR SALE

One Yorkshire sow nine months old, due to farrow in Sept. also three litters that will be ready to ship in July.

JOSSELYN & YOUNG.
"Rose Bank Farm" Silver Falls, St. John, N. B.

Big Money in Raspberries

$180.00 from 1-4 acre in 1911 is record of a grower here. Fall planting is perfectly satisfactory.

We have for sale plants of the celebrated "Herbert" (harvest yielder and frost-proof) also King (a new early) Hiram, Eaton and others. Write for prices.

ORCHARD HILL FARM, Brown's Flats, N. B.

FRIESIAN HOLSTEINS

male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
Buctouche, N. B.

FOR SALE

Two registered bulls, eighteen months old, one Guernsey, one Shorthorn. First class animals of excellent breeding. Apply to

CLARENCE J. COOK. Central New Annan
COL. CO., N. S.

The Moulting Process.

(Continued from page 771.)

never be shown, or that are other than white in color, the use of iron as a tonic cannot be too strongly recommended. Plenty of green vegettables should be supplied if the fowls are not kept on grass, and a box of charcoal within reach is of service.

Many people give sulphur to birds during moult—a small quantity in the soft food. It is an ingredient in feathers and in eggs, and is good for fowls in mild weather, but should not be given on cold, wet days, owing to its tendency to predispose the birds to chill. Fanciers take far more trouble than we have described, some even go so far as to color-feed their birds. It is well known that many foods, if given during the moult, influence the color of the feathers, and exhibitors are not slow to avail of the knowledge. Some breeds vary in color at each moult; for instance, buff birds become paler each year, and Rocks sometimes get darker and sometimes lighter.

The time taken to moult varies with the age of the fowls. The younger the fowl, the earlier and quicker it moults and it is a safe rule that any farm bird that is not in moult in August will not lay an egg before Christmas. In the case of valuable stock birds a little more latitude may be allowed, as they are not wanted to lay before the following spring. Where there is no appearance of moulting when these lines appear, all the birds intended for laying next winter should be immediately put on a low diet, and by the middle of the month the moult should have begun. With the treatment above described, winter eggs should be fairly certain.—M., Farmers' Gazette.

The Good Bull Pays.

(Continued from page 767.)

blood; and one can better afford to pay $150 for such a sire than to accept another at $25 simply because he is "registered." Further, such a bull as a yearling ought to serve 10 cows outside of the herd at a fee of $2 each. Were the herd composed of 10 of his daughters as good as the heifer considered instead of the 10 it actually contained, the account would stand substbntially as follows:

Average gain from 10 cows, at $24.66 each	$246.60
Ten cows served at $2 each	20.00
Total	$266.60
Allow for cost of bull	150.00

Net profit for first years use $116.60

A well selected bull may be used for at least two years, and ought then to bring aconsiderable proportion of his first cost for breeding purposes elsewhere.

It is evident that such an investment pays, and pays well. It is a demonstration of the fact that, if an economical production of butter is desired, the improvement must come through the use of sires bred from cows of high-producing capacity, and that the best cows are raised on the farms—infrequently bought. It also shows the importance of sticking to the breed from which the improve ment began. Were the lesson generally heeded, three cows would produce as much as four ordinarily kept, saving both feed and labor.—C. Clarke in Kimball's Dairy Farm.

The Care of Cream for Buttermaking.

It is a recognized fact that the price received for butter is very largely influenced by its quality and this is in great measure determined by the care given the cream from which it is made. This matter is recognized by the Department of Agriculture at Ottawa as being of vital importance of the creamery patrons and and buttermakers of Canada; consequently there has been prepared by the Chief of the Dairy Division under the direction of the Dairy Commissioner, a bulletin on "The Care of Cream for Buttermaking." It commences with the health and feeding of the cows and follows the subject through the various stages of milk. ing, separating, storing and delivering the cream, each section being dealt with from the standpoint of the man on the job rather than of the official in an office.

The results of experiments conducted on farms and in creameries are given to show the advantages of separating a rich cream, properly cooling and storing it, as well as of making frequent deliveries. The bulletin says:—"Keeping the cream for longer than two days at the farms has, no doubt, much to do with the old cream flavor so common in gathered cream butter, and we can scarcely expect to have this defect remedied so long as cream is gathered less than three times each week."

The bulletin which is No. 32 of the Dairy and Cold Storage series concludes with a summary of important notes for patrons, creamery owners and buttermakers. Sufficient copies have been issued to supply each creamery with a copy for each patron. Requests for supplies for this purpose should be sent to the Dairy and Cold Storage Commissioner while individual copies may be received from Publications Branch of the Department of Agriculture at Ottawa. This bulletin is issued by authority of the Hon. Martin Burrell, Minister of Agriculture.

Potatoes for Cuba.

Two years ago enormous quantities of potatoes were shipped from New Brunswick to Cuba. Last year the shipments were very small because there was such an active demand in the Upper Provinces and the West. This year it is expected there will be a renewal of the trade with Cuba, and arrangements are being made by William Thomson & Co. by which there will be a steamship service between St. John and Cuba every fortnight if the demands of the trade should require it. It is anticipated that despite the prevalence of wet weather during July and the lateness of the spring season there will be a fair crop of potatoes in the province this year.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

MARKETS

St. John Prices.

GRAIN.—Wheat, $1.25 to $1.40 bush; Oats, 50c to 53c bush.; Peas, $2.40 to $2.50 bush.; Barley, 90c. to $1.00 bush; Buckwheat, 50c. to 60c. bush.

FEEDSTUFFS.—Bran, $25.00 ton; Shorts, $26.00 to $27.00 ton; Middlings, $27.00 to $28.00 ton; Linseed Meal, $6.00 per cwt.; Cottonseed Meal $2.00 per cwt.; Corn Meal, $1.80 cwt.

GRASS SEEDS.—Timothy, $9.00 to $10.00 bush.; Com. Red Clover, 25c. lb.; Mam. Red Clover, 27c. lb.; Alsike, 26c. lb.

LIVE STOCK.—Butchers Cattle, $2.80 to $6.90 cwt.; Stockers, $4.00 to $4.50 cwt.; Milch Cows, $55.00 to $70.00 each; Sheep, $4.00 to $4.25; Lambs, $5.00 to $5.50; Hogs, $7.00 to $7.50 cwt.

DRESSED MEATS.—Beef (carcass) 8½c. to 11c. lb.; Mutton, 10c. lb.; Veal, 9c. to 11c.; Pork, 9c. to 11c.

HORSES.—Drafters, $250.00 to $300.00

DAIRY PRODUCTS.-Creamery Butter, 26c. to 30c.; Dairy Butter, 22c. to 25c.; Cheese, 15c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 25c. to 28c. per doz.; Fowl, 12c. lb.; Chickens, 20c. to 25c. per lb.; Turkeys, 20c. to 22c. per lb.

FRUIT.—Apples, $2.00 to $2.50 bush Cranberries, 8c. to 9c.; Honey, 16c. to 20c. lb.

MISCELLANEOUS.—Hay, $16.00 to $18.00 ton; Straw, $6.00; Beef Hides, 10c. to 11½c. lb.; Calf Skins, 15c. lb.; Sheep Skins, 60c. to 80c.; Lamb Skins, 50c. to 60c.

VEGETABLES.—Carrots, $1.00 bbl; Potatoes, $2.00 bbl.; Turnips, $1.00; Beets, 30c. to 35c. doz.

Up to the present the produce market seems to be in favor of the producer. Prices in all lines have maintained a fairly high level, and owing to the unsettled weather during the growing season this condition is likely to continue.

The vegetable lines are easier owing to somewhat fresh deliveries. The market is fairly well supplied, but there is no indication of a slump as has been the case at this season of the year heretofore. This market is showing the increase in consumption due to the activity in building operations and public work now going on. This is not a temporary boom, but rather the beginning of a season of prosperity. Producers can have the market at a profitable basis right through the season by giving the consumer what is called for and of standard quality. Good stock always commands a price, while an inferior article is at the mercy of the market and the buyer dictates the price.

While the grain crop promises to be fairly good, hay is being harvested in bad condition. Good hay will be at a premium by the time the new crop comes on the market next year. The market is very strong on old stock and there is evidence of a serious shortage.

Garden truck of all kinds is going to be in demand. Reports received from localities where the line is a specia,ity would indicate about half a crop.

Owing to the low prices ruling last fall and winter for pork the raisers are not producing the usual quantity for fall delivery. As the consumption will be fully up to past years we are looking for high pork.

We expect country beef to be easy up to the new year. Shortage of feed will compel farmers to reduce their stock.

Dairy products are already showing signs of what may be expected when producers of milk have to house their cattle. It is our opinion that all the lines will be firm in price. The usual quantity of butter is not beng put in cold storage as the local demand is taking it as fast as the dairies can turn it out. A new high water mark in butter prices is in prospect.

A late fall may change the aspect but the growing season is so far advanced that a fairly correct estimate of the crop prospert can be arrived at, and, as we stated at the beginning, the market seems to be strongly in favor of the seller.

Apples are coming on the market two weeks later than usual and the New Brunswick crop is reported only fair.—Farmers' Produce and Dairy Co. Ltd.

Charlottetown Prices.

GRAIN.—Oats, 55c. to 65c.

FEEDSTUFFS.—Bran, $1.35 to $1.45; Shorts, $1.55 to $1.65; Middlings, $1.55 to $1.65; Oil-Cake, $2.35 to $2.50; Gluten Meal, $2.00 to $2.25; Corn Meal, $2.10 to $2. 25.

LIVE STOCK.—Butcher's Cattle, 4½c to 6c; Stockers, $18.00 to $35.00; Milch Cows, $30.00 to $60.00; Sheep, 3½c to 4½c; Lambs $3.00 to $5.00.

DRESSED MEATS.—Beef (carcass), 9c to 12c; Beef (retail), 8c to 16c; Mutton 8c to 14c.

HORSES.—Drafters, $125.00 to $200.00; Roadsters, $125.00 to $200.00; Carriage, $125.00 to $200.00.

DAIRY PRODUCTS.-Creamery Butter, Solid, 25½c, Prints 26c to 26½c; Dairy Butter, 20c to 24c; Cheese, List Board 12 15-16c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 23½c to 24c; Fowl, 80c to $1.25 pair; Chickens, 65c to $1.00

FRUIT.—Cherries, 10c quart; Raspberries, (retail) 10c quart; Currants, black 14c quart.

MISCELLANEOUS.—Hay $12.00 to $13.00 ton; Straw, $6.00 to $7.00 ton; Wool, 24c lb.; Beef Hides. 10c; Calf Skins, 12c to 16c; Lamb Skins, 20c to 25c; Sheep Skins, 25c to 35c. Potatoes, new, 50c bush.; Turnips, 25c to 30c bush.; Beets, 75c bush.

Market quiet, suppy limited, and demand good. Prices are about as quoted, but with new vegetables coming in and the supply increasing the price is dropping, and the prices we quote are the lowest we know of being paid.

Butter, cheese and eggs are all higher and market very firm. Beef is lower and in better supply. New grain is not ready yet but there will be some on the market within two weeks and prices will be lower in fact if any quantity was offered today, Oats would not likely sell at over 50c if at that, but the supply of old oats is about all cleaned up. New hay is not yet offered except in small lots of loose which is being used for local feeding.—R. E. Mutch.

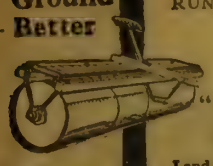
The P. E. I. Cheese Board met in Charlottetown on Friday, Aug 16th with a fair attendance of salesmen. The buyers present were Messrs. Biffin, Spillett, Auld and Mutch. The President L. McDonald was in the chair. The cable message read: "2100 cheese offered on the Brockville Board, no sales. Market dull." The following factories boarded cheese; New Perth, 150; New Glasgow, 230; Stanley Bridge, 250; Kensington, 375; Cornwall, 80; Lakeville, 70; Red House, 60; Red Point, 65. All but New Glasgow sold to R. E. Spillett at 12 15-16. Mr. Mutch offered the same price for New Glasgow but was refused. Inspector Morrow was present at the Board meeting and thought that the directors of the different factories should meet with the cheese makers more frequently and look to the safety of the plant and give the cheese maker more assistance in looking after details, particularly in keeping cans clean.

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's Indian Root Pills 46

Rolls The Ground Better



No neck weight.—Perfectly rigid frame.—RUNS EASILY.—

The "Bissell"

Land Roller will work your soil, no matter how stiff and lumpy, better than you've ever had it done before. Write Dept. M for catalog. 54

T. E. Bissell Company Limited Elora Ontario, Can.

TUESDAY, SEPTEMBER THIRD

is the date on which classes will be resumed at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

Send for free catalogue. Address,

W. J. OSBORNE, Principal.
Fredericton, N. B.

Dates to be Remembered

St. John Exhibition, Aug. 31-Sept. 7, 1912.

Halifax Exhibition, Sept. 11-19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10-13 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th., 1912.

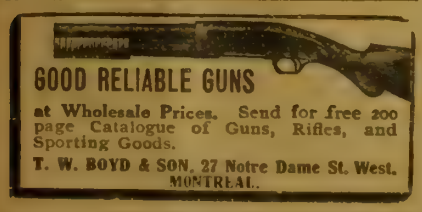
Charlottetown Exhibition, Sept. 24th., 25th., 26th., 27th., 1912.

Cape Breton Island Exhibition, Sydney, N. S., Sept September 24, 25, 26, 27, 28, 1912.

Yarmouth County Exhibition, Yarmouth N. S., September 25, 26, and 27, 1912.

Nova Scotia Agricultural College Long Course begins November 5th. 1912.

Nova Scotia Agricultural College Short Courses for ladies and gentlemen begin January 7th., 1913.



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at Wholesale Prices. Send for free 200 page Catalogue of Guns, Rifles, and Sporting Goods.

T. W. BOYD & SON, 27 Notre Dame St. West. MONTREAL.

One of the most common ailments that hard working people are afflicted with is lame back. Apply Chamberlain's Liniment twice a day and massage the parts thoroughly at each application, and you will get quick relief. For sale by all dealers.

Handling Sheep at Shearing Time.

A writer in a letter to the Agricultural Press says in regard to the handling of sheep at shearing time:—

"Before shearing commences proper provision should be made for the fleeces to be kept as free as possible from all bits of rubbish, straws and other objectionable substances. As a general rule it is not an easy matter to keep out extraneous matter, the nature of the sheep and its native habit both being against the accomplishment of their object. The chief obstacles which prevents wool being sent to market perfectly clean is that the substances which are not wanted in it find their way there quite unobserved, and more than ordinary vigilance is required to prevent them from becoming mixed with the wool. The dark color of the outside of the fleeces renders them partly invisible and the shearing, folding and packing helps to bury the stuff more deeply among the fibres. The scouring process brings much of the rubbish to view, in consequence of the whiter appearance of the wool after it has gone through the bowls. The disintegration of the material also makes it possible to feel the tiny pieces of wood, bits of leaves, etc., which having found their way on to the sheep's back before much progress has been made in the growth, has become embedded in the centre of the staple and cannot be seen until the fibres are thoroughly separated by the fingers. We have often thought that nothing would be so beneficial and interesting to wool growers as to see the actual processes through which their products are put. They would then be able to form an idea of the important though somewhat outside position they occupy in the great wool industry. After seeing for themselves how their fleeces are handled, they would be able to realize that their work is on no mean order.

HOW TO HANDLE THE SHEEP.

The floor of the building in which the sheep are shorn must be thoroughly swept, and then large doors laid on the ground. These will be much better to work on than either the bare floor or the sheep stocks which are frequently used. The latter implement is very useful in its place, and often serves a good purpose at shearing time, but the ewes should certainly not be laid upon it to be relieved of their fleeces. When it is used the sheep require to be lifted on to it, which takes longer and is not so easily done as simply turning them on the ground. They are also less comfortable, and consequently more likely to cause trouble to the shearer. One half of the art of shearing lies in knowing how to handle the sheep, and the other half being able to manipulate the shears. Many a man could shear all right if the sheep volunteered to behave themselves. Unfortunately they do not always do so, though this is generally the fault of the workman. So long as the animal is kept in a comfortable position there will be little trouble, and if any slight movement is taken as a sign that the sheep is not being held as it should be, and a change of position made, the shearer will find that he can continue his work almost with out interruption. Fatal injury may be done to the interna organs of the sheep by rough usuage and when shearers have been employed who have not cared how they did their work, the number of the flock has been seriously reduced. If the animal should succeed in twisting itself into an unnatural position, it should be allowed to rise to its feet rather than be forcibly made to return to a more natural attitude. The shearer's attempt to compel his victim to assume the posture he requires only intensifies the creature's determination to do otherwise, and if neither party will give in a twisted bowel may be the result. If the fleeces are taken off with the sheep on the floor in the way described, all casualities may be avoided. The ewes can be turned about into almost any easy position, and the operation completed in the minimum of time with the least possible amount of extertion.

Dustman's Book of Plans

—AND—

BUILDING CONSTRUCTION

By U. M. DUSTMAN
(Licensed Architect

10,000 Sold in 30 days

Price, $2.00 Prepaid.

Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an anthority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

CONTENTS

General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows, Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure—Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete—Proportions—Sand and Gravel—Itamized List of Material Costs Writing of Specifications.

This book will be sent, together with a year's subscription to The Maritime Farmer, to any person upon receipt of $2.00. That is if you are already a subscriber and will send us two dollars we will send you the book and give you credit for one year's subscripton If you are not already a subscriber and want the book, you may obtain it and The Maritime Farmer for $2.00. These books cannot be purchased anywhere for less than $2.00 each and they are a bargain at the price.

THE MARITIME FARMER,

SUSSEX, - N. B.

Halifax Provincial Exhibition.

In three weeks the Sixteenth Annual Exhibition of Nova Scotia will open to the public.

Judging from the entries so far received in live stock classes the show will be greater than ever.

The management is sparing no expense to make the amusement end of the fair the best that has ever been given the public.

In addition to the usual good horse racing for which this fair has been notable in the past, three afternoons of foot racing will be held, open to all amateurs in the Maritime Provinces.

The most attractive and high-class acts of vaudeville have been engaged headed by Cedora on the Golden Globe, and for the first time in the province; daily Aeroplane flights will be given, the aviator starting from the centre of the track enclosure and returning to same place.

This is not an airship, but one of the most up-to-date aeroplanes of the Curtis type.

The fair will be opened on Wednesday, Sept. 11th, by the Right Hon. R. L. Borden, Premier of Canada.

Entries in all classes close on Saturday, August 24th.

THERE IS NOTHING FOR THE LIVER SO GOOD AS MILBURN'S LAXA-LIVER PILLS

They will regulate the flow of bile to act properly on the bowels, and will tone, renovate, and purify the liver, removing every result of liver trouble from the temporary, but disagreeable, bilious headache to the severest forms of liver complaint.

Mrs. John R. Barton, Mill Cove, N.B., writes:—"I suffered, more than tongue can tell, from liver troubles. I tried several kinds of medicine, but got no relief until I got Milburn's Laxa-Liver Pills. They are a wonderful remedy."

Milburn's Laxa-Liver Pills are 25 cents per vial, or 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

MAXWELL'S HIGH SPEED CHAMPION

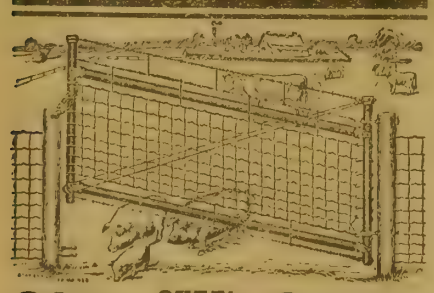
The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

DAVID MAXWELL & SONS, ST. MARY'S, Ont.



Clay STEEL FARM Gates

CAN BE EASILY ADJUSTED TO LET SMALL STOCK THROUGH (see illustration.)

They are the most convenient and serviceable farm gates made. Positively keep back breachy bulls. They cannot bend, sag, break, blow down or rot, and are fully guaranteed.

2000 Clay Gates sold last year. Write for our 60 days free trial offer—also our illustrated price list.

Canadian Gate Co., Ltd.
54 Morris St., Guelph, Ont.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Directions for Sending Specimens.

Orchardists are urged to examine their trees and plantations very closely for injurious insects and fungous diseases.

Specimens of insects, if dead, should be wrapped in paper or cotton and inclosed in a strong pasteboard, tin or wooden box. If the specimen is particularly soft, it should be packed in cotton saturated in alcohol Wherever possible caterpillars and so forth should be packed alive in a box together with a supply of their food; air-holes are not necessary. Particulars as to where the insect was found and the nature of damage which it is doing, whether to leaves, buds or stem, are frequently of great importance.

In the case of bacterial or fungous diseases, choose specimens representing every stage of the disease. Moist material or material likely to decay, should be packed as dry as possible. Press small plants or parts of larger ones carefully between layers of newspapers, protecting this if necessary, with stiff cardboard. Fruits, each separately wrapped, should be packed in strong cardboard boxes.

All such packages should contain the name and address of the sender, and are carried postage free.

Send specimens of insects to: Dr. C. Gordon Hewitt, Dominion Entomologist, Central Experimental Farm, Ottawa.

An Insect Enemy of the Potato Bug.

Editor the Maritime Farmerj—

Readers of "The Farmer's Advocate" have seen in the issue of the 18th. July, that Mr. Peter McArthur has found a beetle preying on the potato bug.

My son found one a few days ago, which when touched walked off with a young potato bug on its proboscis. This one varied in color from the one found by Mr. McArthur, but apparently belongs to the same family. It was light brown, about as broad, but rather shorter than the adult potato bug, but had the square shoulders noted in the one previously mentioned.

Mr. McArthur says "It is rather a handsome creature, of about the same length and breadth as the hard shelled potato bug, square-shouldered and attractively marked with yellow stripes on the back ground." I noticed it had its proboscis sticking into a young potato bug.

The important point is that in each case the beetle had its proboscis sticking into a young potato bug and walked off with it when touched, which leaves no doubt that it had a firm grip on the bug.

Now we want to know how to spare this beetle while keeping the bugs in check, until it becomes plentiful enough to keep them under control for us.—J Turner, Sackville, N. S.

A Herd With a Record.

Samuel Dickie & Sons, Central Onslow, N. S., writes:—The bulls we offer for sale in our present advertisement in the Maritime Farmer, are a real high-class lot and in good growing condition. Their dams average 12,358 pounds milk in one year. Seven of the bulls are sired by Helbon DeKols Prince, whose dam has a record of 17,346 pounds milk and 710.50 pounds butter in one year at the age of three years and four months. Among the lot are a couple of exceptionally good ones, fit for service, from cows with records of from 15,000 to 18,000 pounds milk in one year. There is also a very fine calf, about six months old, whose two nearest dams average 25.55 pounds butter in seven days in official test, average per cent. butter fat 4.15.

Among recent sales was a fine young bull to Mr. Joseph R. Taylor, Upper Dorchester, N. B. This bull was sired by Helbon DeKols Prince, and is out of a young cow that averaged over sixty pounds milk per day for three months after calving. Her yearly record going over 8,800 pounds in one year, when but twenty-two months old.

Another sale was a nice heifer calf to E. H. Barter, St. Stephen, N. B. This heifer was also sired by Helbon DeKols Prince and her dam is Cobequid Arne Belle, the reserve junior champion at the 1910 Dominion Exhibition, St. John. Until the last few days of hot weather our entire herd of cows have averaged about 36 to 37 pounds milk per day with only two cows and a heifer that freshened since January.

FREE TO MEN

You Yourself Can Restore Your Vitality

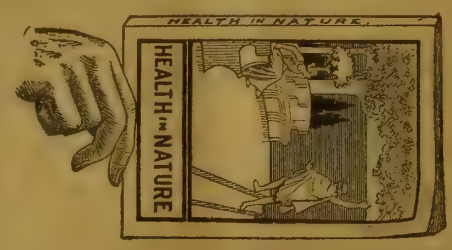
VITALITY is the greatest power in the world. If I renew your VITAL VIGOR I restore you to full and complete manhood. No matter what your age, whether you are young or elderly, no matter what early indiscretion may have sapped your courage. If I resupply you with new VITALITY I give you the strength that all healthy, vigorous men possess. I know the source of this VITAL SUPPLY. My HEALTH BELT, with suspensory attachment, pours a great stream of VITALITY into your system hour after hour all night while you sleep. Thousands have said it immediately benefits and takes the pain and weakness out of the back from one night's use. No drugs, no medicines, no restrictions of any sort excepting that all dissipation must cease. The man who indulges an excesses and unnatural practices can never be other than a weakling, but if you promise me as man to man that you will be decent, take ordinary care of your health and then use my HEATH BELT every night for 60 to 90 days, I should then be able to do in your case exactly what all these other thousands of men have said I did for them. Please write for my booklet to-day. Never mind about purchasing a Health Belt now; first get into communication with me, read what my book says, then later, if we decide between us that you should have a Belt and if you decide that you want to use it, I will arrange for you to have one to wear until you are cured. My Health Belt is the greatest vitalizer the world has ever known. With special attachments it is a remedy for kidney, liver, stomach, bladder disorders, rheumatism. etc.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man. young or old, who would be strong in manly vigour. It is a word of hope, a carefully written, interesting booklet which should be in every one's possession. Therefore, send to-day. If in or near the city, call at my office. Hours 9 to 6

DR. M. F. SANDEN CO., 140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free.



NAME .....

ADDRESS .....

"Were all medicines as meritorious as Chamberlain's Cholic, Cholera and Diarrhoea Remedy the world would be much better off and the pescentage of suffering greatly decreased," writes Lindsay Scott of Temple, Ind. For sale by all dealers.

To Prevent After Swarms.

If we cut all the cells but one on the fifth or sixth day after the issuing of the swarm, as has been recommended many times, we are not sure that the cell left will hatch; and furthermore, the bees still have larvae young enough to convert into queens, which they are almost sure to do, and in this case they will often kill the queen which hatches first instead of allowing her to destroy these later-started cells, when we not only have as many after-swarms as we should have had had we not cut the cells, but we have also the disadvantage of having queens reared from old larvae, which all concede gives inferior queens.

If we wait about this cutting of cells until the eighth day we shall run no risk of the colony swarming; where the first swarm was not kept back by foul weather there will be no larvae young enough to convert into queens. As a rule, the first young queen will be hatched, and all the queen cells there are in the hive. For these reasons, wait till the morning of the eighth day after a prime swarm has issued; before opening the hive, take out the first frame cells. If none are found shake most of the bees off near the entrance of the hive, into which they immediately run, when the frame is closely inspected for queen-cells, peering into every nook and corner for them; for, should some small, crooked one be missed, swarming would surely result.

All cells are cut off after a frame has been shaken to rid it of bees, for this shaking of the young queens in their cells is likely to cause them to be deformed, if not killed outright. The next frame is treated in the same way, unless ripe cells are found, in which case it is set outside of the hive awaiting the finding of a cell from which the queen has hatched, when all are cut off. Should none have hatched, then the best one of the ripe cells on the frame set out is saved and put back into the hive.

In this way we can make sure that no after-swarm will issue from this hive, and it is the only certain plan. Of course, any manipulation of a colony of bees must be done at the proper time and in the proper manner to secure the desired results, which means that the successful bee-keeper is one who has his eyes wide open all the time and sees and appreciates what is going on in his apiary from day to day, and, from what he sees, and from what he reads, is prepared to take advantage of circumstances.

Where one wishes to do away with swarming entirely he must either divide his bees or work for extracted honey. Most persons having outprefer the latter plan. The idea is to supply empty combs and to take away the full ones. If they are thus kept busy it will surpress the swarming tendency.

Oiling Harness.

Neatsfoot oil is made from the feet and joints of cattle. These are boiled to extract the oil. Only the best grade of oil should be purchased for harness, even though it is more expensive than the poorer grades. There is nothing better for harness than neatsfoot oil.

Before oiling harness it should be first taken apart and soaked in warm water to soften the surface accumulations, and then it is cleaned with castile soap and a brush. When the harness is practically dry, but not stiff, the warm oil is applied heavily enough fully to permeate the leather. After it has had time to sink in, any surplus should be wiped off.

Bale Your Hay and Sell It

THERE is always a ready market at a good price for baled hay. It occupies only about one-fifth the space of loose hay. It can be handled easily. It prevents waste and it retains its full food value. Many farmers are making hay the big cash crop of their farms, not only because of the high profits it brings at the present market value, but because as a rotation crop it renews the richness of the soil. These farmers make all the profit themselves. They get a price for baled hay which far more than covers the cost of baling. They are able to ship it to the markets where the price is highest. A big majority of these farmers

Use IHC Hay Presses

the only presses on the market today which fill the need of the individual farmer. Like all other I H C machine lines, our hay press line is complete. You can get I H C pull power presses requiring either one or two horses; I H C motor presses using 3, 4, or 6-horse I H C engine. Both styles have three separate bale chamber sizes, 14 x 18 inches, 16 x 18 inches and 17 x 22 inches.

The I H C pull power press has a greater capacity than any other horse press of its size. It is also easier on the horses; the stepover is the lowest and narrowest made and the horses are pulling no load when they cross it. The I H C hay press has an adjustable bale tension which insures compact bales. It is fitted with a roller tucker that turns in all straggling ends, so that the bale is neat and smooth in appearance. The bale chamber is so low that the attendant can tie the bale without walking round the machine.

The I H C motor press consists of a bale chamber and an I H C engine, mounted together on substantial trucks. It is easily moved from place to place, can be backed to the stack or barn and is always ready for work. The engine does not need a man to watch it. Give it a supply of fuel and water and see that it gets plenty of oil and it needs no other attention. There is no danger of fire because there are no flying sparks, nor is there any smoke or soot to interfere with the comfort and efficiency of the workers. The engine is detachable. Two extra wheels, an axle, and a belt pulley are furnished, so that when not baling hay you have a regular portable I H C engine, which can be used the year around to run a small thresher, saw wood, pump water, generate electric light, grind feed, or separate cream or to run any farm machine for which it supplies sufficient power. Two perfect machines in one. Now is the time to get ready for your haying. Make it a big money crop. Call on the I H C local agent in your town or write the nearest branch house for an I H C hay press catalogue.

CANADIAN BRANCH HOUSES:

International Harvester Company of America
(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

A root cellar like this won a prize last year.

THE drawing was made from a photograph of the root-cellar with which D. A. Purdy, of Lumsden, Sask., won a cash prize in last year's contest. In that last contest there were 36 prizes. There will be ***three times as many prizes*** (108) in the

1912 FARMERS' PRIZE CONTEST

THUS you will have three times as many chances of winning a cash prize. You do not have to use any certain amount of Canada Cement to win a prize. There are absolutely no "strings" to this offer.

There are twelve prizes for each Province (three of $50; three of $25; three of $15; and three of $10) and you compete only with other farmers in your own Province and not with those all over Canada.

It makes no difference whether you have ever used cement. Many of last year's winners had not used it until they entered the contest. When you write for full particulars, we will send you, *free*, a book, ***"What the Farmer Can Do With Concrete,"*** which tells everything you need to know about concrete. It is absolutely free, and you are under no obligation to buy "Canada" Cement or to do anything else for us.

WRITE your name and address on the coupon, and mail it, or use letter or post card, and we will send you at once the book and full particulars of the 1912 Prize Contest.

Address Publicity Manager

Canada Cement Company Limited **504-561 Herald Building, Montreal**

A VETERAN OF THE BOER WAR

TESTIFIES AS TO THE EFFICACY OF BURDOCK BLOOD BITTERS FOR THE CURE OF

BOILS

Mr. D. M. McBlaine, Niagara Falls, Ont., writes:—"It is with pleasure I testify to the sterling qualities of your Burdock Blood Bitters. After the Boer War, through which I served in the 1st I. L., I suffered from boils, constipation, and sick headaches, and tried many preparations, but got relief from none till an old comrade of mine got me to try the Burdock Blood Bitters. To say I got relief is to put it mildly. It made me myself again, viz., a man who knows not what it is to be sick, and who has been, and is still, an athlete.

"To anyone in want of purified blood and the resultant all round vigorous health, I can conscientiously recommend B.B.B."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Acadia University

WOLFVILLE, Nova Scotia.

DEPARTMENTS

ARTS AND SCIENCE for degrees of B. A. and B. Sc.

THEOLOGY for degree of B. Th.

MUSIC for degree of B. Mus.

APPLIED SCIENCE first two years of engineering.

Aim to develop thorough scholarship and high character. Unsurpassed location. Three new Science buildings. Complete faculty. Low cost of Tuition and Board. Fine athletic equipment. Over $1,000 given in Scholarships yearly. Fall term begins Oct. 2. Write for catalogue.

George B. Cutten, D.D., Ph.D., *President.*

Acadia Seminary

WOLFVILLE, Nova Scotia.

"A First Class Residential School for Girls and Young Women."

THE AIM.—To Prepare for Complete Living.

THE COURSES.—Eleven, including College Preparatory, Music, Art, Oratory, Household Science, Business.

THE FACULTY.—Twenty-two Teachers of Fine Personality and Special Training for the Work.

THE LOCATION.—Evangeline Land—"The Beauty Spot of Canada."

THE EXPENSE.—Very Moderate. From $180 up according to course selected.

INFORMATION.—Write for illustrated Book to

Rev. H. T. DeWolf, D.D., *Principal.*

Next Term begins Sept. 4th, 1912.

Acadia Collegiate and Business Academy

Founded 1829. WOLFVILLE, N.S.

Select boarding school for boys, preparing for University Matriculation in the Arts, Sciences and Engineering. Also a thorough Business Course, including Stenography and Typewriting, and a complete Manual Training Course.

The unsurpassed location, high standards of scholarship and conduct, wholesome moral influences, superior athletic equipment, long career and low cost, make this school famous. Fall term begins Sept 4. Write for catalogue.

W. L. Archibald, Ph.D., *Principal.*

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he used Chamberlain's Cholic, Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has founh it to be an excellent remedy, and takes pleasure in recomending it. For sale by all dealers.

British Dominion Butter.

The following paragraphs are taken from W. Weddel & Co., Ltd., "Eighteenth Annual Review of the Imported Dairy Produce Trade for the year ended June 30, 1912," issed today:—

"The imports of butter from the British oversea dominions for the past year unfortunately again illustrate the uncertainty of supplies which necessarily attaches to enormous areas, like Australia, New Zealand and Canada, with their varied climates. The year which closed twelve months ago provided us from the British dominions with the heaviest import on record, viz., 61,023 tons, while in the twelve months just ended only 52,857 tons arrived. This check in the import is very disappointing, notwithstanding the similar experiences in the past. The successive and enormous increases in the two preceding years of 14,440 and 14,386 tons, respectively, encouraged hopes of still further progress, and the sudden decline of 8,166 tons must be regarded as a very great misfortune.

On the other hand it should not be overlooked that notwithstanding this decline, one-fourth of the butter imported into this country in the past year came from our kith and kin beyond the seas. A survey extending backwards for ten years shows the imports of British oversea butter to have more than doubled.

CANADA DROPPING OUT.

If the three sources from which this butter comes be examined, there is, however, another cause for regret in the fact that Canada, the nearest of the dominions to this country, is evidently dropping out of the trade. Ten years ago over 13,000 tons of Canadian butter came to this country, while twelve months ago the import had fallen to 776 tons. It is true this amount grew to nearly 3,000 in the past year; but the increase was due more to the excessively high prices ruling in the Untited Kingdom last autumn than to there being any real surplus of butter in Canada available for export. Canadians were tempted by the high prices to overship, but soon discovered that they had not enough left at home to supply their own requirements, and in past winter had to import Australian and New Zealand butter in very large quantities, at higher prices than those obtained for their own exports.

"For some time past every year has supplied sufficient evidence to prove that so far as butter is concerned, Canada is nearing the end of her export business. During last autumn, when she sent us 3,000 tons, it was principally to the ports of the Bristol channel and to Liverpool. On the London market, for the year ended with June, Canadian butter was not once in sufficient supply to secure an official quotation. In recent years Canadian butter has been imported into this country mainly for cold storing to supply our winter requirements. In the future these requirements will have to be filled from Australian and New Zealand by fresh landed goods. This will be an advantage to the Home trade as well as to the Commonwealth and the dominion of New Zealand, for however well butter may keep in cold store, it is not so palatable as when it is freshly made, and there is likely to be an increasing demand for the better article.

"An examination into the falling off in the imports of British dominion butter from other parts of the empire for the past year, reveals the fact that this misfortune is due solely to the droughts in Australia, which brought about reductions in the export from Queensland, New South Wales, Victoria and South Australia, amounting altogether to 10,718 tons. The increases of 2,221 tons from Canada and 331 tons from New Zealand reduced the net decrease to 8,166 tons."

BRITISH DOMINION CHEESE.

"It is greatly to be regretted that the British dominion imports of cheese are not following the same lines as the British dominion imports of butter, which in the past ten years have more than doubled. The real cause of the decline in imported British dominion cheese is somewhat paradoxical, for it is due to the progress and prosperity of one of these dominions, viz., Canada. That country is increasing in population so rapidly that it cannot keep up the supply of cheese to its home population and at the same time continue its exports to the United Kingdom. This development in Canada is bring prosperity to the dominion of New Zealand, which is preparing to take over the business which Canada year by year is less able to carry on.

"In the past ten years Canadian imports have fallen off by 15,000 tons. while New Zealand imports have increased to the extent of 22,000 tons. The statements made in Canada by those who know the cheese trade there, that Canada will cease to export by the year 1916, though of an alarmist character, may have some foundation, in view of the enormous rate of increase in her population, mostly by immigration. New Zealand, therefore, will be acting prudently in preparing for probable developments in Canada. By erecting dual plants for butter and cheese she will be in the best position to meet all reasonable emergencies. Canada lies so close to the over-populated countries of Europe, and the means of access to her boundless areas of fertile soil are so cheap, that the stream of immigration will most probably steadily increase in volume and the declining years of her export trade come much earlier than now seems probable."

LITTLE ROOM FOR IMPROVEMEET IN QUALITY.

"For the last few years Canadian cheese has been so free from damage in transit that there can be very little room for further improvement in this direction. It is only the manufacture that offers opportunities for any further progress towards perfection, and the past year has not shown any wide field for criticism of a suggestive character on this point. Canadian shippers are every year more and more alive to the necessity of placing their cheese on our markets before the bulk of the New Zealand article arrives, which is in January. This will gradually do away with some of the expense of long storage in Canada, and at the same time prevent deterioration in quality in the stores there, and so give better satisfaction when it arrives in this country."—J. E. Ray, Trade Commissioner, Birmingham, Eng.

Are You Coming to the St. John Exhibition?

While there, do not fail to call at the MOLASSINE MEAL tent, which will near the entrance. We are sure you will be interested. Let us show you some Animals that we are positive will win prizes, that were fed on MOLASSINE MEAL. This is your chance to be convinced, if you are one of the few who are not already.

MOLASSINE MEAL, the great HORSE, CATTLE, PIG and POULTRY Feed, is made in England.

L. C. PRIME CO., Ltd.

Distributors for Canada.

ST. JOHN, - N. B.

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

The Maritime Farmer

and Co-operative Dairyman

Has Again Selected SUSSEX, N. B., as Its Home.

BELIEVING that we would be able to handle our growing business in a larger centre we moved The Maritime Farmer from Sussex to St. John, N.B., in October, 1911.

While business has been exceptionally good and advertisers and readers have alike expressed their appreciation of the worth of The Maritime Farmer, we who have had a "peep behind the scenes" felt that in order to keep properly in touch with farming conditions we must get "back to the land."

The building which we occupied in St. John was sold and as we were forced to seek new quarters we decided to bring The Maritime Farmer back to Sussex, its old home and birthplace.

Sussex is the centre of one of the finest farming districts in Canada, where the farmers are enthusiasts and where science and practical experience go hand in hand.

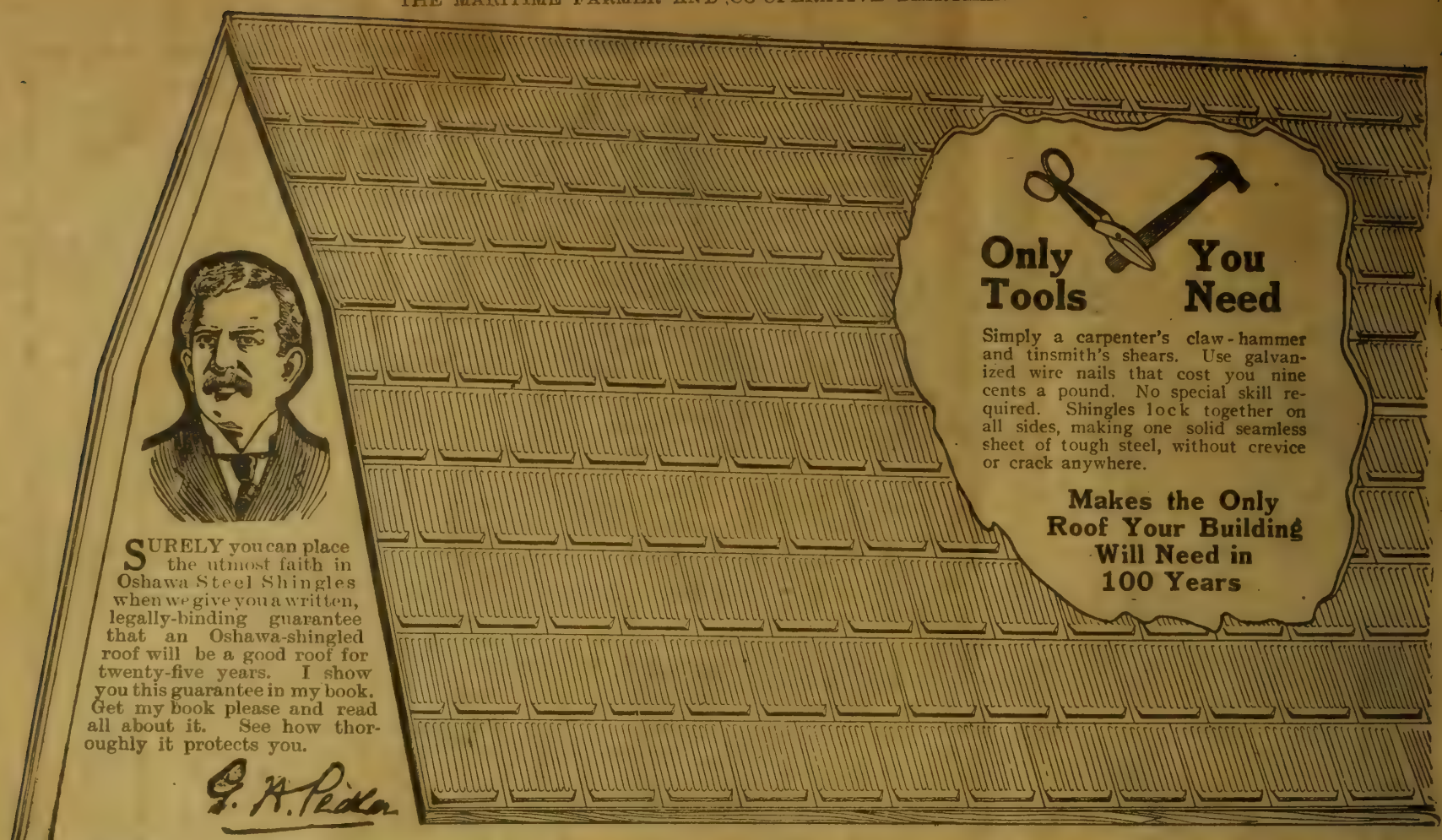
The Maritime Farmer is now comfortably situated in one of the finest printing offices in Eastern Canada, the building having been especially designed for a "print shop," being the home of the Kings County Record.

One of the greatest drawbacks we have had to contend with in the past was the lack of a press large enough to handle The Maritime Farmer in quick time so that we could hold our forms open until the very latest moment for the accommodation of advertisers and to give the latest market reports. This difficulty has been overcome as our printers have installed a No. 12 Babcock Optimus flat bed press, with one exception the largest in Canada. We are now able to print sixteen pages of The Farmer at one time instead of eight pages as formerly.

The move, we believe, will prove advantageous both to readers and advertisers as we are enabled to carry on our work with higher efficiency and to assume newer and heavier responsibilities.

We extend a cordial invitation to all our friends, old and new, to call and see us in our new home.

R.D. ROBINSON PUBLISHERS, Ltd., Sussex, N.B.



SURELY you can place the utmost faith in Oshawa Steel Shingles when we give you a written, legally-binding guarantee that an Oshawa-shingled roof will be a good roof for twenty-five years. I show you this guarantee in my book. Get my book please and read all about it. See how thoroughly it protects you.

E. A. Pedlar

Only Tools You Need

Simply a carpenter's claw-hammer and tinsmith's shears. Use galvanized wire nails that cost you nine cents a pound. No special skill required. Shingles lock together on all sides, making one solid seamless sheet of tough steel, without crevice or crack anywhere.

Makes the Only Roof Your Building Will Need in 100 Years

Here's the ONLY Right Roof for You

I REFER to my Oshawa Steel Shingles. Reckon it all up and see if you don't agree with me. A roof that is one big seamless sheet of 28 gauge steel, smoothly and thickly galvanized by the Pedlar process of rust-proofing. A roof that cannot rust, will not gather moisture on underside, stay a good roof for a hundred years at a cost of less than five cents a year. A roof that makes your building safe against both fire and lightning. A roof that makes your building warmer in winter, cooler in summer. A roof that costs no more than common wood shingles to **put** on, and much less to **keep** on. A roof that needs no painting, no patching, no tinkering or repairs for at least twenty-five years—or you get a new roof free. The **only** roof that is guaranteed in writing. Certainly a roof like this is the only right roof for you. You cannot be sure of as much down-right roof value from any other kind of roof you can buy. The question is: Can you afford to risk your money in any other kind of roof.

The ONLY Roof that is Guaranteed in Writing

I claim a good deal for an Oshawa-shingled roof. Almost too much to be true, some folks think. So do makers of other roofs. But note this difference. I give you a **written guarantee** that's good for a new roof any time within twenty-five years if any Oshawa-shingled roof fails to make good everything I promise. That means that its cost when you put it on is the **only cost** for the next twenty-five years. Will the "other fellow" give you such a guarantee? I don't know any one who will. They want **you** to take the risk. They talk very confidently—and promise, yes indeed. But can you get their promises down in writing and signed—like mine are. That's the only way you can be positively sure of a roof that will be

Good for 25 years or an Entirely New Roof Free

My guarantee, remember, is a **written** one, in proper legal form, and is backed by 50 years of honorable dealing, and over $365,000 of invested capital, the biggest business of its kind in the British Empire. It is your roof-insurance for twenty-five years. When you consider that no other roofing is guaranteed at all, even though you pay as much for it as you pay for my Oshawa Steel Shingles, there's no doubt about which roof you should buy.

PEDLARIZE All Your Buildings--Inside and Out

BY "Pedlarizing" I mean doing for the whole building what Oshawa Steel Shingles do for the roof. I make other kinds of sheet metal building materials—for ceilings, side walls, outside—that make your whole building more fire-proof, more sanitary, more beautiful, more substantial. You should know about them. May I send you a booklet and pictures that tell the whole story? It's free. Just ask me to tell you about "Pedlarizing."

First Cost no More than Roofs You Think Cheap

Of course you don't want to pay any more than you have to for a good roof. But for the amount you **have to** pay you ought to get the roof that will cost the least to **keep** on. And Oshawa Steel Shingles make the **only** roof you can **be sure** will end your roof expense once you get it on. My written guarantee settles that. Figure it out any way you like. You'll find an Oshawa-shingled roof as cheap to begin with, and far cheaper in the long run, than **any other** roof you can buy.

Best Protection against Both Fire and Lightning

This fact alone is reason enough for putting my Oshawa Shingles on the next building you roof. Lightning causes over 40% of all fire-damage on farms. Destroys about 7,000 farm buildings each year on this continent. In one year killed 623 human beings and 4,500 head of cattle—most of them housed in wood-shingled buildings. My Oshawa Steel Shingles would save all this terrible loss. Because they make a lightning-proof roof. They are better protection than any number of lightning rods—better than the best and cheapest lightning insurance policy. Best fire-protection, too. The saving in fire-insurance premiums alone pays the whole cost of an Oshawa-shingled roof in a very little while. Your insurance agent will tell you.

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Then you'll have **all** the facts about this weather-proof, rust-proof, rot-proof, fire-proof, lightning-proof roof, which needs no painting or patching for the biggest part of your lifetime. By reading my book you may save yourself considerable money and a lot of bother. It is free. Do write for it—right away.

Write to Address Nearest You. **Ask for "Roofing Right" Booklet No. 17**

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. SUSSEX, N. B., SEPTEMBER 10, 1912 No. 23

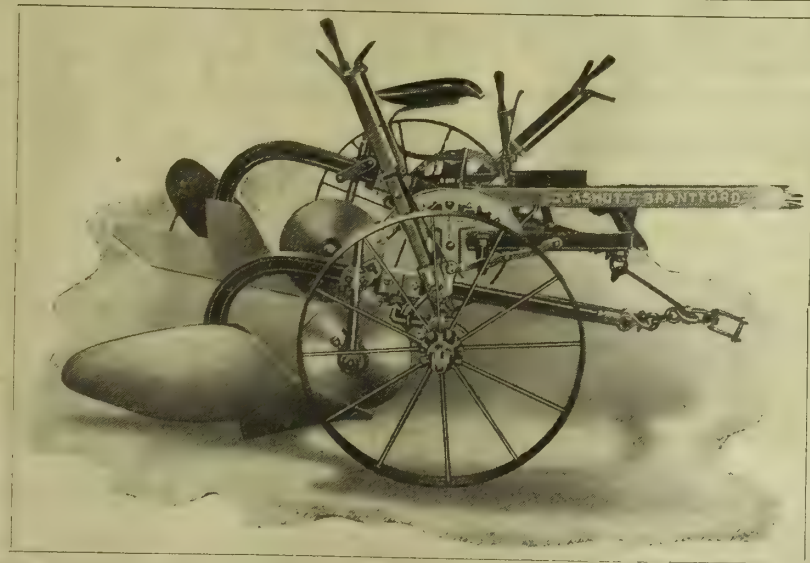
HERE is the Ideal Plow for Hilly, Irregular Farms. Do You Need It? . . .

THE Cockshutt Two-Way Plow is the most satisfactory Sulky Plow for Hillside and irregular land plowing. It is also used successfully for plowing level land, so with it you can do ALL your plowing if your farm comprises both kinds of ground.

For irregular shaped fields, or those cut up by creeks, etc. it is the only plow to use. When such a field is plowed with our Two-Way the work is done satisfactorily. You won't see any irregular centres or crooked furrows after the Two-Way.

On Hillside plowing you will find the Two-Way will do excellent work. When one bottom is working the other is out of the way. See also the position, of the wheels. They are so placed that the plow will not tip over when at work, a feature of great value. The furrows are turned all one way and left in a uniform land.

The Cockshutt Two-Way is designed and built to give the best service. Every part from the beam to the mouldboard is constructed of the best materials that can be bought for the purpose. Note carefully the construction of the Pulley Shift Clevis. When one plow is raised and the other lowered, the Clevis shifts automatically. There is no side draft on the Two-Way because the pull is direct from the Beam point.



The tongue on the Cockshutt Two-Way can be shifted by means of the short lever near the seat, so the plow will take more or less land as the operator wishes. The bottoms can be raised by pressing a lug into the ratchet on wheel hubs. Then the team does the lifting. We put our celebrated No. 21 bottoms, cutting 10 to 12 inches wide and 4 to 8 inches deep on this plow. It will certainly do your work satisfactorily.

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The famous Cockshutt line of Riding and Walking Plows is sold exclusively by Frost & Wood Agents. These plows include a wide variety of single furrow and gang plows for every soil condition. Cockshutt plows are built in what is generally conceded to be the best plow factory in Canada and by men who have made the plow business their life-study. Our agent in your vicinity will be glad to show you this extensive line and explain to you the many superior points it possesses over all others. This extensive line, together with our excellent Frost & Wood plows, gives you a better assortment to choose from than you can get anywhere else—a fact which we know you will appreciate when buying your next plow. Our catalogue describing our complete line of Haying, Harvesting, Seeding and Cultivating implements is at your disposal. Let us send you one to-day.

Cockshutt Plows

Write Us in regard to any farm implement or **See Our Agent**

Tell us your needs on a post card and we will see that you receieve prompt attention and assistance in buying. Don't delay—get in touch with this line to-day.

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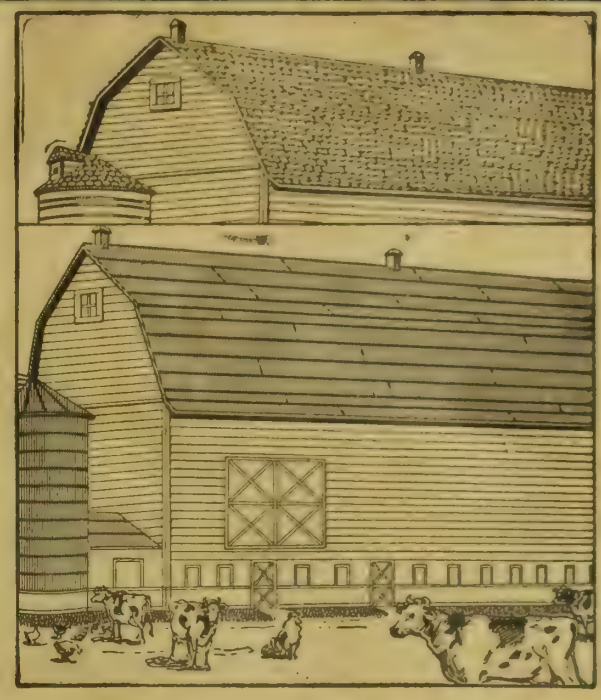

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Look around you—have you noticed the increased number of farm buildings that are being covered with ready roofing? Your lumber dealer may prefer to sell you wood shingles, he usually has a big stock to get rid of—or your hardware dealer may coax you to try the old-fashioned, short-lived metal roofing—but don't make any mistake, *Certain-teed* Roofing is wonderfully durable, and best of all, *costs less money.* It comes in Rolls or Shingles and is easily applied. You can get it from your local dealer in Rubber finish, Sand surface or Mica coating.

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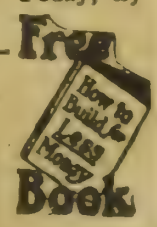

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of unexpected accidents, without a flinch. It holds under the most trying conditions. Maritime Wire Fence makes good because Maritime material is first quality, and Maritime workmen excel in their calling.

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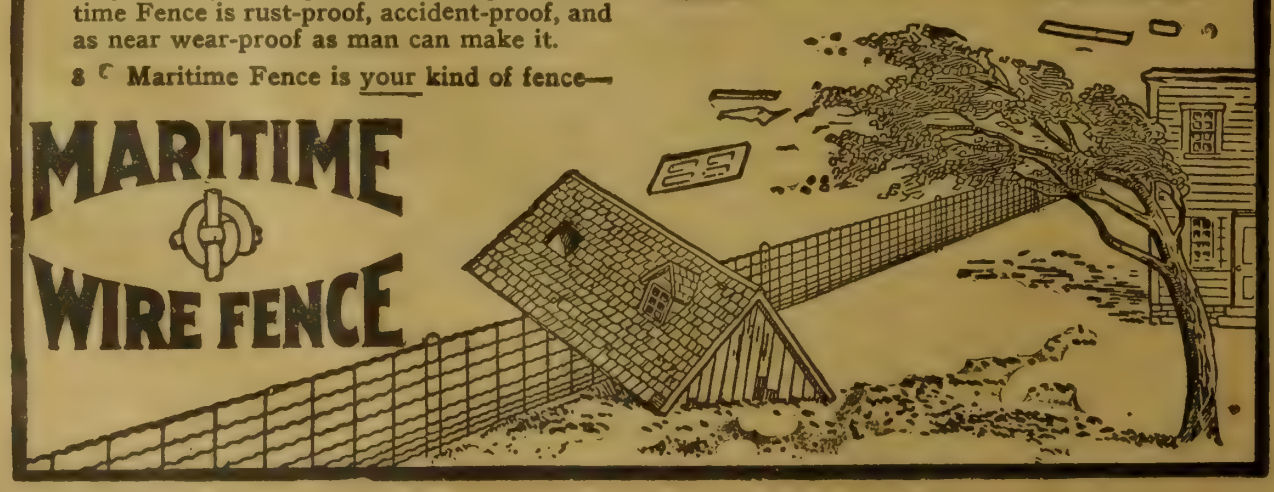


THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

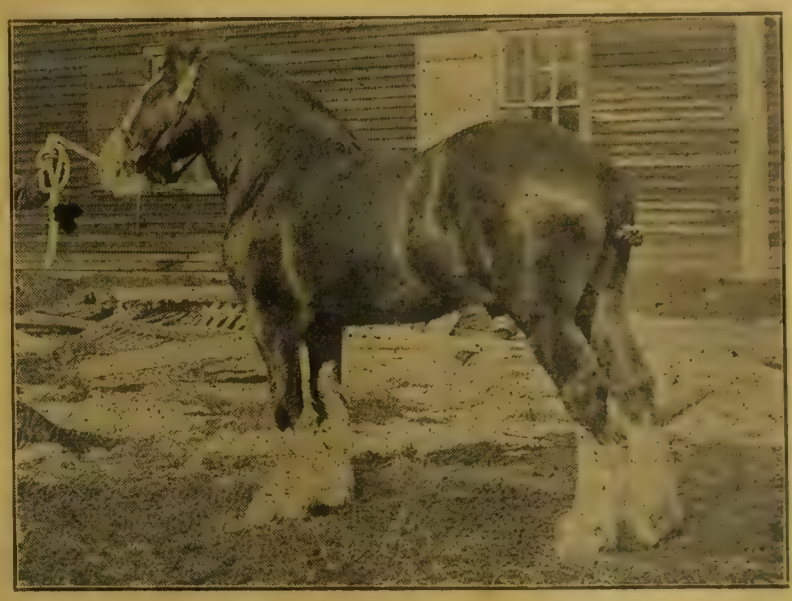
Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. SUSSEX, NEW BRUNSWICK, SEPTEMBER 10, 1912. Number 23.

The Greater Saint John Exhibition.

Fair Weather and Record Attendance.

AFTER a serious of optimistic addresses by men prominent in the St John Exhibition Association, the city life of St. John and in the agricultural resources of New Brunswick, His Hon. Lieutenant Governor Wood touched the button on Saturday evening, August 31st., that formally then opened to the general public the gates of the Greater St. John Exhibition, the first show in the Maritime Circuit of 1912 fall fairs. The addresses by the various speakers bristled with words of cheer, re the future prospects of New Brunswick, prospects which are being hourly becoming brighter as the Greater St. John looms up, with a pace in keeping with the developments of her winter port and the train of special advantages that will surely follow.



Baron Squire.

Champion Clydesdale Stallion at the 1912 St. John Exhibition. Owned and exhibited by McFarlane Bros., Fox Harbor, Cumberland Co., N. S.

THE LIEUTENANT GOVERNORS' ADDRESSES

Lieutenant Governor Wood when called upon to formerly open the exhibition referred to the fact that it was the first occasion on which he had been asked to perform such a duty and continued as follows :

"This exhibition by the Exhibition Association of St. John city and county, has become one of the established institutions of the province. It began its corporate existence in 1889 and after meeting and overcoming many difficulties in its career of upwards of twenty years, I am glad to know is at present in a most prosperous condition. The last year was one of the most successful in its history.

"The time appointed for holding the exhibition this year is too early to enable the farmers to display the fruit, grain and root crops of the present season's growth. The exhibits which will be made, will however, show the capability of this province of producing crops of this character of a high standard of quality.

"The spring has been a backward one and the unusually wet weather has interferred with the harvesting of the hay crop. This crop is an important one and promises to be an unusually good one but owing to the wet weather at the time of harvest, considerable loss will be entailed. The same cause will no doubt injure the potato and root crops, especially where the land is low or poorly drained. The pastures have been very good, stock is in good condition and dairy interests should have a successful year. I understand that the number of entries for this portion of the exhibition will be about the average.

"The general condition of the farming population should be satisfactory. It has greatly improved within the last few years. Though in numbers our farming population have not increased, nor the acreage under cultivation, yet better methods have been adopted, new and improved machinery has been employed, the land has been better cultivated, and very much better results obtained. In the last few years there has been a very material advance in the price of ali kinds of agricultural produce, the farmer has found little difficulity in marketing his crops. The demand has been active, the prices high and the payment cash. As a class, I believe the farmers have made greater progress and accumulated wealth more rapidly than any other class in the province.

"There has been marked progress in the development of the natural resources of the province. The discovery of natural gas in the county of Albert promises to contribute very greatly to the general prosperity. Its utility in furnishing light, heat and power at a low cost has been demonstrated. The present indications justify the belief that it exists in such quantities as will attract to this province a number of the larger manufacturing industries. The discovery of iron at Bathurst and development of the mines will greatly benefit the northern part of the province. The active working of the Grand Lake coal fields on a large scale will benefit the central portion of the province. The construction of the St.John Valley Railway and the extension of the Central Railway to connect with the C. P. R. at Fredericton, will be of great benefit to the whole province. The large expenditure to which the Dominion government is committed at Courtenay Bay, and the works already undertaken by the C. P. R. on the west side of the St. John harbor will afford greatly increased accommodation for shipping and the export and import trade of the province, which has shown a satisfactory increase in the past, will greatly increase and St. John will take its rank as one of the chief commercial seaports of the Dominion.

"The census taken by the Dominion government during the last year shows but very small increase in the population of the province. In the older settled portions, with the exception of the cities, there has been no increase, and in some sections the population has actually decreased. It is not, however, fair to measure the prosperity of the country by the increase of its population. Its prosperity depends not so much upon numbers, as upon the industry and progressive spirit of its people. During the last few years there has been an entire revolution in the conditions under which we live. Better implements and labor-saving appliances have come into general use among the agricultural and laboring classes and improved machinery has been introduced in connection with all manufacturing industries. One man under present conditions can produce more than ever before. The farmer, the mechanic and the laboring man are better rewarded for their labor, and if industrious and frugal, contribute more to the wealth of the community in which they live than they could do under the conditions which exhisted in former years.

"Although our province has not increased in population, its people were never more prosperous than now. This exhibition will demonstrate this fact. Besides proving an illustration of the prosperous condition of the country, its mission will not be entirely fulfilled unless it is educational. It should show to those who visit it, who have done well, that they are not perfect, that others are doing better, and by adopting other methods they may do better. Exhibitions of this character bring our people together in such a way that each sees the improvements and profits by the ideas of all the others. No one should leave this exhibition without acquiring

some knowledge that will prove useful to him hereafter.'

He then declared the exhibition formally opened.

The addresses by the other speakers who preceded the Lieutenant Governor, were brim full of pictures of the future greatness of St. John and several allusions were made to the developments that are there now taking place.

THE MANAGEMENT.

H. A. Porter, the efficient manager of the fair, was always on hand to make matters run as smoothly as possible. The success of the 1912 fair proves that he is a good man at the helm.

THE WEATHER AND ATTENDANCE

The weather was all that could be desired and the merry click of the turnstiles recorded a record attendance of sight seers.

THE AMUSEMENTS.

were clean and the various arts were cleverly performed. No one went away disappointed for each and every part of the show was up to the standard with the exhibition association announced.

IN THE MAIN BUILDING.

A conspicuous feature of the 1912 exhibition was the absence of cheap displays. In almost every case the designing and decorations were of a high degree of excellence. The several buildings, themselves, showed a marked transformation. The installation of the new system of tungsten lighting and the profusion of flags, festooning and bunting produced a most pleasing effect.

All the booths were very tastily arranged and each and every one of them contained displays of interest to the visitors. There was no booth in the main building, however, which seemingly drew so much attention and on which so much interest centered as did the "Made in St. John" display exhibited under the auspices of the Board of Trade.

FIELD ROOTS, GRAINS AND GARDEN VEGETABLES.

Owing to the peculiarities of the past season the display of field roots, grains and garden vegetables was rather slim. R. Robertson, Superintendent of the Nappan Experimental Farm placed the awards. A full list of the prize winners will be found on another page of this issue.

FRUITS.

There was a good display of preserved fruits, in jams, jellies, and preserves that had a particularly appetizing appearance. The display of apples was not up to the mark, in either point of quality or of quantity. Many specimens were shown in a very immature state, owing to the earliness of the season. The whole apple exhibit was very much inferior to the grand display that visitors to St. John saw at the 1910-11 fall fruit show, when New Brunswick fruit at its best gave the visitor an insight into New Brunswick's apple growing possibilities.

Visitors, to the 1912 fair, who are familiar with New Brunswick and Nova Scotia climatic conditions, and fruit growing possibilities could picture the wealth of color and quality that the fruit display would evidence were the various specimens allowed to remain on the trees until their respective picking seasons had arrived.

A. G. Turney, Provincial Horticulturist placed the awards.

THE APIARY DEPARTMENT.

Mr. E. L. Colpitts, who judged the apiary section was well pleased with the quality of the products therein displayed. The weather conditions experienced during the past season were not favorable for honey production. Mr. W. G. Aspbell, of Sussex, had a very attractive assortment in this section, the quality of the various products in his collection was very good and carried off a great many of the red tickets. R. L. Todd and others also made interesting displays.

BUTTER AND CHEESE.

Mr. Harvey Mitchell, of the Dairy Division, Ottawa, placed the awards in the butter and cheese sections. The cheese was of good quality throughout but the butter, in many cases, would have stood a little more care in the various details of the buttermaking in order to bring out a better quality.

The butter making competition was under the direction of Mr. L. C. Dayle, dairy Superintendent.

Near the Dairy Department, Mr. Flewelling, of the Dairy Division, had an interesting display which emphasized the importance of cow testing and the care of milk and cream from the time the milk is drawn until it is put on the table for use, either in its natural state or as a finished product.

THE LIVE STOCK DEPARTMENTS.

Notwithstanding the amusements and other attractions in the various departments of the fair, on no part of the show was so much interest centered as on the live stock departments. There were few, if any, visitors who did not take a keen interest in the showing made in the horse cattle, sheep, swine and poultry classes. In these sections the farmers saw ideals of type towards which they may gradually attain by systematic feeding, breeding and weeding.

Horses

Light horses were judged by Dr. J. A. Sinclair, of Cannington, Ontario. He did his work without fear or favor and in cases where there was no competition, unless the animal shown possessed quality enough to warrant the awarding of a prize, or any prize, he had no hesitancy in dealing out such awards as he considered justifiable and applicable to the case. Some of the punishments dealt out were not very highly appreciated by some of the horseman, but the general effect will be an uplifting of the ideal standard.

R. S. Starr, Port William, N. S., a successful breeder and exhibitor of Clydesdale horses, judged the heavy horse classes. Mr. Starr has judged horses at the Toronto and other exhibitions where his decisions have given general satisfaction.

THOROUGHBREDS

were few in number. Two aged stallions, three mares, over three years, and a brood mare with foal by her side made up the total number of entries in the class. Samuel Jones, St. John, had the champion stallion while H. R. McMonagle, Sussex, had the champion female, Lindahorna which he sold during the fair for a handsome figure. Waterlight, the champion stallion at the Maritime Horse show went down to defeat before the Jones horse on the question of breed type.

STANDARD BREDS

were also few in number. In the aged stallion class, W. J. Alexander's Dan Gilbert, carried off the red ribbon. Maritime Prince, a winner of sixteen first prizes and six second prizes at various Maritime shows and second in a field of eleven horses at Halifax, in 1911 was put out of the money because his age had been obliterated on his registry certificate. The best thinking horsemen who know Maritime Prince and his past record as well as his present good form were very much chagrined over this decision, and were not a bit slow in expressing their disappointment. A two year old stallion, a one year stallion, and a mare, H. R. McMonagle's Inheritus, by Montrose King, by Nelson's Wilkes, out of a Sir Charles dam made up the remainder of the Standard Bred classes.

HACKNEYS.

Aged hackney stallions were three in number. R. A. Snowball's Model Performer topped the list and carried off the Sweepslates diploma and Silver medal, donated by the Canadian Hackney Horse Society for the best stallion on the line. John Jackson's Stampede came in for second money and McFarlane Bros' Sedgeforth Enterprise stood in third place. There was only one other Hackney stallion on the grounds, a two-year-old, shown by Randolph Cox.

R. A. Snowball's Langton Lily carried off the diploma for best mare, any age, and the silver medal donated by the Canadian Hackney Horse Society for best mare, on the line.

FRENCH COACHERS.

Were represented by W. J. Alexander's Onyx, in the aged stallion class and Onyx Jr. in the one year old section.

CLYDESDALES.

The Clydesdale classes were by far the best classes of the horse department. The aged stallion section had eight entries. McFarlane Bros.' Baron Squire and Vanderbilt capturing the first and third monies while R. A. Snowball's Baron Balgreddon was sandwiched in between them in second place. H. C. Jewett's Sorbie Boy came in for fourth place and was followed in fifth position by the Fraser Lumber Companys' Baron Corning. Baron Squire captured the diploma and gold medal for best Clyde stallion, any age, a close competition for this honor being G. C. Cossar's two-year-old stallion, Dunbar Crag.

The aged mare section brought out seven good ones. R. A. Snowball's May Lothian and her mate Marinetta capturing first and second monies, W. W. Black's Miss McKay captured the third award and fourth and fifth honors, had there been such would have gone to the Fraser Lumber Company's Lady Rose and Rosaline. Winsome Bessie, owned by John B. Barton was one of the good ones in this class.

In the two-year-old filly class, R. A. Snowball had everything his own way with two very typical fillies. R. A. Snowball also captured the one-year-old filly first prize red ribbon. The Fraser Lumber Company captured the blue ribbon and John Price had the winner of the third prize, a Royal Baron's Pride filly, which was sold during the fair to G. C. Cossar.

John A. Hughes' Lady Ann Carleton and her foal by Baron Admiral captured the red ribbon in the brood mare, with foal by her side and foal of 1912 sections.

R. A. Snowbail's May Lothian captured the diploma and gold medal for best mare, any age.

Snowball's Baron Balgreddon and Moss Rose captured respectively the monies offered by the Clydesdale Association of Canada for the best Canadian bred stallion and mare.

SHIRES.

Samuel Jones and Edwin Hogan each showed one-year-old Shire stallion. Mr. Hogan also showed a pair of one-year-old fillies in the Shire class.

PERCHERONS.

In the aged Percheron Stallion section there were six entries. H. C. Jewett's Gresham led the way, W. H. Fowler's Mathurin followed in second place and Jamieson & Walkers' Glenеur captured the third money. E. A. Chamberlain had the only entry in the two-year-old stallion class and Ernest Floyd had no competition against his one-year-old stallion.

Chas Symes'Distinguee was the only aged mare in the ring. Symes' also had the only filly in the one-year-old class. Geo. F. Mayes had the only two-year-old filly in the ring. Chamberlain had no competition against his brood mare and her foal of 1912.

Jewett's Gresham captured the championship diploma for the best stallion, any age.

HEAVY DRAUGHTERS

were a good class. The aged mare or gelding section had seven entries. The two choicest plums in the list went to the Fraser Lumber Company, much to the delight of their popular and efficient horseman, Mr. Jas. Armstrong. W. W. Black captured the remainder of the money in this section. In the matched team section of this class there were only two entries. A Fraser team headed the money list and a W. W. Black team took second award.

MEDIUM DRAUGHTERS.

W. W. Black's horse captured the red ribbon in the single section of this class heading a list of eight entries. John B. Barton, had the second best and Thos. A. Barrett snatched the third prize ribbon.

In the matched section E. Hogan, W. W. Black and P. H. Nugent respectively captured first, second and third monies.

ROADSTERS.

In the Roadster stallion class, H. J. McManus' Maritime Prince, the rejected in the Standard Bred class, captured the most coveted prize from his apponent Dan Gilbert.

The prizes in the aged mare section of the roadster class were won by W. J. McIntyre, P. H. Nugent and John Gillis.

A Buz Fuz filly, shown by Orin Hayes topped the two-year-old colt or filly section followed in second and third places by W. J. Alexander and B. E. DeBow. Walter Kirkpatrick had the only matched pair in the roadster class.

CARRIAGE HORSES.

In the carriage horse class the first and second monies on single and first on doubles went to Geo. McAvity. A H. Merritt captured the third money in the single class.

HEAVY HARNESS HORSES.

In the heavy harness carriage horse class awards were made on the basis of sixty per cent. for the horses and forty per cent. for the equipment. In the single horse section of this class Mrs. Arthur H. Merritt captured the first prize ribbon, P. H. Nugent following in second place. Geo. McAvity's tandem had no competition and was awarded first money.

SADDLE HORSES.

The saddle horses made a good showing and prizes were awarded as indicated on another page of this issue.

GENERAL PURPOSES HORSES

as a class were disappointing.

COMMERCIAL HORSES.

G. B. Taylor had the only horse in the light delivery section of the commercial class. In the heavy delivery section the Dominion Express Company captured first, second and third monies.

COBS AND PONIES.

In this class, S. Bishop had the only entry in the section for pony under 12½ hands. There were three entries in the section for ponies 12½ to 14 hands. J. P. Clayton showed the only jenny on the grounds.

Beef Cattle

Shorthorns, Herefords and Devons and grades of the two former mentioned breeds made up the beef cattle display at the fair. R. W. Wade, Guelph, Ontario, placed the awards to the satisfaction of all interested breeders.

SHORTHORNS.

With the exception of two bulls shown by the Fraser Lumber Company, C. A. Archibald and R. A. Snowball had all the Shorthorns at the fair. Both herds were out in fine fettle, and honors were fairly even. Archibald's Prince Ideal captured the red ribbon in a class of three aged bulls, and finally secured the male championship diploma. Snowball captured the first prize on breeder's young herd. The aged herd prize went to C. A. Archibald. The female championship was captured by Edith 4th. a senior yearling heifer owned by R. A. Snowball.

HEREFORDS.

W. W. Black had the only herd of Herefords at the fair and as usual he had the various animals in the herd out in good shape. He had lots of quality and could stand any amount of competition.

DEVONS.

There was only one herd of Devons of which the less that is said the better, as they were out in such poor fit that they were no credit to the show nor to the breed, but an eyesore among so much good stock in the stables.

BEEF GRADES AND FAT CATTLE.

Hereford and Shorthorn grades and fat cattle were shown by W. W. Black and C. A. Archibald.

Dairy Cattle

F. R. Mallory, Frankford, Ontario placed the award in the Ayrshire, Holstein, Jersey and Grade Dairy classes. Matters ran smoothly in the Holstein and Jersey classes but not so with the Ayrshire men as the majority of the interested breeders were not at all satisfied with the placings in two or three of the sections, which strengthened their contention that a class of such magnitude as the Ayrshires were at St. John should be entitled to be judged by a thoroughly competent Ayrshire expert. While they all admitted that the judge did conscientious work so far as he knew, the fact that he is a Holstein breeder loomed up before those who did not concur and in could not follow his placing of awards in the two or three classes already mentioned. Ayrshires were represented by the cream of the principal Maritime Province herds. McIntyre Bros., were out stronger than ever with a splendid lot of well groomed, thrifty looking cattle. Prescott Blanchard and Retson Bros. were there with their best and there are some good specimens included in the number. M. H. Parlee, another show ring veteran had his stock out in good form. S. Creighton & Son were also on hand with a very creditable lot as was J. A. Hughes with a few entries. The most coveted awards went to McIntyre Bros., Spring Brook Farm, herd. Their Grange Kelly, first prize aged bull in a class of top notchers also captured the male championship and diploma with three of his get. Their Morton Mains Lady Nelly, first in the four-year-old cow class of ten, captured the female championship and diploma with two of her offspring.

The Senior and Breeder's young herds red ribbons were also captured by the Spring Brook herd. In the four animals, get of one sire, class, Grange Kelly's calves led the way followed in second by another McIntyre Bros.' quartet, sired by their old stock bull, White Hall Sunrise, recently sold to R. R. Ness and champion last week at Toronto. The first award of two animals, the progeny of one cow was captured by Easton Bros. with McIntyre Bros. in second and third places. Easton Bros. also had the red ribbon winners in the senior yearling bull, two year old heifer and junior yearling heifer classes as well as a number of other prizes in second and third places. Creighton had the only two-year-old bull, a good one, and a close competition for championship honors. The red ribbon winners in the dry cow three-year-old and two-year-old cow classes were also owned by S Creighton & Son. Parlee had the best senior bull and junior heifer calves. Retson Bros. led the way in a field of ten aged Canadian bred cows. A full list of awards in this class will be found on another page. With one or two exceptions, there was strong competition in every section of the class.

GUERNSEYS.

There were two good herds of Guernseys in the ring, and they were satisfactorily judged by Supt. R. Robertson of Nappan, N. S. Howard W. Corning was over from Yarmouth County with a particularly uniform, milky looking lot and in competition with the largest herd of the breed on Prince Edward Island very successfully managed to carry off a goodly number of first, second and third prizes as well as championship diploma for best bull, any age, with Island Prince of Hillside, also the head of the list with bull and three of his get. The female champion was Dolly of the Villet, one of the Island herd. The diploma for cow and two of her offspring went to Fanny of Willow, another one of the good ones in the Island herd. Both herds were out in condition to win. The Island herd captured the first honor in the aged herd classes while the similar honor of the breeder's young herd went to the Yarmouth herd.

JERSEYS.

were represented by three good herds. H. S. Pipes & Son were over from Nova Scotia and a battle royal for honors was waged between their herd Josselyn & Young and S. Creighton & Sons' herds. The first prize for aged bull went to Creighton's Brampton Phra, who also captured the male championship in a stiff competition. His competitors in the aged bull class were Foxhall St. John o' Dreamwold and Imported Fereor, winners of second and third places respectively.

In the two-year-old bull class, Josselyn & Young's Pogis of Lakewood downed Pipes' Bloods Own. In the senior yearling bull class a Pipes bull, Brigadier, won the red from Josselyn & Young's Foxhall Keene. Pipes & Sons also led the way in the bull calf sections with Distinction in the senior section and Romance in the junior section.

Josselyn & Young's Flying Fox's Adora, Pedio's Gladys, Pipes & Sons' Babbit, and Creighton's Golden Beauty stood in first, second, third and fourth positions when the judge had completed his inspection of the aged cow class. Flying Fox's Adora also won the championship diploma. The best cow and three of her offspring class was headed by Josselyn & Young's Pedio's Judy shown in the Canadian bred class. Pipes' Imported Fereor was first with three of his get. Josselyn & Young captured the most coveted herd prize in the senior herd section and a similar honor on junior herds went to H. S. Pipes & Son. The prizes in the other section of the Jersey class were pretty evenly divided between Pipes' and Josselyn & Youngs' herds. Creighton & Son also managed to get a respectable look in at the money in sections where they had entries.

HOLSTEINS.

were exhibited by J. D. Irving Lea & Clark, Harding Bros. and John A. Hughes. The respective breeders had their herds out in a very creditable condition and as usual the black and whites were much admired. Irving's two-year-old bull, Lord Sea View Rooker, captured the male championship and his aged bull, Togo of Seaside came in for reserve honors. The two-year-old Irving cow, Dorindo Vale, captured the female Sweepstakes and another Irving cow, Rosa Bonheur Beauty, shown in the aged class was reserve champion. Irving also captured the red ribbon on both aged and breeder's young herds. Harding Bros.' Sir Mercena Forforit Lad was first with three of his get. Sir Mercena Forforit Lad's three animals, the get of one bull, also stood at the top of the list.

Lea & Clark's Jacoba Johanna could not be put down with two of her offspring. Her offspring also held the red in spite of strong competition.

The competition in the respective Holstein classes was very keen. The Irving and Harding herds comprise a magnificent lot of home bred and imported individuals. Mr. Hughes is only a beginner and will be heard from later. The Lea& Clark herd is composed almost entirely of home bred stock. There is not an animal in their herd with the exception of their stock bull under four years old that they did not breed themselves, and these compare very favorably with the imported individuals of similar ages. See full list of awards on another page.

DAIRY GRADES.

The dairy grades were without a single exception a credit to their owners. The only competitors being Lea & Clark with a magnificent lot of Holstein grades and McIntyre Bros. with an equally desirable lot of Ayrshire grades, the majority of which would give pure breds of their respective breeds a run for their money if they were judged in the same classes. They were a milky looking aggregation of which any farmer might justly feel proud and an ideal which showed what may be accomplished by persistently breeding along one specific line.

Sheep

were judged by Mr. R. W. Wade and they were a good, uniform, well-fitted lot.

LINCOLNS

were shown by Albert Boswall, Chas Symes and Almon D. Boswall. Albert Boswall's aged Lincoln ram captured the sweepstakes bronze medal, donated by the Canadian Bank of Commerce for the grand champion ram, any breed, two shears and over.

OXFORD DOWNS.

J. E. Baker & Sons' Oxfords met foes worthy of their steel in Burder Goodwin's splendid aggregation, the latter capturing all but two of the first prizes. The Bakers had the best shearling ram and ewe as well as very close seconds in the other classes.

SHROPSHtRES.

were represented by two good Prince Edward Island flocks shown by Geo. L. Boswall and Cephas Nunn. Nunn had the best shearling ram and ewe. Boswall led in the other sections of the class.

SOUTHDOWNS.

Cephas Nunn and J. E. Baker & Sons had everything their own way in the Southdown class. Nunn captured all the red ribbons in the class with the single exception of the first prize on aged ewes which went to the Baker flock.

DORSETS

were shown by Geo. L. Boswall and Cephas Nunn. Boswall captured the major part of the prizes taking first in every section but one.

HAMPSHIRES.

Cephas Nunn found no opposition against his Hampshires. He was out with quality that would stand good, stiff competition.

... SUFFOLKS.

Albert Boswall showed a nice flock of Suffolks but had no competition.

CHEVIOTS.

Chas. Symes and Geo. A. Symes were over from Nova Scotia with two very choice flocks of Cheviots and honors were pretty evenly divided.

LEICESTERS.

Albert Boswall, S. L. Boswall and Retson Bros. waged a three cornered contest in the Leicester class. Albert Boswall captured the lion's share of the prize money. Retson Bros followed in second place and S. L. Boswall took the remainder.

Swine

were also judged by R. W. Wade and exceeded in both numbers and quality the showing made at the Dominion two years ago. Yorkshires, Chester Whites, Poland Chinas and Duroe Jerseys made up the classes The various porkers were all in good shape. Sows with litters predominated in point of numbers. Prizes were awarded as will be found on another page of this issue.

Poultry

The poultry exhibit was not up to the standard of former years in quality nor in numbers. No doubt the cutting down of the prize list kept outside exhibitors of poultry away. All who are interested in Poultry Husbandry regret that the list was cut down while all other live stock branches were kept up to the usual money.

The Rhode Island Reds came to the front as the largest and best quality of any breed in the show, thus showing the strong hold they have on the fancy of our best breeders. The champions of the old favorites, the Barred Plymouth Rocks, seemed to stay away from the fray reserving themselves for the Amherst fair. In many of the most popular classes there were not enough entries made to claim the przes offered. This is to be regretted when poultry culture is on the increase and the demands for poultry prices is so great and record prices prevail.

In the utility breeds the Rhode Islaod Reds led in numbers with White Plymouth Rocks and White Wyandottes a poor second and third. While many af these classes were small, many specimens showed class.

In the lighter breeds the White Leghorns led in numbers and quality. followed by the Brown Leghorns as a good second. The largest exhibitors were F. M. Merritt, Hillside Poultry Co., Hartland Poultry Co., E. C. Campbell, Glen View Poultry Yards, A. S. E. Hatfield and Orchard Hill Farm. These men brought out a good string of stuff and made the show.

The highest class and strongest competition in the whole show was found in White Pekin Ducks. This class for numbers and quality was a credit to any show in the Dominion. The Turkey exhibit was small. Some good geese were shown in the Toulouse and White Embern varieties. The pigeon show was up to the mark.

Daniel P. Shove, Fall River, Mass. was judge and as usual he did not please all by any means. W. D. Golding of Sussex made a very capable and popular Superintendent, who, with his staff of capable assistants oleased the exhibitors.

See list of prize winnings on pages 792, 798, 799, 806, 807, 814 and 815.

The Construction of Pig Sties.

Contrary to popular opinion, no farm animal is really so clean in its habits as the pig, and probably none suffers so much if obliged to exist in wet, dirty, cold surroundings. In the case of all stock, any reasonable expenditure incurred in making them thoroughly comfortable is likely to be well repaid by the better return given for the food consumed, to say nothing of the prevention of those diseases which may arise from bad hygenic conditions. The pig is an accommodating animal in many respects, but it is not fitted like other farm stock to withstand great changes of temperature; it is very sensitive to damp, and it may be said that pig-keeping is not likely to be a success unless warm, dry, fairly roomy, well ventilated sties are available. It is equally essential that the buildings should be so constructed that they can be easily kept clean, and disinfected from time to time. If these requirements are not satisfied, the most expensive and elaborate building will most certainly give poor results, while on the other hand, so long as these essentials are obtained, there is no reason why good results should not be obtained in the cheapest possible erection. The common conception of a pigsty is the small low lean-to building opening into an open court. This type of erection has the important advantage of being cheap, but it has serious disadvantages. The only opening into the sty proper is usually so low as to necessitate creeping into it, a fact which militates against frequent cleaning, particularly in wet weather, while it is difficult to inspect the pigs except about feeding time; it is too small and in other ways unsuitable for sows with litters; the building as commonly constructed is dark, badly ventilated, and owing to the absence of a door is either too cold in winter or too close and hot in summer. Furthermore, if it is not required as a pigsty, it is of little use for anything else, whereas a small building, say 10 feet by 8 feet, about 5 feet high at the eaves, suitably lighted and ventilated, and provided with a door in two sections, would not only be much superior as a pigsty, but would be useful for other purposes, e. g., poultry, storage of fuel, etc., if not required for pigs. On farms it is doubtful if, in ordinary cases, the erection of the common kind of sty is necessary or justifiable. As a general rule, all pigs except sows with litters, boars, and those nearly fat can be most economically and advantageously kept in the covered yards with fattening cattle. It is necessary to say that for the comfort of the cattle the number of pigs should not be too large, and for the sake of the pigs themselves they should have a dry corner fenced off for feeding and sleeping. If the manure from the stables is thrown into the yard, it is important to see that it is well distributed, or the pigs will choose it to sleep in, and "cramp" or "rheumatism" will almost certainly follow. For young litters, buildings of the loose-box type, opening and draining into the covered yards, or pens cut off from the yards by walls about 5 feet high, are most suitable, and can be used for a great variety of purposes when not employed as pigsties. There is no trouble with drainage or in the disposal of manure provided that the floors are well above the level of the manure in the yards. Where pigs are kept in large numbers, accommodation such as that suggested is not sufficient, and special piggeries have to be provided. As already mentioned, the essential conditions required by pigs are warmth, dryness, sufficient room, and good sanitation, and so long as these are secured the arrangement and construction of the piggeries can, if desired, be regulated entirely by economy of erection and upkeep, and of labor involved in feeding and tending the pigs. There are, however, certain essential conditions which should be secured in whatever kind of building is erected.

SITUATION AND ASPECT.

If at all possible, a fairly high and dry position should be selected, and in no case should the level of the floor be below the level of the surrounding ground, since buildings so constructed are almost certain to be damp and cold. The doorways, courts, windows, and openings should as far as possible be on the south side. Sties facing north may in some cases be unavoidable, but should never be used for young pigs, except possibly during the hot summer months. Sties for boars, especially sties used for boars to which sows from other premises are sent for service, should be isolated from the sties in which other pigs are kept.

FLOOR.

This in many respects the most important part of the building, and the part in which it is most difficult to combine conditions which are desirable from all points ol view. For instance, for cleanliness, durability and cheapness there is no doubt whatever that a floor of concrete with a skin of smooth cement is the best. Such floors are, however, unsuitable for, at any rate, the sleeping quarters ol pigs; they are always cold, and young pigs reared in houses with cement floors generally do badly, even if they do not develop cramp or rheumatism. Furthermore, if even slightly dirty they are as a rule very slippery. A compromise often made, is to have a cement floor, but to provide a movable wooden platform for the pigs to lie on, and this is good if the stie is roomy enough to allow of the platform being lilted frequently for cleaning purposes. Otherwise, dirt and manure will accumulate underneath. Probably a better plan is to have at least part of the floor laid with asphalt, or to make it of bricks set on edge in cement on abed of concrete. Such floors are warmer than cement, give a much better foothold, and are fairly easily kept clean, though a slightly greater slope is required for efficient drainage.

WALLS.

The walls must be weather proof, substantial and easily kept clean, and may be made of brick, concrete, or stone. Wooden walls can only be regarded as a makeshift, since with them it is impossible entirely to avoid cracks or joints in which manure lodges, while the junction with the floor is always a source of trouble, and unless protected by sheet iron or some such material, the lower part of the wall is gradually gnawed away by the occupants of the sty. If the wall is made of brick or stone, all joints should be pointed with cement or, better still, the wall should be faced with cement to a height of at least 3 feet from the floor. When the sty is intended for breeding-sows, a rail, which is best made of iron tubing about an inch and a half in diameter, should be fixed about 10 inches from the floor, and the same distance from the walls, to protect the young pigs from being crushed. Partition walls need not be more than about 4 feet high, though in the case of a long building some should be taken up to the roof. In case of extensive piggeries it is convenient to have some of the partitions so constructed that if required two or more sties can be thrown into one.

ROOF.

The roof should be weather-proof and non-conducting, and may suitably be tiled, or boarded and covered with galvanized sheeting or thou-

(Continued on page 816)

Saint John Exhibition Prize Winners

Field Grains

Wheat, white—1, B. Goodspeed, Penniac, N. B.; 2, Donald Innis, Tobique River, N. B.; 3, Cornelius McLellan, Arlington, P. E. I.

Wheat, red—1, Orin Hayes, Sussex, N. B.; 2, D. Innis.

Barley, 2 rowed—1, D. Innis; 2, Orin Hayes.

Barley, 6 rowed—1, Cornelius McLellan.

Barley, hulless—1, Orin Hayes; 2, D. Innis.

Rye—1, D. Innis.

Oats, white, Banner—1, D. Innis; 2, B. Goodspeed.

Oats, white a. o. v.—1, W. R. McFate, Golden Grove; 2, D. Innis.

Oats, black—1, Cornelius McLellan; 2, D. Innis; 3, Orin Hayes.

Buckwheat, rough—1, Cornelius McLellan; 2, D. Innis.

Buckwheat, smooth—1, W. N. Sterritt, Grey's mills, N. B.; 2, W. R. McFate.

Peas, telephone—1, A. R. Gorham, Gorham's Bluff, N. B.; 2, Orin Hayes.

Peas, stratagem—1, A. R. Gorham; 2, Edgar Harrison, Maccan; 3, B. Goodspeed.

Peas, gradus—1, W. N. Sterritt; 2, A. R. Gorham; 3, Fred B. Waters, Loch Lomond, N. B.

Peas, marrowfat—1, M. B. Harrison, Maccan; 2, Edgar Harrison; 3, D. Innis.

Peas, marrowfat, black eyed.—1, D. Innis.

Peas, field, any variety—1, M. B. Harrison; 2, E. Harrison; 3, D. Innis.

Beans, small, field—1, A. R. Gorham.

Beans, large, field—1, E. Harrison; 2, M. B. Harrison.

Beans, yellow eye—1, A. R. Gorham; 2, M. B. Harrison; 3, B. Goodspeed.

Beans, pink eye—1, E. Harrison; 2, A. R. Gorham.

Corn, Indian, yellow3, Eben Scribner, White's Cove.

Best collection of grain grown in New Brunswick—1, D. Innis; 2, Orin Hayes.

SHEAF GRAIN.

Best sheaf white wheat.—1, Orin Hayes; 2, D. Innis; 3, E. Harrison.

Best sheaf red Wheat—1, D. Innis; 2, Orin Hayes.

Best sheaf Oats, Banner—1, B. Goodspeed; 2, A. R. Gorham; 3, D. Innis.

Best sheaf Oats, legowo—1, A. R. Gorham.

Best sheaf Oats, white, a. o. v.—1, A. R. Gorham; Orin Hayes; 3, D. Innis.

Best sheaf Oats, black—1, A. R. Gorham; 2, Orin Hayes.

Best sheaf Barley, 2 rowed— 1, D. Innis; 2, Orin Hayes.

Best sheaf Barley, 6 rowed—1, D. Innis.

Best sheaf Barley, hulless—1, Orin Hayes; 2, D. Innis.

Best collection Sheaf Grain—1, D. Innis; 2, Orin Hayes.

CLASS 57.—FIELD ROOTS.

White Potatoes, largest, long—1, W. N. Sterritt; 2, B. Goodspeed.

White Potatoes, table, long—1, W. N. Sterritt; 2, B. Goodspeed; 3, F. B. Waters; 4, A. R. Gorham.

White Potatoes, largest, round— 1, B. Goodspeed; 2, W. R. McFate; 3, A. R. Gorham; 4, F. B. Waters.

White Potatoes, table, round—1, A. R. Gorham, 2, W. F. McFate; 3, F. B. Waters; 4, Orchard Hill Farm.

Red Potatoes, largest, long—1, B. Goodspeed.

Red potatoes, table, long.—1, W R. McFate; 2, B. Goodspeed; 3, F. B. Waters; 4, A. R. Gorham.

Red Potatoes, largest, round—1, W. N. Sterritt; 2, B. Goodspeed.

Red Potatoes, table, round— 1, B. Goodspeed; 2, W. N. Sterritt; 3, F. B. Waters.

Black Potatoes, largest, long—1, B. Goodspeed; 2, W. R. McFate.

Black Potatoes, table, long—1, W. R. McFate; 2, B. Goodspeed.

Black Potatoes, largest round—1, W. R. McFate; 2, B. Goodspeed.

Black Potatoes, table, round—1, B. Goodspeed; 2, F. B. Waters; 3, W. R. Waters.

Best collection Potatoes—1, B. Goodspeed; 2, F. B. Waters; 3, W. R. McFate.

Swede Turnips, largest—1, Orchard Hill Farm; 2, B. Goodspeed; 3, F. B. Waters.

Swede Turnips, smoothest—1, B. Goodspeed; 2, A. R. Gorham; 3, W. N. Sterrit.

Turnips, any variety for table— 1, B. Goodspeed; 2, F. B. Waters.

Carrots, red—1, Geo. Stiven, Chatham; 2, Orin Hayes; 3, F. B. Waters.

Carrots, white—1, Orin Hayes; 2, W. N. Sterritt; 3, A. R. Gorham.

Carrots, Chantenay, half long, scarlet—1, F. B. Waters; 2, B. Goodspeed.

Mangel, Wurtzel, red—1, Orin Hayes; 2, B. Goodspeed; 3, F. B. Waters.

Mangel, Wurtzel, yellow globe— 1, Orin Hayes; 2, F. B. Waters; 3, A. R, Gorham.

Mangel, Wurtzel, golden tankard—1 Orin Hayes; 2, F. B. Waters; 3, B. Goodspeed.

Sugar Beets—1, Orin Hayes; 2, B. Goodspeed; 3, F. B. Waters.

Pumpkins, largest by weight— 1, F. B. Waters.

Best collection Field Roots—1, Orin Hayes; 2, B. Goodspeed; 3, F. B. Waters.

Best exhibit of Field Roots and Garden Produce—1, B. Goodspeed.

Best exhibit of Potatoes—1, B. Goodspeed.

Best and largest collection of vegetables grown from Burpee's Seeds—1, B. Goodspeed.

Best exhibit of roots and vegetables grown for Bowker's Fertilizer Company's Special prize—1, B. Goodspeed.

Garden Vegetables

Cauliflower—1, Samuel S. Linton; 2, F. B. Waters; 3, Orin Hayes.

Cabbage, white,—1, Samuel S. Linton; 2, Orin Hayes; 3, F. B. Waters.

Cabbage, red—1, F. B. Waters; 2, S. S. Linton.

Savoys—1, F. B. Waters; 2, S. S. Linton; 3, Geo. Sriven.

Brussels Sprouts—1, F. B. Waters.

Carrots, intermediate—1, Geo. Stipen; 2, F. B. Waters; 3, S. S. Linton.

Carrots, oxheart—1, A. R. Gorham; 2, F. B. Waters; 3. B. Goodspeed.

Carrots, early horn—1, F. B. Waters; 2, B. Goodspeed.

Parsnips, hollow crown—1, George Stiven; 2, Orin Hayes; 3, B. Goodspeed.

Parsnips, intermediate—1, Orin Hayes; 2, B. Goodspeed.

Clery, white—1, Geo. Stiven.

Celery, white plume—1, Geo. Stiven.

Tomatoes, red—1, A. R. Gorham; 2, Eben Scribner.

Tomatoes, green—1, A. R. Gorham; 2, Geo. Stiven.

Tomatoes, best collection—, 1, Eben Scribner; 2, Edgar Harrison; 3, M. B. Harrison.

Beets, blood, long—1, B. Goodspeed; 2, F. B. Waters.

Beets, Egyptian—1, Geo. Stiven; 2, S. S. Linton; 3, B. Goodspeed.

Beets, eclipse—1, F. B. Waters; 2, B. Goodspeed.

Onions, white—1, Eben Scribner; 2, B. Goodspeed.

Onions, yellow—1, Geo. Stiven; 2, Eben Scribner; 3, W. R. McFate.

(Continued on page 813)

Sheep on the Farm.

The importance and profit of a flock of sheep on the average farm is too often disregarded and minimized by the negligence and lack of care on the part of the farmer. Too many farmers have an idea that a sheep is simply a sheep and because he is a sheep he needs no care and but little feed. When the results of such methods prove profitless these same men declare that sheep do not make money, and thoughtless observers unacquainted with the facts and conditions are quick to proclaim sheep-raising on the farm a failure.

It is a strange fact that the sheep has received little consideration from the agricultural colleges and the majority of the farm press. The ways of our grandfathers have seemed good enough for the handling of sheep on the farm, and when interest has lagged and improvement has been neglected men have said that sheep do not pay. When we have seen how some farmers have handled their sheep we have wondered not that they did not pay, but that they even lived.

The trouble is principally neglect in the care and feed of the flock, and failure to realize the value of good straight breeding. The result is the production of an inferior lamb or sheep. If a fleece is obtained it is of nondescript character and uncertain grade, generally filled with chaff, burrs and other foreign material, wrapped with an unnecessarily large amount of such twine as leaves its fibers intermixed with the wool. Such wool is obviously not worth as much as a well grown fleece put in good condition.

Farmers must realize that it requires feed to grow sheep, just as it does to grow cattle or hogs. Sheep will live and thrive on much feed that is of little value for other stock, but that does not imply that they can do without. One cannot turn a flock of ewes or lambs into a stubblefield, leave them there until there is nothing for them but the bare stubble to eat, and often without water, and then expect the lambs to grow fat and the ewes to grow good fleeces. Likewise in winter, it takes feed to keep the breeding ewes in condition so that when spring comes one may get a large percentage of strong, healthy lambs and at the same time a fleece of good staple and weight. One cannot get something for nothing in this world, nor can we grow mutton and wool without feed.

Along with care and feed goes good breeding. "Blood will tell" applies to sheep as to all other animals. It would seem as if its importance, had been sufficiently demonstrated, but when one drives through the country or sees the sheep come into the stock yards at the market centers, he is amazed at the various breeds and crosses, especially the latter, that appear. It is right along this line that improvement is required. There must be more uniformity in the breeding of the average farm flock, and with this more continuity of purpose.

Years ago when wool was the main purpose with sheep, Vermont Merinos always tending toward the wrinkly type, were practically the only breed. But when mutton came to be a valuable product this wrinkly Merino was emphatically condemned by the market men, and every grower was advised to sell his Merinos and to breed a mutton sheep, for the wool was of no value and never would be again. The only sheep in mind was a black-face or a long-wool, according to the personal choice of the market man. The result was a nearly universal crossing of those old flocks with mutton rams of the breed generally recommended by the market man in that neighborhood. From that time on many farmers who keep sheep have been crossing and re-crossing breeds. Like a weather-vane in the wind, too many farmers change their mind as to the breed they want with every change in the market, and it keeps them so busy changing that they never have time really to determine on some one breed and purpose and stay with it.

Some well known sheepmen advocate the standardizing of breeds by localities, but it seems as if quicker and better results could be obtained by emphasizing the importance of uniformity and pure breeding within the individual flock. It makes little difference what breed a man selects so long as it is adapted to his conditions of production and market, but it is important that after he selects that breed he continue with it. He cannot improve his flock by crossing it with rams of other breeds.

Sheep have just as important a place upon the average farm as any other live stock, but they must be given intelligent feed and handling to produce maximum profits. That they do pay is amply demonstrated in those sections where they have been maintained for any length of time and given intelligent care and breeding—Roscoe Wood, in Breeders' Gazette.

The Public Sale of Pure Bred Breeding Stock.

As a system of selling "purebred" stock the public sale affords so many positive and distinct advantages that argument for the method would seem unnecessary. The efficacy of the system is clearly evidenced by the fact that our most active and successful present day breeders have adopted it, and that the foremost breeds of live stock are those which have been kept conspicuously before the public eye by the auction method. So generally established and so popular has this method of selling and buying registered live stock become that the breeder who does not follow the custom is looked upon by the public with a degree of indifference and suspicion, while the breeder who manifests a confidence in his neighbors, permitting them to compete publicly for his goods, wins their confidence and will command their patronage just as long as he gives them clean and honest actions.

The public sale is unsurpassed as an educator upon the matter of values, types and breeds and gives great impetus to the improved stock breeding industry. The public sale proposition is not clothed in mystery that should cause a breeder to hesitate and doubt his ability to make a successful sale and undergo the monotony, uncertainty and disappointment attending the private sale business. Far from being so, the process is very easy and the results gratifying if one will but observe and carry out the details pertaining thereto.

First: The character and standing of a breeder among his neighbors is essential. If the public esteem a man's word, and know him to be honest, personality other than this is of little consequence. I have in mind a great number of breeders who might not be termed "smooth" or "clever", but better, they are honest, and their sales are always successful.

Second: The sale offering should be presented in good breeding condition, doubtful and inferior animals should in no case be listed.

This does not imply that every animal must be a high class individual, but those that are not superior to the common stock of the community should by all means be eliminated.

Third: The sale should be dated far enough in advance that the offering may be shaped up for the occasion, and also allow a sufficient time in which to thoroughly advertise the sale. Advertising is very important, and I heartily commend the use of the agricultural press. A sale offering which will not justify advertising in a live stock journal, should not be sold for breeding purposes. In addition to these, a sale should be given notice in the local papers covering a radius of fifteen miles. Ten days prior to the sale, bills should be posted at cross roads and in business houses in the local territory, and a general announcement of the auction made over the local phone lines the evening before the sale. Sale catalogues should be gotten out by the time the first advertisement appears so that inquiries may be promptly supplied. Ten days before the sale mail catalogues to these on your mailing list, which should in addition to the breeders' names, include those of fifty or more farmers living nearest to you. Follow this with a circular letter, or postal card notice three days before the sale. See that your catalogues are complete, and free from error, using footnotes that will do the animal justice without exaggeration. Solicit mail bids to be entrusted to your field-men or auctioneer, and reserve 150 catalogues for sale day.

In determining upon whether to hold the sale, you should consider the convenience and comfort of the public. As a general thing, it is better to hold winter sales in town, however, there is no established rule on this point. If sale is a driving distance from town furnish free conveyance and see to it that the service is prompt. Furnish free entertainment to parties from a distance and have free lunch for every one.

Fourth: Provide a comfortable place in which to hold the sale. If there is no barn suitable for the purpose, do not hesitate to hire a good tent. Have seats for the crowd and be sure that seats are secure. If a swine sale do not have the ring more than 18 feet across, enclosed with patent fencing 30 inches high bringing seats well up to the ring. For cattle and horse sales a larger ring is, of course necessary.

Fifth: Class and arrange your stock in the pens or stalls so it will appear to the best advantage, numbering each animal so as to correspond with the catalogue number. Number swine with paint, and place number on back just behind the shoulders. Never depend upon ear tag numbers for the sale ring, and be sure there is no error in the numbering. For cattle place cloth, or paper numbers, by pasting on each hip, and for horses attach numbers to halter. It is always best to number your offering the evening before sale, or very early sale morning. Never delay numbering until the crowd is arriving. Procure a sufficient number of helpers and give instructions so that each will know what is expected of him. Arrange entrance and exit to the sale ring, so there can be no delay in getting the stock in and out. Everything should be completed and ready by nine o'clock sale day, with nothing for the proprietor to do but receive the guests and look after their comforts. Extend to your neighbors the same courtesy as to those from a distance, and make every one feel at home.

Sixth. One hour before sale time, have lunch served, and have plenty. Be ready to start the sale on time. With your helpers instructed as to the order in which the stock will be sold, your place during the sale is near the auctioneer. Be prepared to answer all questions regarding the stock, and do not withhold or cover up any of the facts. Be brief and to the point and also be pleasant. If an animal sells for less than you were expecting, do not complain, for the next may bring more than you expected. At this particular time in the sale, the success with which you are to meet depends entirely upon the ability of the auctioneer on the block. If you have employed an expert sales man, a man who is familiar with every phase of the business now at hand, you have done nicely. But if you have tried to save a few dollars by hiring an auctioneer whose only recommendation is a low fee, and and placed within the hands of an inexperienced salesman, the responsibility of getting you a reward for your effort in caring for the offering, and getting ready for the sale, may the good Lord pity you. Employ the local auctioneer through courtesy and to prevent a hard sale being held in the neighborhood the same day. He can also help in advertising, and work in the ring. The "field-men" representing the live stock journals in which you have advertised the sale are all good ring men and they are always ready and willing to help a sale in every possible way. Where you expect them to help in the ring, always supply your clerk with a few sheets of carbon paper, so that he can furnish each of them with a complete list of the sale when it is concluded, and thus avoid the delay entailed by the ring-men also having to clerk sale while it is in progress.

Seventh: Employ an experienced clerk, and have your pedigrees all made out in advance of the sale, leaving them with the clerk to give to the buyers when settling. Instruct your clerk to settle with the advertising men and auctioneer just as soon as the sale is over. Be as interested in conveying parties back to the station and saying good-bye to them as you were in greeting them. Make every promise and agreement good, and you will find your reputation extending from year to year, your sale averages increasing, you will become an exponent and advocate of the one great effective method of selling and you will attain a success otherwise impossible.—H. S. Duncan.

Black Soils.

The black soils in different parts of the globe are remarkable for their fertility, and abundant crops are harvested off them year after year without any apparent decrease of productive capacity—we say "apparent" because the continual extraction of plant-foods must sooner or later impoverish even the richest land.

Such soils exist in parts of Morocco Russia, Australia, Canada, and a few other places.

The most remarkable black soil is probably that of Russia. It has been calculated to cover an area of 60,000 square miles and, while supplying food for a population of about 20,000,000, yet produces an enormous surplus of wheat for export. It extends right up to the borders of Hungary, and forms the largest extent of similar fertile soil known to exist.

Its depth varies from 1 or 2 to 20 ft.; when moist, it is jet black; when dry, of a dark brown. The dark color from which it derives its name, "Tchovnoi zem," is due to the presence of large quantities of organic vegetable matter in a peculiar decomposed mix with mineral matter.

The richness of the mineral constituents of the black soil, a rich sample, is shown by its contents in a dry state:—Potash, 5.81 per cent; soda, 2.31 per cent.; lime, 2.60 per cent.

This abundant supply of the essential mineral substances combined with the rich organic matter, is sufficient to afford an explanation of the exceptional fertility of the soil.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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SEPTEMBER 10, 1912

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September 24
October 8-29

GOOD JUDGMENT.

Good judgment in conducting a dairy farm is a somewhat rare quality. Yet, not so rare but that many farmers possesses it. It also seems to be of slow growth, for a well conducted farm will exist for years in the midst of poorly conducted farms without the operators of these farms noticing it. There is a question of judgment involving here. And here breaks in a serious of questions that we have heard asked hundreds of times.

"Must a farmer be a thoroughly educated man to have good judgment ?"

"What is good judgment and in what does it consist ?"

"Do you measure it solely by the fact of making money on the farm ?"

"Why is it that we often see a well educated man of good intellect who seemingly cannot succeed as a dairy farmer ?"

"Why is it that some men succeed fairly well, who are not well educated, who do not surround themselves with books and papers as do the men who come from the schools ?"

"Must the farmer be a chemist in order to have good judgment of soils and how to manage them ?"

"Must he be a man learned in animal physiology in order to understand well the cow and how to make a profit from a herd of cows ?"

"Can't we have good judgment and do well at dairy farming without all this fussing with what we call the intellect ?"

"Why should a man have a bench full of expensive tools when some men can do so much and do it well with a jack knife?"

The foregoing questions fill the middle ground between the so-called scientific dairyman and the average dairy farmer and the latter is constantly asking them. What answer will our readers make to any one of them ?

The average dairy farmer does not like the idea that with all his experience he is not better fitted to exercise than any other man. We are not prepared to say that he is not, but the fact remains and is staring us in the face that a great host of such men are not succeeding well at the business.

Their farms are running down. Crop growing is yearly getting more and more hazardous with them.

Have they good judgment ? Are they managing their soil rightly when such is the result.

There is a difference of two to five hundred per cent in the net profit per cow between farmers in the same neighborhood on farms on the same natural quality.

Is the quality of the judgment the same in both cases ? Both have had experience, What is the matter with this low per cent man ?

We want some of our readers to fire at one or more of those questions. We need help in solving them.

Our New Serial Story

THE first instalment of our new serial story appears in this issue of the Maritime Farmer. The interesting and world famous story, David Copperfield, by Charles Dickens is one that always stands re-reading. Those of our readers, who have previously read this story will be delighted to read it again, while many of our readers, who have never read it before, will eagerly await the coming of the mailman on Maritime Farmer days. We are sure that there will be many happy gatherings around the family circle as the story is close followed from issue to issue. Now would be an opportune time to ask your friends to subscribe for THE MARITIME FARMER. Tell them about our new serial story and the other good points of The Maritime Farmer. They will thank you for bringing it to their notice. Speed the good work today.

AN INVESTMENT FOR FARMERS.

A group of farmers were one day talking together about farmers' investments. One man declared that mortgages on farms could be had, realizing five per cent., and they were investments that farmers knew a good deal about. Another anvocated putting surplus money into the banks, for though the interest was low yet the money was safe, and could be got at any time. A third, however, the richest of the party, then gave his views, and he was listened to with attention. "The practice I have followed for many years has been, I am convinced, more profitable than any other I could have taken to. Every time I have found myself with any surplus money I have invested it in some way or another on the farm. Either implements, or fresh stock, fertilisers, repairs, extra hired labor or something else offered itself for attention and the result proved it a most profitable investment. If you want a good use for your money, put it back into the farm, just as the city man puts his money back into his business."

PLAY TO YOUR MARKETS.

A wise butter maker on being asked whether he considered it right to use butter color answered that, if the market demanded Paris green in butter he would put it in. To succeed in the producing of butter or of beef the requirements of the purchaser must be complied with. The standard of the beef market has changed greatly in recent years. Not many years ago the best markets demanded large thick bullocks, weighing 1,800 to 2,000 lbs., but the demand has changed and cattle of that description are no longer sent forward. The bullock that demands the highest price is a compact, well finished animal weighing not more than 1,500 lbs. on foot and if he weighs only 1,200 lbs. he will command the highest market price, provided he has the form, quality and finish. Even the thousand pound 'baby beef' is looked for by the man with the money on this side of the Atlantic, but such cattle are not shipped abroad. The change is greatly to the advantage of the producer, as other things being equal, the younger the animal goes to market, the less is the cost of food and the greater the profit to the producer. The British market demands cattle of moderate weights, good quality, and carrying sufficient fat in connection with the lean meat to secure a high degree of excellence without waste. To secure delicate flavour and tenderness a certain proposition of fat is necessary and this should be incorporated with the flesh or lean meat rather than appear only as a covering to the muscles. The great secret in procucing a carcass of beef is to treat an animal in such a way that the fat grows with it during the entire period of its life time. It is unfortunately the too common practice of Canadian beef raisers to produse all that fat that an animal carries in the course of a few months. Much of the fat put on in this way is deposited on the outside of the carcass; it is largely wasted as it is useful for little else than tallow. The carcass that dresses out showing specks and streaks of fat throughout the lean tissue commands the highest prices. Such beef is regarded as much of a delicacy as the finest turkey or lamb. The only way to be sure of prime quality is to maintain the animal in good condition by a system of liberal feeding from birth to maturity. Then the finishing period is comparatively short and the carcass produces the highly desirable marbled beef.

MARITIME FRUIT INSPECTORS.

The Dominion fruit inspection service plan for the seaion 1912—13 has just come to hand. A new position, chief inspector has been created in each of the five fruit districts into which Canada is sub divided.

The inspectors for Nova Scotia are:—G. H. Moore, chief inspectors, A. S. Alcorn, W.C. Healy, Stuart Dimock, and Geo. Akins, inspectors at Halifax, and F. B. Westcott and Wm. Bishop, inspectors in the Annapolis Valley. Chas. M. Williams is chief inspector for Prince Edward Island and S. L. Peters occupies a similar position in New Brunswick.

EDITORIAL NOTES.

What plans have you made for better school this fall ? This work is not for teachers and school officers alone; the patrons and friends of the pupils should have a part.

Corn in Adverse Years and in Years of Plenty.

After four days' drive through the centre of Prince Edward Island, during which I discussed the condition of crops with several farmers, in the various localities which I visited, I believe this will be a fairly favorable season for the average farmer. Good growing weather in May favored the growth of grass somewhat earlier than usual and early sown grain started up very fast; but the cold wave experienced all through the month of June greatly hindered growth, so much so that the middle of July found crops rather backward, for that time of year.. Since the middle of July, abundant rains following excessive heat brought everything on in good shape, and there was time for grain to recover from the June setback. Hay was well up to the average; potatoes, everywhere, looked well, turnips are patchy in most places, but corn, where it is grown, is regular and strong.

This has been a peculiar season with its extremes of cold and heat, drought and moisture and one that emphasizes the necessity of a variety of crops. It is wonderful to note the persistency with which a great many farmers stick to the staple Island crops, hay, oats, and potatoes, the latter being always sold and thus leaving only a choice of the other two, with the exception of a small amount of turnips, for stock feeding.

Now, granted that in good growing seasons this variety may answer the requirement of the mixed farmer, as everything one can grow sells readily, it should be the aim of every farmer to so create conditions of fertility of soil and grow a variety of crops so that he may be prepared to cope with adverse weather conditions and be reasonably sure of a sufficient supply of feed, under any condition that is likely to occur.

While there may be more fertile lands and greater opportunities for a few fortunate individuals to acquire prosperity in the West and South West of the Maritime Provinces, Prince Edward Island is nevertheless a good place in which to farm.

When we read of the cyclones, the hailstorms, the early frosts and the destroying floods that so suddenly ruin most promising crops, as is frequently experienced in the West, we should be thankful for our temperate climate, where conditions are such that we are assured profitable returns each and every year.

No farmer should be satisfied with merely holding his own by keeping just the same number of live stock and manuring just the same small acerage year after year. If we live up to our opportunities, whatever they may be, we should, year by year, be found growing a little larger acerage of the heavy producing crops and keeping a few more cattle and feeding those we carry better. For this reason, I think about all the manure produced on a farm should be used for growing roots and corn. If these crops grow well, they will be followed by a good crop of grain and subsequently by hay or pasturage as we desire.

About twenty years ago Professor Robertson toured our Island Province preaching the doctrines of dairying, corn growing, silo building, an the growing of all succulent feeds. Co-operative dairying, the most suitable and, in every way, the most favorable industry ever established on Prince Edward Island was thus introduced and a large number of silos were built.

I was only a boy at the time and had no part in the pioneer silo days, but as I look back now I wonder that so many silos were built and so quickly abandoned. It was almost a stampede in and out of corn growing and while quite a number of silos are still in use, in this province, very few indeed of the pioneers are amongst the number. The effect of the outward stampede is hindering many, who are now giving the question of corn growing some thought, from erecting a silo.

As this is the sixth consecutive corn crop we have successfully grown for the silo, I am beginning to think that we can grow it every year, as I do not expect to ever meet more unfavorable seasons than we experienced during the past six years, the present season included. Few crops are as hard to injure as corn, from the time it is through the ground until it is fed. It is too tough for the cut worm; no flies, blights, rusts nor droughts affect it. When it gets too dry for anything else to grow, corn keeps right on growing. A slight frost prematurely ripens it and if heavy necessiates cutting and prevents further cobbing, but does not spoil its feeding qualities, as bad weather will affect hay, and once in the silo, neither excess of heat nor cold can injure it, nor will the length of time it is kept spoil its feeding value. When we can grow from ten to twenty tons of corn per acre, and it usually grows in years that hay will not grow, why do not more of our Maritime farmers grow corn for the silo ?

I think that some are hindered in this work, as I was for some years, by the experience of some of the men who abandoned the silo. For several years, I have known them to fail to get a stand—it seemed the ground was too cold and damp for the kernels to germinate. I believe the trouble was that the ground was not properly cultivated. The usual custom was to summer fallow a piece of sod land and before planting it was plowed again. While this made a good seed bed, in a warm season, it did not give underdrainage enough during a cold, damp season.

I have grown corn several times following both fall plowing and spring plowing systems in the same season and after closely following tne results of my own work and the experience of others I would not now risk growing corn on any but spring plowed sod, manured dther the previous fall or as early as possible in the spring, with a manure spreader which spreads so fine that the grass is not buried anywhere after which the grass will make wonderfully rapid growth—this makes the manure grow more manure. We plow this grassy field about the last of May using a skimmer plow, set to skim a deep roll of soil out into the furrow, which answers the double purpose of preventing the grass from starting where the furrows join, and the turned soil falling on the grass in the furrow so loosens up the sod that after-cultivation is greatly aided. We diec or double disc this soil until we work up a good deep seed bed and then we plant our corn with a disc drill, in rows thirty-five inches apart. It takes a little over one-half bushel of seed corn to the acre. Land so treated will have a thick, heavy growth of grass and manure starting to heat under the corn. We get some grass to keep the cultivator busy and also some couch, if it is in the soil, but we get good corn with well matured ears every time.

The season of 1910 had a cold wet June and the half of our corn was on summer-fallowed sod land. The other half was on an adjoining p lot that had been spring-plowed sod treated as above described. The crop on the summer-fallowed plot was not nearly as good and cars were much inferior in filling qualities and maturity to those on the spring plowed plot. On some other years we did not see such a marked difference in the bulk of crop but the ears were always better and the corn grew more regular on land prepared by manuring grass land and following the practice of spring plowing and after cultivation as I have already described.

Turnips are a splendid feed—there is nothing that can just take their place and so we always grow large quantities of them. But we should have corn too. This is the only safe way to be sure to have plenty of feed. It seems such a pity to see whole sections of a province importing hay by the car load, as the farmers of the eastern end of Prince Edward Island were compelled to do last year. Had each farmer his corn crop and silo he could have had sufficient feed, even if the hay and grain crops were both light.

Don't waste any sympathy on the men you see buying mill feed and perhaps a little hay, after growing a large quantity of roots and corn. If he grows good crops of these, he will grow good crops of grain and hay, and if he has enterprise enough to buy mill feeds to supplement his farm-grown crops, you may rest assured that he will have wit enough to feed it to some class of live stock that will recompense him for his trouble.

On the other hand, the man who is compelled to purchase high priced hay to carry his stock through the winter, earning nothing in return, is deserving of sympathy and something else.

Such a man shodld be persuaded to take up a variety of crops. On our one hundred and twenty-five acres of cultivated land, some twelve years ago, six acres was all that could be dressed with stable manure in one season. By feeding better and growing more roots and corn we now dress from twenty-five to thirty acres each year and grow a great variety of crops, this season, including six acres of corn, seven acres of turnips and four acres of potatoes. The remainder of the manure, not used on the above mentioned crops, was used as a top-dress on grain. If our hay or grain crops are light, which is not the case, we have always a full crop, of at least, one of the others which yields an abundance of feed.

Now, I would not wish to advocate the growing of corn instead of turnips—we need them both in this province. I like to pass a farm where both are grown in quantity for I am assured that every other crop will grow after them and the manure produced by feeding them on the farm and the good cleaning their cultivation gives soon puts the owner on the road to prosperity.

Do not let the fact that several abandoned silos are in your immediate vicinity hinder you from giving corn-growing your serious thought. To the man who has a timber growth on his place, a silo need not cost very much after he has a concrete base or foundation built about three and one-half feet in the ground. The silo may be square framed and double boarded up and down with tarred paper between and joints carefully broken, the corners on the inside being cut off about one foot so that the ensilage will pack in better than if they were square. A silo of this kind keeps corn perfectly. No part of it will spoil excepting a little on top and even the latter may be avoided or, at least, reduced to a minimum by covering the ensilage with a foot or so of fine hay or seaweed, immediately after the silo is filled

We cannot grow any other crop that will give such an amount of feed, with the same expenditure of manure and labor as will corn. We cut our corn by hand and use a corn blower. The elevator is not satisfactory as it is too easily put out of commission, causing a lot of delay and added expense.

Ensilage cutters and blowers are not very costly and a good machine may be owned and used co-jointly by neighbors. A little experience will soon teach one how to make good ensilage. We like to leave the corn as late as possible to get all the ear-growth we can. A little frost does not injure it, in fact, my impression is that frost actually improves it, as the leaves being a little withered and dry take up excess moisture and the silage is not so apt to sour. However, if a heavy frost strikes your corn, cut it as soon as possible and little injury is done only, in this case, if the weather is dry, use some water.

There are two extremes to be guarded against, if the corn is too green and moist the ensilage will sour, and if, on the other hand, the corn is too dry the ensilage may mould. As our corn is usually a little frosted before we cut, we put it into our silo pretty damp. The firmer it is tramped the better, particularly around the walls, corners and on top. When the silo is full, plenty of water may be splashed on top to make it thoroughly wet. A lot of heat will soon develop and, while the mass is settling, it should be well tramped every day, so that there will be few if any air spaces. This will give better ensilage near the top and when the silo is opened for use nothing can injure it. Mice will not touch it, neither rain, snow, heat nor cold affect the feeding qualities of ensilage. It can be stored in a small area and every claes of live stock like it. Corn is a good feed in a year of general good crops and a bonanza in a year of drought. — W. A. Lea, Victoria, P. E. I.

Smut in Oats.

In making a careful examination of the oat fields entered in the Kings County, N. B., Crop Growing Contest, Mr. Fiske, the judge, reports that smut was found in nearly every field. The Farmer has also heard a great deal of complaint re the prevalence of smut this year from a great many farmers other than those who participated in the contest.

Smut is one of the most serious propositions which grain growers have to deal with from year to year. It is a serious proposition because of the decrease in oat production due to oat smut. In order to know exactly what the damage due to smut amounts to all one has to do is to measure plots two feet square in about six representative points in each field. Then make two counts, first counting the total number of stalks and second the number of stalks infected with smut. After making the count calculate the results. In some cases it will be found that nearly ten per cent. of the oat heads will be filled with smut which means a loss of about five to ten bushels per acre.

The question now arises as to how farmers are to combat the smut. The answer is to treat the oats in the spring just before sowing and save from five to ten bushels per acre.

(Continued on page 810)

Pandora Range

The "Pandora" Range is doubly guaranteed — it is guaranteed by the makers and just as fearlessly guaranteed by every McClary agent. You should know "Pandora" perfections before you buy a range.

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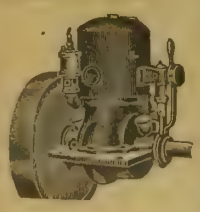

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4-6 h.p. Combination, $145 Complete, 12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton Ont.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

HORTICULTURE.

The Thinning of Fruit.

It is only a few years ago that any of us first understood at all definitely what was meant by "thinning fruit." Now practically all commercial growers instinctively think of the removal of some of the fruits at an early stage on their growth, to permit of the greater perfection of the rest.

What was unheard of a few years ago becomes widely talked of today, and is the common practice of tomorrow. This has been the history of spraying throughout the apple districts, while pruning has gone through a similar evolution, though in a more irregular fashion.

Thinning as a feature of orchard practice on a large scale was probably first adopted in California, and was soon after applied to apples and pears in the producing districts of the Pacific Slope. It is in these districts that high fraght rates and a long haul to markets has made essential the production of the greatest possible percentage of high-class fruit.

Only good fruit can be sold at a profit in western packages and under transcontinental freight rates, but the valuable lesson was learned that care in all features of production results, not in a minimum of profit, but in a maximum of profit; in other words the high expenditure per acre involved by intensive methods produces not a lower profit per box of fruit, but a higher one. The West has taken this lesson to heart and the changing market conditions are bringing it home to the East as well.

The British Columbia grower never asks himself if thinning pays any more than he asks whether pruning or cultivation produces a profit. About spraying, especially in those districts where San Jose scale and the codling moth are unknown and where apple scab and similar fungous diseases have never been seen by the average orcharist, he does raise a question, but the cost of pruning, cultivation and thinning he does not question any more than he questions the box package or the wrapping of high-class fruit.

Until varieties of peaches, apples and pears are produced that reach the commercial standard of perfection without pruning and thinning (and such varieties are a long way off as yet), these practises, which go hand in hand, will continue to be two of the most important in the orchardists' calendar.

In the East a similar view of the matter will in the near future obtain. Progressive growers will experiment and their results will shortly lead to the adoption of thinning as a part of orthodox orchard practice as it is now in the West.

In discussing the question of thinning we admit that a tree may set more fruit than it can possibly bring to perfection, as the fruit grower understands perfection. Nature cares nothing for the fruit except as an aid to produce seed; the orchardist cares nothing for seed except as they are necessary to the production of fruit. We wish each tree to carry all the fruit it can bring to commercial perfection, and no more. At the same time the tree must make new vegetative growth consistent with its age, and the variety. The third requisite is that it should also form enough fruit spurs for a similar crop in the following year.

When a tree is fulfilling these three requirements, it is performing its maximum duty to the owner. If it falls short in any of them he is not getting his maximum of profit, either immediate or prospective from

One Roofing Used Twice

After fighting smoke, burning cinders and storm for seven years, the roofing shown above on the old Wells Street Station of the C. & N.W. R. R. in Chicago, was rolled up and used to re-roof several suburban stations.

NEPONSET PAROID ROOFING

This hard wear has not taken a bit of the life out of the roofing, and it is now giving perfect service in its new locations. A good life insurance risk is the man who lives beyond the average time—longer than he is *expected* to live. A good roofing is one that lasts *longer* than is necessary. That's what NEPONSET Paroid does. An ideal roofing for factories, storehouses and farm buildings.

Blue Print Barn Plans—FREE

They are the kind of plans that appeal to every Canadian farmer.

NEPONSET *Roofings are made in Canada*

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RU-BER-OID Roofing

TRADE MARK REGISTERED.

Lessens Fire Risks

Fire Insurance Companies assess buildings covered with Ruberoid at the "base" or lowest rate.

That is because a RU-BER-OID Roof will not catch fire from flying cinders or even burning brands—and because the one-piece, air-tight, fire-resisting RU-BER-OID Roof helps to hold down a fire starting within.

RU-BER-OID Roofing will not warp or crack like shingles—rust like metal roofs—nor rot, dry out nor crumble as so many ready roofings do. It gives fuller and more lasting protection per dollar of cost than does any other roofing.

Made under Canadian Patents 93,027 and 93,160, in 3 Permanent Colors—Red, Brown and Green—and in natural Slate. Write for Samples and Booklet, "RU-BER-OID—Why?"

THE STANDARD PAINT CO. OF CANADA, LIMITED.

MONTREAL. WINNIPEG. CALGARY. VANCOUVER. 87

The Advertisers in The Maritime Farmer are worthy your confidence.

it. This ideal is the foundation of our orchard practice.

The removal of some of the fruit at an early stage in its growth helps materially towards securing the maximum duty of the tree in certain definite ways.

First, the average size of the fruit left on the trees is increased; this is the most obvious result of thinning. Trees overburdened with fruit produce a greater percentage of number two apples. The increase in size of the remainder, after the first or second pickings of Bartlett pears is made, is a striking instance of the increase in size when the number of fruits is reduced.

Second, the fruit borne is more uniform in size and shape. On the overloaded tree there is much variation in size, and especially where two or more fruits remain on a spur they are variable in shape as well. The fruits from the side blossoms of the cluster are in many varieties much different from those from the centre blossom, usually being flatter in shape and having a considerably longer stem. Uniformity in size and shape is an important essential of commercial perfection.

Third, the color is materially bettered, more uniform, and comes earlier. The remarkable increase in color which occurs when a first picking is made from heavily bearing trees of even the Winter varieties such as Jonathan and Wagener, furnishes a striking confirmation of this point, while color seems largely related to sun-shine, it is a well known fact that on a heavily loaded tree the fruit has less color less evenly distributed, and more slowly acquired.

Fourth, thinning improves the quality. This is especially the case when the soil is deficient in moisture or plant food.

Fifth, the fruit is freer of diseases and insect pests, because wormy apples, limb-bruised or diseased fruit of any kind can be removed at thinning time. On plums and peaches in moist regions, fruits thinned so that no two touch when full grown, are much freer of brown rot.

Sixth, the removal of misshapen fruit lowers the percentage of low grade fruit.

Seventh, thinning prevents premature dropping. A familiar instance is that of the McIntosh Red, which is especially liable to drop where two fruits are left on one spur. Premature dropping is quite largely due to the inability of the tree to supply moisture to an excessive crop.

Eighth, the load of fruit is more evenly distributed, and this is a very important feature in preventing the breaking down of trees.

Ninth, the cost of picking is reduced considerably, and the labor of packing is divided more evenly over the season. This is an important advantage where the supply of labor is deficient in picking time. The costs of grading and packing are also much lessened.

Tenth, less fertility is removed from the soil, a ton of apples takes out approximately 1.2 pounds of nitrogen, 1.6 pounds of potash, and 6 pounds of phosphoric acid. A ton of pears removes the same amount of nitrogen and about twice as much of the other elements. The seeds take the great bulk of these amounts, the pulp of the fruit taking but a small portion. As the number of seeds is roughly in proportion to the number of apples, and not to their size, the removal of fruits leaves a much greater supply of plant food for the balance of the crop, for the growth of the tree, in the soil.

Eleventh, the tree is less liable to Winter injury. The extensive injury suffered throughout Ontario by the hard Winter of 1903-4 fell mainly on the trees which had borne an overload the previous season. This is a natural result because the ripening of the crop drains the vitality of the tree, so leaving it in poor shape to withstand the winter. Trees bearing moderate crops for which there is an adequate supply of moisture have sufficient vitality to ripen the crop, and to ripen the fruit buds and new shoots as well.

Twelth, one of the most important results of thinning is that trees will bear a larger and more uniform crop the following year. The tendency towards biennial bearing is materially reduced, much depending in this, however, on the variety.

For various reasons, then, thinning helps materially to secure the maximum duty from the tree.

As soon as the crop can be determined and the supply of labor permits thinning should be commenced. Start with those varieties which are most advanced. Generally, apples, about the size of a hickory nut, and pears and peaches are thinned when the thinning should be completed before they are more than double that size. On the various plums the work should be commenced as soon as possible after the dropping, familiarly known as "the June drop" is over.

Apricots, cherries and crab apples are not usually thinned by hand, because the crop which they are to bear is a reasonably certain quantity, and can be controlled to a greater extent than in the larger fruits by proper pruning. The Italian prune and the peach plum are not usually thinned, because normally the set of fruit of these varieties is not great enough to necessitate the expenditure.

To set rules for thinning is even more difficult than to set rules for pruning. The fruit grower must determine for himself just how much crop the tree will be able to carry. Much depends on the variety, the age of the tree, its vitality, the soil, cultivation, climate, and district. Under equal conditions the Winesap may be thinned to, say, five inches, where the Jonathan would be thinned to six or seven, and the Northern Spy to eight. In climates such as that of Vancouver Island, where no irrigation is available, and the rainfall averages about half an inch per month during the growing season, or one-fifth that of the average Ontario district, all varieties are thinned to a greater distance than in districts of greater rainfall or where irrigation is available. In this district it is advisable to thin many crops, the whole of which could be carried to advantage under other conditions. Unhealthy or diseased trees should not be expected to grow as great a load as those in perfect health, while trees making extensive growth may very well be allowed to carry much more than average trees under the same conditions.

By one rule which is practised to some extent the grower sizes up all the conditions and determines how many boxes of fruit the tree should carry. It is a small matter then to determine how many fruits there should be left on the tree. The results at first are likely to be considerably off the estimate, but this is very largely a matter of practice and variation of seasons.

Another rule which might be taken in conjunction with the previous one is to thin plums to about two and a half, or three inches, peaches four to eight, depending on the earliness of the variety; pears and apples, five to seven inches apart. In thinning pears and apples it is only with early varieties that more than one should be left on any fruit spur, and with these early varieties part of the crop may be removed in one picking, and the balance later.

With Winter varieties of apples it is a good rule to leave fruit only on each alternative spur, to encourage annual bearing. On slender twigs and on wood of the past season's growth (where many varieties bear heavily in British Columbia) it is well to thin to a greater distance than on strong fruit spurs in the body of the tree. On the outside twigs and shoots the fruit will average smaller than on the stouter branches; they are unable to grow a close crop of fruit to perfection.

A very important point, especially with regard to the Yellow Newtown apple, is that the centre apple of the cluster and not one of the side apples should remain. The centre blossom of the cluster comes out first; its stem is usually shorter and stockier than those of the outside blossoms, and at the time of thinning the apple is usually much larger than the others and on a shorter stem. The centre apple usually hangs better to the tree, is the typical apple of the variety, is less liable to variation in shape, and having a shorter stem is better for packing and for appearance's sake.

Fruit spurs vary greatly in size and vitality; the best spurs bear the best fruit; the weaker spurs should be given a chance to develop into strong ones before a next year's crop.

In the production of fancy fruit, thinning pays, and pays well. It means much in the assurance of crops of only higher-class fruit. It is not likely to be of value unless the orchard is right in the matters of variety, fertility, cultivation, pruning and spraying; it is not likely to give good returns unless the high-class article produced is properly packed and marketed by business-like methods. Thinning is an essential feature of the new orchard culture.—R. M. Winslow in Canadian Horticulturist.

A Whitewash for Trees.

Just now is the time for whitewashing the trunks of the orchard trees, to ward off borers and to keep the bark smooth and healthy. A good wash is made from three pounds of the best stone lime, one bar of shaved laundry soap dissolved in a quart of boiling water, and one-half pint of crude carbolic acid.

Place the lime and acid in a pail, and pour over them the dissolved soap. This will start the lime to slaking. Then add small quantities of cold water—not enough to flood the lime, but just to keep it boiling violently until slaking is completed. When slaked, add sufficient water to make about two and one-half gallons of the mixture. The wash should be about the consistency of thick paint. Make up a cheap paint or whitewash brush.

TREATING THE BORERS.

The soil should be removed to a depth of three or four inches at the base of the tree, and an examination made for borers. If the dust-like borings betray them, dig them out with a pocket knife, or thrust a piece of small wire into the burrows and kill them. If the trees are young, the bark of the trunk and larger branches should receive a good rubbing with an old leather mitten, worn on the left hand.

On old trees, the scaly bark should be removed with a tree-scraper. The wash should then be applied to the trunk and larger branches, and the soil replaced about the base.

Another Fruit Pest Threatened.

People on the Pacific coast of the United States have been alarmed by the report of William H. Tidwell, special agent for the United States, that all varieties of fruit in Hawaii are infested with the Egyptian fly, and that unless importation is prohibited California orchards will be infected. The pest makes fruit drop before it ripens.

IT must satisfy you.

If it doesn't, your dealer, backed by us, gladly returns your money.

Isn't that a sincere way to invite you to try it?

REGAL FLOUR

Saint John Exhibition Prize Winners.

Horses

THOROUGHBREDS.

Stallion, 3 yoears od and upwards—1, Samuel Jones; 2, Geo. W. Fowler.

Mare, 3 years old and upwards—1, E. C. Wood; 2, Hugh McMonagle; 3, Samuel Jones.

Brood Mare, with foal by her side—1, Peter Clinch.

Stallion, any age—1, Samuel Jones.

Mare, any age—1, Hugh McMonagle.

STANDARD BREDS.

Stallion, 3 years old and upwards—1, W. J. Alexander.

Stallion, 2 years old—1, B. E. DeBow.

Stallion, 1 year old—1, W. T. Porter.

Mare, 3 years old—1, Hugh McMonagle.

Mare, any age—1, Hugh McMonagle.

HACKNEYS.

Stallion, 3 years old and upwards—1, R. A. Snowball; 2, John Jackson; 3, McFarlane Bros.

Stallion, 2 years old—1, Randolph Cox.

Mare, 3 years old and upwards—1, Mrs. H. A. Merrill; 2, R. A. Snowball.

Filly, 2 years old—1, R. A. Snowball.

Foal, 1912—3, R. A. Snowball.

Brood Mare, with foal by her side—1, R. A. Snowball.

Stallion, any age, diploma— R. A. Snowball.

Mare, any age, diploma— R. A. Snowball.

Best Stallion, on the line—Silver Medal—R. A. Snowball.

Best Mare, on the line— Silver medal—R. A. Snowball.

Stallion and three of his get— R. A. Snowball.

FRENCH OR GERMAN COACH.

Stallion, 3 years old and upwards—1, W. J. Alexander.

Stallion, 1 year old—3, W. J. Alexander.

CLYDESDALES.

Stallion, 3 years and upwards—1, McFarlane Bros.; 2, R. A. Snowball; 3, McFarlane Bros.; 4, H. C. Jewett; 5, Fraser Lumber Co.

Stallion, 2 years old—1, G. C. Cossar.

Mare, 3 years old and upwards—1 and 2, R. A. Snowball; 3, W. W. Black; 4 and 4, Fraser Lumber Co.

Filly, 2 years old—1 and 2, R. A. Snowball.

Filly, 1 year old—1, R. A. Snowball; 2, Fraser Lumber Co.; 3, John Price.

Foal of 1912—1, John A. Hughes.

Brood Mare with foal by her side—1, John A. Hughes.

Stallion, any age—McFarlane Bros.

Female, any age—1, R. A. Snowball.

Best Imported Clydesdale Stallion—1, McFarlane Bros.

Best Canadian Bred Clydesdale Stallion—1, R. A. Snowball.

Best Imported Clydesdale Mare—1, R. A. Snowball.

Best Canadian Bred Clydesdale Mare—1, R. A. Snowball.

Best Clydesdale Stallion, any age—God Medal—McFarlane Bros.

Best Clydesdale Mare or Filly, any age—Gold Medal—R. A. Snowball.

ENGLISH SHIRE HORSES.

Stallion, 1 yea r old—1, Samuel Jones; 2, Edward Hogan.

Filly, 1 year old—1 and 2, Edward Hogan.

PERCHERON.

Stallion, 3 years old and upwards—1, H. C. Jewett; 2, W. H. Fowler; 3, Jamieson & Walker.

Stallion, 2 years old—1, E. A. Chamberlain.

Stallion, 1 year old—1, Ernest Floyd.

Mare, 3 years old and upwards—1, Chas. Symes.

Filly, 2 years old—1, George F. Mayes.

Filly, 1 year old—1, Chas. Symes.

Foal, 1912—1. E. A. Chamberlain.

Brood Mare, with foal—1, E. A. Chamblerlain.

Stallion, any age—H. C. Jewett.

Female, any age—W. H. Fowler.

HEAVY DRAUGHT HORSES.

Mare or Gelding, 3 years old—1 and 2, Fraser Lumber Co.; 3, W. W. Black.

Team—1, Fraser Lumber Co.; 2, W. W. Black.

MEDIUM DRAUGHT HORSES.

Mare or Gelding—1, W. W. Black; 2, John B. Barton; 3, Thomas A. Barrett.

Team—1, E. Hogan; 2, W. W. Black; 3, P. H. Nugent.

ROADSTERS.

Stallion, 3 years old—1, H. J. McManus; 2, W. J. Alexander.

Mare or Gelding, 3 years old—1, W. J. McIntyre; 2, P. H. Nugent; 3, John Gillis.

Colt or Filly, 2 years old—1, Orin Hayes; 2, W. J. Alexander; 3, B. E. DeBow.

Matched Pair—1, Walter Kirkpatrick.

CARRIAGE HORSES.

Single Horse, Gelding or Mare— 1 and 2, Geo. McAvity; 3, Mrs. A. H. Merrill.

Matched Pair—1, Geo. McAvity.

HEAVY HARNESS HORSES.

Single Horse, Gelding or Mare, 15.2 hands and over—1, Mrs. Arthur H. Merrill; 2, P. H. Nugent.

Tandem—1, Geo. McAvity.

SADDLE HORSES.

Saddle Horses, ridden by a gentleman—1, Mrs. H. A. Merrill; 2, Geo. McAvity; 3, E. J. Mooney.

Saddle Horse, ridden by a lady—1, Geo. McAvity; 2, Geo. Carvell; 3, E. C. Wood.

Military Class, open to any cavalry member of the Maritime Provinces—1, Col. J. L. McAvity; 2, E. J. Mooney.

GENERAL PURPOSE.

Single Horse—3, Jas. McFarlanef

COMMERCIAL.

Single Horse, with suitable vehicle open to bakers, confectioners, grocers milkmen and butchers—1, G. B. Taylor.

Single Horse, heavy express—1, 2, and 3, Dominion Express Co.

COBS AND PONIES.

Pony in harness, 12½ hands and under—1, E. Bishop.

Pony in harness, 12½ hands to 14 hands—1, W. J. Alexander; 2, Miss Gladys Baxter; 3, Dolan Bros.

Ass, Jack or Jenny—1, J, Clayton.

Beef Cattle

SHORTHORNS.

Bull, 3 years old and upwards—1, C. A. Archibald; 2, R. A. Snowball; 3, Fraser Lumber Co.

Bull, 2 years old and upwards—1, R. A. Snawball.

Bull, senior yearling—1, R. A. Snowball.

Bull, junior yearling—1, R. A. Snowball.

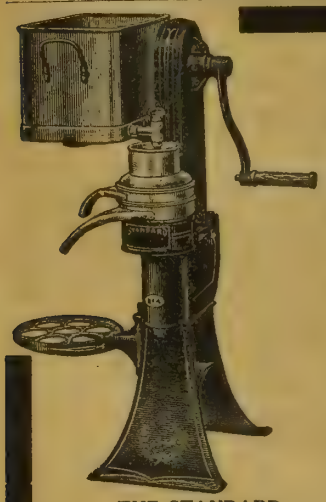
Bull, junior yearling—1, R. A. Snowball; 2, Fraser Lumber Co.

Bull, senior calf—1, C. A. Archibald 2, R. A. Snowball.

Male Sweepstakes—1, C. A. Archibald.

Cow, 4 years old and upward—1, C. A. Archibald; 2, R. A. Snowball; 3, C. A. Archibaldf

Cow, 3 years old—1, C. A. Archi-



THE STANDARD

Remarkable Skimming Records Reported by Eastern Dairy School

CANADIAN Dairymen look upon The Eastern Dairy School at Kingston with great respect, and know that the School's reports are always accurate and reliable. One of this year's reports of the School is of great interest to dairymen as it shows some remarkable skimming records made by The STANDARD Cream Separator.

Test No. 1 (printed on right side of ad) shows that the No. 4 STANDARD, listed at 450 lbs. capacity of milk per hour, skimmed at the rate of over 520 lbs. Not only skimmed at nearly 100 lbs. over its rated capacity, mind you, but skimmed down to .025 per cent., which represents the loss of but 1-4 lb. of butter fat in 1,000 lbs. of milk.

Other makes of separators, skimming at their listed capacity, averave about .10 per cent., which represents the loss of 1 lb. of butter fat in 1,000 lbs. of milk. The STANDARD, skimming at away over its listed capacity, saves 3-4 of a lb. more butter fat in every 1,000 lbs. of milk.

Test No. 1 therefore goes to show that the owner of a STANDARD 450 lb. machine can open it up to skim 550 lbs. and still skim as closely as the next best 450 lb. machine. In other words you can secure a 550 lb. machine at the price of a 450 lb. STANDARD, provided you are satisfied to have the STANDARD skim equally as well as, or better than, other reputed close skimming separators.

Standard

But, if you desire to skim at the rate of .01 per cent. which is equal to a gain in butter fat amounting to $27 per year with a herd of 20 cows, just run the STANDARD at its listed capacity. In fact, in the Eastern Dairy School's tests Nos. 2 and 3, the STANDARD skimmed at .01 per cent. (losing but 1-10 of a pound of butter fat in 1,000 lbs. of milk) and still skimmed considerably over its rated capacity. Truly, the STANDARD is a remarkable machine.

The STANDARD is indeed, "The World's Greatest Separator." And the machine you will select, if you go into the separator-question thoroughly and buy a machine solely on its merits.

Let us send you booklets containing further records of STANDARD tests and proofs of its superiority. Send us your name and address today.

TESTS OF STANDARD
SIZE NO. 4 LISTED CAPACITY, 450 lbs.

Test No. 1 April 23rd	
Minutes running	23
Temp. of Milk	90° Fahr.
Lbs. of milk separated	200
Per cent. of butter fat in skimmed milk	.025
Per cent. of butter fat in cream	27.5
Test No. 2 April 24th	
Minutes running	25
Temp. of milk	90° Fahr.
Lbs. of milk separated	200
Per cent. of butter fat in skimmed milk	.01
Per cent. of butter fat in cream	39
Test No. 3 April 26th	
Minutes running	19
Temp. of milk	90° Fahr.
Lbs. of milk separated	150
Per cent. of butter fat in skimmed milk	.01
Per cent. of butter fat in cream	41

The Renfrew Machinery Co., Limited

Head Office and Factory, RENFREW, Ont. Sales Branches, WINNIPEG, Man., SUSSEX, N. B.

Cheese Makers !

Just Remember This—

Windsor Cheese Salt will make money for you, by making better cheese for you.

Windsor Cheese Salt improves both the flavor and the keeping quality.

Windsor Cheese Salt enables you to salt the curd just right, because it dissolves slowly and evenly—stays in the curd—and because it is pure and clean and good.

Windsor Cheese Salt is cheap, because, being ALL SALT, it goes further.

Make your cheese bring you better prices by using 75C

WINDSOR CHEESE SALT

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay for Pure Parchment.

The Maritime Pub. Co., Ltd.

Direc Parchment Importers, Sussex, N. B.

To The Public

We beg to announce that we have purchased the good will and interest of the EMPIRE LINIMENT CO. Ltd. and will supply the trade for this excellent Liniment from our factory at Middleton, where all orders should be addressed.

C. GATES SON & CO.

What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism saw

EMPIRE LINIMENT

advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

"I was cured of diarrhoea by one dose of Chamberlain's Colic, Cholera and Diarrhoea Remedy," writes M. E. Gebhardt, Oriole, Pa. There is nothing better. For sale by all dealers.

bald; 2, R. A. Snowball; 3, C. A. Archibald.

Cow, or heifer, 2 years old—1, R. A. Snowball; 2 and 3, C. A. Archibald.

Heifer, senior yearling—1, R. A. Snowball.

Heifer, junior yearling—1 and 2, R. A. Snowball.

Heifer, senior calf—1 and 3, R. A. Snowball; 2, C. A. Archibald.

Heifer, junior calf—1 and 2, C. A. Archibald.

Female sweepstakes—1, R. A. Snowball.

Senior Herd—1, C. A. Archibald.

Breeder's Young Herd—1, R. A. Snowball; 2, C. A. Archibald.

Bull and 3 of his get—1, C. A. Archibald; 2, R. A. Snowball.

HEREFORDS.

All the prizes in the Hereford sections were won by W. W. Black without competition.

DEVONS.

All first prizes in this class went to Wm. A. Pinkney, Melbourne, N. S., without competition.

Dairy Cattle

AYRSHIRES.

Bull, 3 years old and upwards—1, McIntyre Bros.; 2, M. H. Parlee; 3, Easton Bros.; 4, Prescott Blanchard, Truro.

Bull, 2 years old—Cliff Creighton.

Bull, senior yearling—1, Easton Bros.; 2, McIntyre Bros.; 3, M. H. Parlee; 4, Retson Bros.

Bull, junior yearling—1 and 2, McIntyre Bros.

Bull, senior calf—1 and 4, M. H. Parlee; 2, Prescott Blanchard; 3, McIntyre Bros.

Bull, junior calf—1, McIntyre Bros.; 2, M. H. Parlee; 3 and 4, John A. Hughes.

Male sweepstakes—McIntyre Bros., diploma.

Cow, 4 years old and upwards— 1, and 2, McIntyre Bros.; 3, M. H. Parlee; 4, Prescott Blanchard.

Dry Cow, 4 years and over—1, Prescott Blanchard; 2, Easton Bros.; 3, Cliff Creighton; 4, Retson Bros.

Cow, 3 years old—1, McIntyre Bros; 2, Prescott Blanchard; 3, M. H. Parlee; 4 and 5, Cliff Creighton.

Dry Cow, 3 years old—1, Cliff Creighton; 2, Easton Bros.; 3, McIntyre Bros; 4, Retson Bros.

Canadian Cow, 3 years and upward —1, Retson Bros.; 2, Prescott Blanchard; 3, M. H. Parlee.

Cow, 2 years old—1, Cliff Creighton; 2, McIntyre Bros; 3 and 4, Retson Bros.

Heifer, 2 years old—1 and 4, Easton Bros.; 2, Cliff Creighton; 3, McIntyre Bros.

Heifer, senior yearling—1, McIntyre Bros.; 2 and 3, Easton Bros; 4, Cliff Creighton.

Heifer, junior yearling—1, Easton Bros.; 2, McIntyre Bros.; 3, Retson Bros.; 4, Prescott Blanchard. ...

Heifer, senior calf—1, McIntyre Bros.; 2, Prescott Blanchard; 3, McIntyre Bros.; 4, Easton Bros.

Heifer, junior calf—1, M. H. Parlee; 2, McIntyre Bros.; 3, Easton Bros.; 4, Clifford Creighton.

Female sweepstakes—1, McIntyre Bros.

Senior herd—1, McIntyre Bros.; 2, Prescott Blanchard; 3, Easton Bros.

Breeder's young herd—1, McIntyre Bros.; 2, Easton Bros.; 3. M. H. Parlee.

Bull and 3 of his get—1, McIntyre Bros.; 2, Easton Bros.; 3, Prescott Blanchard.

Cow and 2 of her offspring—1, McIntyre Bros.; 2, Easton Bros.; 3, Prescott Blanchard.

Get of one sire, four animals, either sex, any age—1 and 2, McIntyre Bros.; 3, Easton Bros.

(Continued on page 806.)

Both Cream and Skim Milk Are Delivered Pure and Clean

GOOD reasons are the basis of all buying. It follows then, that the best buyer is the man who has the best reason, or the most good reasons for buying. When this rule is applied to the purchase of a cream separator and each separator on the market is carefully studied for reasons why it should be chosen, the most careful buyers invest their money in

I H C Cream Separators Dairymaid or Bluebell

Assuming for the sake of argument that the best separators are equal in skimming capacity, simplicity, and durability, there is still one best reason why your choice should fall on an I H C separator. The reason is—the dirt arrester chamber which is found only on I H C separators. More or less foreign matter is very likely to find its way into the milk before it reaches the separator. The I H C dirt arrester chamber removes every particle of this matter before separation begins and holds it imprisoned until the last drop of milk has passed through the bowl. Both your cream and skim milk are delivered pure and clean.

Dirt-arrester chamber with part of side broken away to show how the impurities are collected

There are points in the construction of I H C separators, such as the heavy phosphor bronze bushings, trouble proof neck bearing, cut-away wings, dirt and milk proof spiral gears, etc., which taken in connection with the dirt arrester chamber, make I H C separators beyond any doubt the best of all to buy. There are four convenient sizes of each style. Ask the I H C local agent for demonstration. Get catalogues and full information from him or write nearest branch house.

CANADIAN BRANCH HOUSES

International Harvester Company of America
(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

Farmers

Please take notice

Did your ever know of any article, that gave good satisfaction to the public, that somebody did not try to imitate and, in nine cases out of ten, with an inferior one.

Be on your guard, when you buy your Molassine Meal, that you are not landed with some other Feed with a similar name. Make sure that the above trade mark is on every bag.

There is no question about the feeding quality of the genuine Molassine Meal. And remember, that it is made in England, and nothing to equal it is made elsewhere.

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ST. JOHN, N. B.

LIVE STOCK.

Salt for Cows.

Some experiments conducted by Professor Babcock, the inventor of the milk tester in Wisconsin regarding the giving and witholding of salt to cows, are of interest to dairy farmers. He found that if salt was absolutely withheld the effect would be seen with some cows in from two or three weeks; but some individuals went on for the most part of a year without any evil effects, but sooner or later the animal developed a state of low vitality, ending in a sudden and complete breakdown, though recovery would be rapid when salt was again given. The effect was worst shown at calving time, or immediately after. In general, cows giving the largest amount of milk were the first to show signs of distress, while there was less trouble while the animals were on the pasture than when in the cowshed. Dry cows suffered very little and the same applies to bullocks and store cattle, the salt naturally in the food or in the "earthlicks" of animals out in the fields being nearly sufficient for them. In an ordinary daily ration there is about three-quarters of an ounce of salt, and this is nearly, but not quite, sufficient for dry stock per head, but not enough for the milch cow. The milk drains away a lot of salt out of the system, and an additional ounce per head daily must be added to the food of a cow indoors. Many years ago the French Government carried out some experiment to test the amount of salt required by the different kinds of farm stock, and reckoned a milch cow required a total of two ounces daily; and this corresponds with Babcock's figure, allowing for differences in the size of different breeds. It is, therefore, safe to say that a milch cow requires about an ounce of salt daily when in milk, besides what she gets in her food. When out of doors the best way is to let her have access to rock salt to lick; but indoors it must be given in the food in the ordinary granular form.

Milk Shorthorns Much Prized.

It is practically an axiom that horses cows or sheep must be kept on every farm to maintain fertility and keep down undesirable vegetable growth. It is also true that every farmer will succeed best with the kind he likes best and that is suited to his farm and location. Cows will not thrive in the same field with sheep, and as few farms are so arranged that the two can be kept separate, it is undesirable to try to keep both sheep and cows on the same farm; at least the cows will not do so well as if they had the farm to themselves.

When a farmer has decided to make cows his money making stock the question arises what breed shall he keep? In the first place no farmer need have two or more breeds of cattle on the same farm. Let him select the breed that suits him best and start in with a pedigreed herd, small or large as circumstances may dictate, or if he cannot afford the pedigreed females use a pedigreed bull on a good cross of the breed desired; then having made his start stay with the breed as long as he farms. There is no great difference among the breeds. Each one fills its own place, and locality to a large degree will determine the breed to be selected. There can be no doubt of the value of the general purpose cow, and as long as iarmers make money breeding them the type will not be abandoned.

A cow that will give a profitable amount of milk and make good beef in time except when she is in flush of milk, is a paying investment for the general farmer; also a farmer wants a regular breeder. It is for these reasons I chose dairy Shorthornsi and I have paid off the mortgage as the result of my choice. All of my cows give upwards of 8000 pounds of milk a year and breed large, healthy calves. In my herd is a two-year-old with a record of 10,395 pounds of milk.

The minute a cow is not wanted in the herd she will bring from $50 to $80 as beef, which makes a considerable item so long as the cow has been up to that time a profitable milker.—Horace W. Avery in New England Homestead.

Choking in Cattle.

This means the lodgement of a foreign obstacle in the esophagus or gullet. It is known by slobbering, distressed breathing and accumulation of gas, which may be noticed on the left side of the paunch.

The proper method of handling an animal thus afflicted is to stand the cow with her head down hill, pressing the head downward as much as possible, while the attendant squeezes as much saliva out of the gullet as possible, then allow her to raise her head and give her one-half pint of raw linseed oil, giving her but one swallow at a time.

If she is not relieved from within 10 to 30 minutes, a half-inch rubber hose six feet long may be pressed gently down the gullet. This will force the obstacle into the stomach, at the same time allowing the gas to escape.

If the animal has been greatly distended by gas before relieved, it may be necessary to give her a laxative and tonic to overcome partial paralysis of the bowels which sometimes follows.

Abortion in Cows.

Editor Maritime Farmer :

Better results are always obtained from a well managed small herd of cattle over that of a mismanaged large herd; in other words, the extra time and attention the stock raiser may take in securing his herd from disease, nets the owner a saving of stock as well as increasing their value.

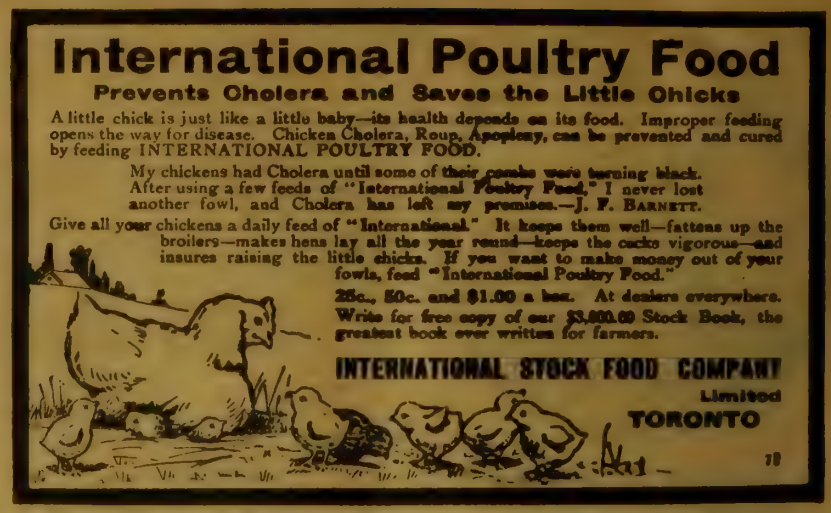
All animals are subject to the germ of disease. The healthier the animal the greater the germ destroying power, but, when a contagious germ is once introduced into a herd, the chances of escape are comparatively small and for this reason the stock raiser is justified in caring for his entire herd, irrespective of their condition of health, and in this way act as a guard in protecting the healthy ones from becoming infected by the germs of the diseased animals.

One of the most important questions which confronts the stock raiser of today is; "How shall we keep our herds in a healthy condition ?"

There is danger in delay. It is never wise to wait for bad results before inspecting your herd as a destroying germ may become embedded in the body and rapidly increase its power of destruction before the oRner observes that his herd is infected with the germs of disease. For this reason it is of a financial benefit to have all animals in the herd inspected, regardless to outward appearances for such diseases as abortion, tuberculosis, etc.

There is no disease among cattle more transmissable than that of abortion as it has been known in numerous instances where whole, healthy herds have become infected in practically a short time from bringing a single animal into the herd affected with this disease.

To substantiate the contagious nature of abortion, a pregnanat cow which has been standing by an animal which aborted was moved to quarters where the disease was unknown and for some time appeared in a healthy condition but later aborted. Unless proper treatment is pursued an animal which aborts for the first time, is a fit subject to abort again, thus rendering her profitless to the owner.—Dr. David Roberts, Wisconsin State Veterinarian.


International Poultry Food
Prevents Cholera and Saves the Little Chicks
A little chick is just like a little baby—its health depends on its food. Improper feeding opens the way for disease. Chicken Cholera, Roup, Apoplexy, can be prevented and cured by feeding INTERNATIONAL POULTRY FOOD.
My chickens had Cholera until some of their combs were turning black. After using a few feeds of "International Poultry Food," I never lost another fowl, and Cholera has left my premises.—J. F. Barnett.
Give all your chickens a daily feed of "International." It keeps them well—fattens up the broilers—makes hens lay all the year round—keeps the cocks vigorous—and insures raising the little chicks. If you want to make money out of your fowls, feed "International Poultry Food."
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Write for free copy of our $3,000.00 Stock Book, the greatest book ever written for farmers.
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TORONTO

Digestive Disorders in Cattle.

COLIC—BELLY ACHE.

This disorder is neither so common nor so urgent as in the horse. It is not so common, because the intestines of the ox play a less important part in the process of digestion, the more frequent and fatal diseases being, as we have shown, those of the stomachs; and less urgent, because the bovine is capable of withstanding a much greater degree of abdominal pain , has less tendency to inflammation of the bowels, and, from its greater patience, is less likely to complicate matters by doing injury to itself during paroxysms of pain.

As in the horse, colic may be of two forms, spasmodic and flatulent. In the former the symptoms are most severe; in the latter the pain is less acute, but more persistent. It is essential to differentiate between variwties of colic, because they necessarily involve a difference in treatment.

CAUSES.

The passage of food material from the stomachs through the intestinal canal is effected by alternate contraction and relaxation of the muscular coat. When this contraction is irregular we have spasm of the bowel—perhaps only a small portion affected, but sufficient to give rise to acute abdominal pain.

Drinking cold or hard spring water will sometimes produce this; therefore, when the supply has to be drawn from a well, whether by means of windlass or pump, it should stand exposed to the air for some time that its temperature should be raised to that of the atmosphere. Rain water, if sweet, is best for all domesticated animals, and every farm should have efficient means for catching and storing every drop that falls.

Pond water is to be preferred to spring water on account of its greater softness, provided the pond is not in a position in relation to the buildings and yards to receive the drainage from them, which is unfortunately too often the case. If drainings flow into the pond the water is contaminated and rendered unfit for drinking purposes, for liquid manure cannot be considered a fit beverage for animals, and especially for dairy cows; while there is also the loss of valuable manurial constituents which might with advantage be applied to more useful purposes than filling the pond.

Changes of diet are another producing cause of "colicy" pains and these should always be made gradually, and especially in the case of fattening bullocks.

A portion of the old diet should be withdrawn and the new substituted, so that the animal may be gradually accustomed to it.

Flatulent colic is produced, as its name indicates, by the distention of the bowels with gas. It is not of frequent occurrence, tympanic distension being mainly restricted to the rumen.

When it does occur, the cause is probably the passage of improperly prepared food, which, by undergoing fermentation, liberates gas to a larger extent and more rapidly than can be passed off by the usual channel.

Colic may also occur as a result of excessive or morbid secretion of bile, as a feature of constipation, and as a symptom in various kinds of rupture.

Fit Up Your Barn With These Old Reliable Stanchions.
THE farmer of today knows that chains, halters and wooden stalls in the cow barns are expensive, unhealthy, often dangerous makeshifts.
O.K. Canadian U-Bar Steel Stanchions
have replaced them in the modern barns of prosperous farmers. O.K. Canadian Swinging Stanchions are comfortable and easy for cattle—save time in tying cattle—no trouble to latch and unlatch—strong enough to stand rough usage. Used by the leading farmers and stockmen for years—because the best and most satisfactory stanchion on the market.
5 sizes—write for new catalogue.
Canadian Potato Machinery Co., Limited, - Galt, Ont.

SYMPTOMS.

An attack of colic may be sudden or gradual. In the latter there are premonitory symptoms of uneasiness for which the stockman is unable to account, and the animal stops feeding and rumination is suspended.

When the attack is sudden or acute there is no mistaking the locality of the pain, for the animal stamps its feet and kicks at its belly, moans, grinds its teeth, looks around in the direction of the seat of pain, and frequently passes small quantities of urine. There are intervals of ease during which the animal appears quite comfortable until the spasm comes on again.

When due to flatulence, the pain is not so severe, but the intervals of ease are not so frequent. Gaseous eructation and the passing of wind per anum, with more or less swelling or distension on the right side of the abdomen, help to distinguish flatulent from spasmodic colic.

As a result of colic, there sometimes occurs intussusception— a condition where during spasm one uart of the bowel is drawm into another— and volvulus, or twisting of the intestine, either of which, of course, produce complete obstruction and give rise to inflammation.

These may result from the struggles of the animal during its paroxysms of pain, the displacement being rendered still more easy by the contraction or reverse peristalsis, and the distension of the bowels with gas.

TREATMENT.

To prevent either disaster resulting, it is necessary that treatment should be prompt. The indications are to relieve the pain and obtain a free evacuation of the contents of the bowels. The latter tends to remove the cause, and the administration of a cathartic is not open to the objections urged against such a course in the treatment of colic in the horse.

To relieve the pain opium is most valuable, and this drug in the shape of laudanum (tincture of opium) should find a place in the Materia medica of every stockowner. Chlorodyne is now preferred by some, but a bottle containing laudanum is more commonly kept at hand for use in cases of emergency.

An example of a drench for colic in cattle is:—Laudanum, 1 oz.; sweet spirit of nitre, 1 oz.; powdered ginger ½ oz.; Epsom salts, 2 oz., in a quart of warm ale. If the pains are due to flatulence ammonia should be added to the drench, preferably in the shape of 2 ozs. of spirit of sal volatile.

Walk the animal gently round a yard or roomy box, and rub the abdomen with a wisp of hay or straw, or with the palm of the hand and a little stimulating liniament, or with thin mustard and water.

In colic, pressure and rubbing of the abdomen give relief.

Very often the above dose is sufficient to relieve the pain, and further treatment is unnecessary, but if the paroxysms continue the opium and antispasmodics must be repeated, substituting linseed oil in doses of half a pint for the Epsom salts. Copious enemas of warm soapy water are most useful.

If ammonia, spirits of sal volatile, and sweet nitre are not at hand, turpentine in 2 oz. doses, essence of peppermint, gin, pepper, or cloves may be tried, but there is nothing that can efficiently replace the laudanum.

There is great difficulty, even for experienced men, in determining the occurrence of the complication of intussusception and volvulus; in fact, they are only to be assured from the pain becoming more severe, and the intervals of ease less frequent, or from the attack not yielding to treatment. —M. C. R. V. S., in Mark Lane Express.

Both A
Bread Flour
And A
Pastry Flour

"A woman always wants a reason, but never gives one".

So we are going to tell you just why **"Beaver" Flour** is a bread flour and a pastry flour —as good for one as for the other—*and best for both.*

Ontario Fall Wheat is the most nutritious wheat in the world — rich in flesh and strength building qualities and with a full rich flavor and splendid pastry making qualities.

Manitoba Spring Wheat has more strength than Ontario Fall Wheat—but is not so good for pastry.

Naturally, *the perfect flour* is the one that combines the good qualities of *both* Ontario and Manitoba wheat. *This is exactly what* **"Beaver" Flour** *does.* It is a *blend* of Ontario Fall Wheat and Western Spring Wheat. It contains *exact quantities of each.* **"Beaver" Flour** has the real home made flavor that a Western Wheat flour lacks—it makes deliciously light, tasty Cakes, Pies and Fancy Pastry.

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for your next baking day. Put it to the test. Try it for *both* Bread and Pastry—and see for yourself the convenience and economy of using a true blended Flour. Dealers—Write us for prices on Feed, Coarse Grains and Cereals.

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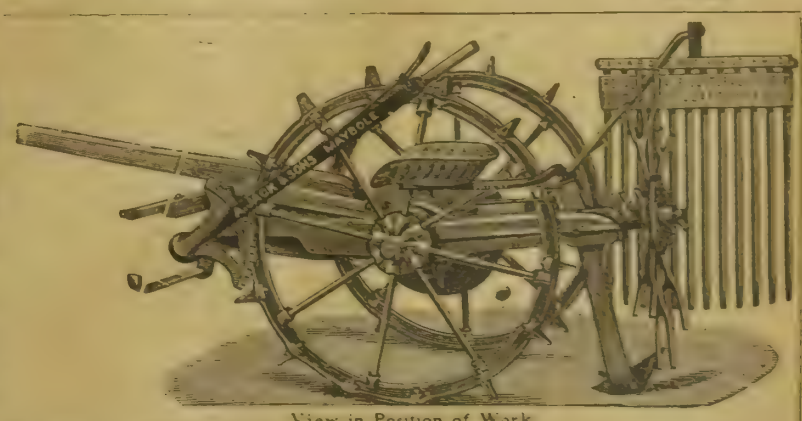
POTATO DIGGER

Fitted With Ball and Roller Bearings



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THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers. and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christana (leading Foreign and English Machines competing). WRITE FOR CATALOG and PRICE.

ILLSLEY & HARVEY, Canadian Agents, Port Williams, N. S.

THE HORSE.

Night Watering of Horses.

"A horse comes in hungry, and he wants his supper so much that he will drink but little, and he ought not to drink deeply at that time, even if he wanted to,'. was the way a stableman put his ideas on watering before feeding in the evening. "Then he eats a quantity of dry, heating food. He shouldn't have water right after eating; but if he doesn't get a good drink two or three hours later, he will go through the night thirsty, and the heating food will burn out his insides for the lack of the water that is needed to give the nourishment of the food a chance to do the good work it ought to be doing." Moreover, a horse not watered at night is very apt to drink too much in the morning.

This night-watering is not only common humanity in hot weather, but it is almost equally valuable in winter. For appetite comes with the bracing effect of cold weather, and horses eat more than they do in summer. Consequently, if this extra food is to do its part in giving the horse power to resist the cold and the strain of the winter work, water must be given at the time when it will do the most good. Nothing does so much towards giving back a return ,or the food given in the way of extra strength, working endurance and good condition.

The effect of this night-watering in the blood and general circulation is far-reaching. The thirst that follows the digestion of a meal is the call of nature for the water that is needed to help the good of the food to get into the flesh and blood of the animal; and equally important is the part played by the water in sending the waste matter out of the body with the least possible wear and tear on the organs that perform this indispensable duty. A horse that remains thirsty all night cannot be expected to last as long as one that is watered at the proper time. A distinguished veterinary surgeon recently remarked: "Going too long without water causes more colic in horses than anything else does."— The Homestead.

Judging Brood Mares.

The question of judging brood mares has come very much to the front of late, and there seems a good deal to be said in favor of a contention that I have heard of more than once at the ring side. It is to the effect that sufficient notice is not taken of the foal when the brood mare classes are before the judges. In a case which took place within the last few weeks the merits of two brood mares seemed pretty evenly balanced. There was little between them on points, but the foal of the mare which took second prize stood out a long way in front of that of the winner. In a word the superior breeding of one mare showed itself emphatically in her foal. It was argued, and I think with reason, that, as the sole use of a brood mare, as a brood mare, is the quality of the foals she breeds, in this case the second prize mare should have been placed second. Against this standpoint, it was argued that you must take the mares as you see them; and it was asked what was to be done with a mare that was herself "nothing very wonderful to look at, and thatunder ordinary circumstances would stand fifth or sixth in her class, suppose she had a foal that was a long way the best in the class?" Well, if the foal stood out a long way in front, I should put her first, for she has fulfilled the first requirements of a brood mare. That it would add considerably to the labors of the judges, at any rate at first, if such a plan were adopted I have no doubt, for it is not often that any foal stands out so pre-eminently as I have indicated. But I am sure the principle is a sound one.

Let me put the argument another way, or rather let me give an illustration of it from another standpoint. Many years ago I knew a brood mare that made a great reputation. She was a big, fine mare, full of quality with good bone, and she was an exceptionally good mover. Wherever she went Bess—let us call her Bess, it was not her name— was a winner. It is many years since, and memory is apt to play us funny tricks after a lapse of time, but I can only remember two occasions on which she was not a winner, and she was certainly a nice little annuity for several years to her lucky owner. But (and it is a very big "but") she never bred him a foal worth the proverbial glass of gin, and I do not remember any of her foals being shown in a separate class for foals. I am quite certain none of them ever won anything. Not so many years ago I had occasion to look this mare's history up, and so I am sure of my facts. Now, in this case two facts present themselves; first, this mare secondly, if she was not a good brood was not a good brood mare, and, mare she should not have cleared the board as she did. Then another question perhaps needs a word of discussion. Why was she such a bad breeder? I have no hesitation in saying that it was because she had a bad cross in her somewhere—that her pedigree was faulty. As I have said, she was a big, fine mare. I do not remember to have seen a single foal from her, and I can safely say I saw them all, which was not undersized and weedy.

Green Oats for Horses.

Some feeders can winter horses on hay and straw alone when they are not working and start them in with a grain ration only a few days before hard work begins. There is a little secret here for those who do not know the knack. It is in the hay. Hay that is cut early enough to have all the juice in it when cured will carry animals through well if it was cured properly. Hay that was dead ripe when cut is too woody to have much of its feeding value. Horses that come through the season's work in good condition can be carried through the winter on the right kind of hay and straw. A few bundles of oats cut green will help out this rough ration wonderfully during the coldest weather.

Heaves.

J. B., N. S.—We have a horse which is badly wind broken. Is there any remedy, and if not what can we give him to ease him so we can work him?

Ans.—The disease is incurable and it would be well if you could trade the horse back to the dealer. But there is no resourse. A written guarantee always should be demanded when buying from a stranger; but it is best not to buy a horse from anyone you do not know and trust. Feed grass alone in summer and wetted oat straw or oat hay and a little silage in winter. Oats and bran may be fed when work has to be done. Do not feed any bulky feed at noon and do not work the horse soon after a meal. Give the drinking water before feeding. Give half an ounce of Fowler's solution of arsenic night and morning, after afew smaller preliminary doses.

Care of the Horse.

In grooming curry him every way.

Scrape off all bot fly eggs with a knife.

Leave him his forelock, mane and tail, but trim them if necessary.

Dry your horses feet at night, wash them in the morning.

See that no nails get in his feet.

In harnessing, keep the backband back from the withers.

Shoe your horse regularly, but do not allow the blacksmith to rasp off the outer edge of the hoof, which should act as varnish does on a pine knot.

To prevent the shoulders of a green horse from scalding, raise his collar periodically and thoroughly dry his shoulders.

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he has used Chamberlain's Cholic, Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an exvellent remedy, and takes pleasure in recommending it. For sale by all dealers.

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distempr, Glanders, Spavins, Pink Ey, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

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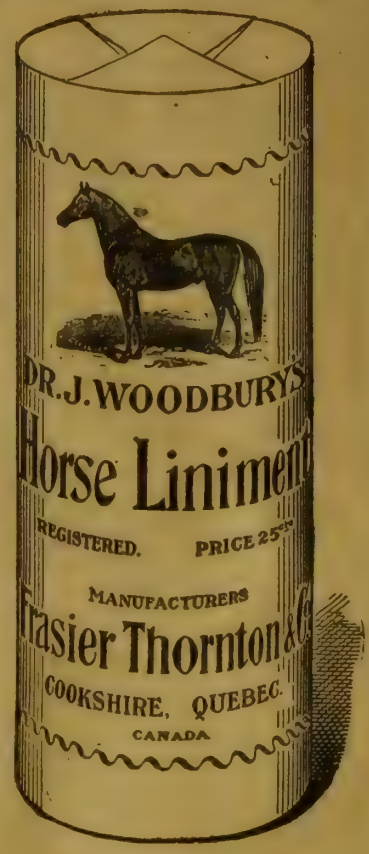
Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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DR. J. Woodbury's Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be removed with

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also any Bunch or Swelling. No blister, no hair gone, and horse kept at work. $2 per bottle, delivered. Book 3 E free.

ABSORBINE, JR., liniment for mankind. Reduces Goitre, Tumors, Wens, Painful, Knotted Varicose Veins, Ulcers. $1.00 and $2.00 a bottle at dealers or delivered. Book with testimonials free. W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

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Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

POULTRY.

Frozen and Dried Eggs.

Frozen and dried eggs intended for human consumption are largely used for cooking purposes where inferiority may be concealed, as in baking cakes or making custards, omelets, pies, etc. The traffic in eggs sold for drying and freezing has greatly increased in the past few years. Strictly fresh marketable eggs in the shell command a high price and there is difficulty in meeting the demand for them; but large quantities of questionable eggs, often bought at vert low prices, have been broken out for cooking purposes by disreputable firms, being preserved by freezing or drying until ready for use. Some dealers, howcever, maufacture a satisfactory product by the use of good eggs handled under proper conditions.

There is no objection to drying or freezing good eggs under proper sanitary conditions; in fact, there are some advantages to be gained by preserving eggs in this manner, although the manufacturing processes devised by man, as a rule, do not improve the quality of nature's work. Conditions of modern life and commerce must, however, be met, and dried eggs or eggs in a frozen condition may be shipped long distances and require less space for transportation and storage than do eggs in the shell.

As the result of investigations instituted by Secretary Wilson, the United States department of agriculture has recently issued two publications that give practical suggestions for correcting some of the existing practices and conditions which are at least partially responsible for the unsatisfactory products now found on the market. These publications are Bulletins 158 and Circular 98 of the Bureau of Chemistry, entitled, respectively, "A Bacteriological Study of Shell, Frozen and Dessicated Eggs", and "Practical Suggestions for the Preparation of Frozen and Dried Eggs."

Dr. Morse's Indian Root Pills

exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

Diseases of Poultry.

As this is the season of the year when that most dreaded and contagious of diseases among poultry is liable to attack them, it may not be out of place to caution the readers of the Poultry Department of this journal to keep a sharp lookout for any symptoms of roup which may make their appearance at any time.

The treatment of poultry diseases should seldom concern the farmer or the up-to-date poultryman. If the healthiest and most vigorous breeding fowls are kept, the chickens reared under the most satisfactory conditions, fed on wholesome food and not over-crowded and the runs and buildings kept thoroughly clean and disinfected, there will rarely be disease among them. When disease does appear it will usually be found more satisfactory to kill and bury the sick birds than to treat the disease.

The poultry houses should be thoroughly cleaned out and disinfected by the use of a good application of chloride of lime or slacked lime reduced very thin with boiling water, to which has been added some carbolic acid or coal oil, and with a good whitewash brush or spray pump cover every inside inch of the building, including roof, walls, roosts, nest boxes, etc., with the hot mixture.

The poultry yards, if situated so they cannot be plowed and cropped, should be treated with unslacked lime dust. Scrape the yards clean of manure and refuse, scatter the lime thick on the ground, then sprinkle the lime with water, which will cause it to become slacked and cause it to destroy any germs of parasites in the soil.

Roup is the result of damp, cold and draughty houses, and attacks the fowls in various ways. The most reliable symptom is noticed while the fowl is at roost, and consists of a rattling noise which sounds like water thrown on coals of fire. The noise is caused by the fowl breathing through the windpipe and nostrils, which have become clogged. A most offensive odor is also noticed and a discharge at the nostril starts, which in a few days becomes hardened, so that the fowl can only breath through the mouth. In other cases the rattling only is noticed and no discharge at the nose. One of the surest methods is to see if the odor is present, and to examine the roof of the mouth where in nearly all cases of roup a yellow, offensive deposit is noticed.

Roup is one of the highly contagious diseases and is mostly communicated to healthy birds through the medium of the drinking trough. One sick bird will by this means infect a whole flock. The disease is easily recognized, as the bird's head swells and a foul discharge proceeds from the eyes and nostrils. When the disease has great headway it is safest to kill the bird, because a disgusting fungus has grown in the throat which has given rise to the term "diphtheric roup." It is then very dangerous and is communicable to children.

The treatment should be isolation of the affected birds, disinfect all of their roosts, nests and houses, destroy or at least thoroughly cleanse with a disinfecting fluid all drinking and feeding utensils, and for some time afterwards add a little Stockholm tar to the drinking water. Bathe the head of the affected bird frequently with warm water into which has been put a little bluestone sufficient to turn the water a pale blue, and use a syringe to clean the nostrils and throat with the same solution. Do not allow the bird to swallow any quantity of it as it is poison. When the symptams of roup is first noticed give the bird a dose of Epson salts. The only certain way to prevemt the re-appearance of the disease is to kill the affected birds and thoroughly cleanse and disinfect the houses and runs.

Another cure is to take a small quantity of glycerine and put into it a couple of drops of essence of wintergreen and pour this into the fowls nostrils and throat, and is also a good mixture to use on the head and eyes of roupy birds. Be sure and treat the disease at once. Plenty of charcoal and grit is a great preventative, but above all have suitable quarters for the birds.

Any Man May Easily Regain LOST VITALITY

Strong vigorous vitality, the crowning glory of mature, healthy manhood.

Do you know, reader, what this means to you?

If by these few simple inspired words which every man may with profit read) I should be the means of pointing out to you or other men the straight and sure, if narrow road to new manhood, new powers, new capacities for a better and more glorious physical and vital development, then in doing this I have rendered a great and lasting service to my fellow beings, and one which is infinite in its power for good.

This self-same VITALITY, this builder of manhood and manly vigor, may easily be regained, and I will tell you how.

Have you ever stopped to consider that it is this VITAL FORCE which makes rugged men the real men that they are? It is this same MAN FORCE which is behind every great achievement in the world to-day, which gives the flower of our army and navy the courage to meet and face death unflinchingly, which gives the rough and rugged man of the plains that compelling power to rescue at all odds a loved one from some great peril, as our illustration here portrays, and it is this self-same, identical VITAL VIGOR which I must impart to you, reader, if you are not the man you should be.

Therefore, if I give you new vitality, I make you young again, and keep you feeling young the balance of your days. By increasing your vital supply, I soon have you answering "Simply feeling fine" to your friends' morning greetings, while they in their turn will secretly marvel at the wonderous change for the better which has come over you. A thoroughly vital, manly man is the greatest inspiration in the world; his power and fascination are felt by all women and all men alike who are near him. Nothing but death can conquer the giant of strength and manly vigor. On the other hand, how different with the half-man, the neurasthenic degenerate, who is burning up his vitality in dissipation and excesses! Is there any sight more pitiable, more repellent to one's sense of decency, then the weakling who deliberately kills his manhood and self-respect by acts of willful debauchery? Such a man has neither my sympathy nor can he profit by what of wisdom I can impart. But any man who is willing to make a fair, square fight for the return of his lost vitality and lost manhood, who will promise faithfully and honestly to discontinue any debasing practices or excesses he may be indulging, who will help me thus by helping himself to such, no matter how despondent he may be, no matter how weak and debilitated, no matter what years of folly have passed, to such a man I can offer all the encouragement in the world. Just lead a decent man's life, my friend, and then increase your VITALITY. All else will come.

I make and distribute a vitalizing appliance which I call a HEALTH BELT. I do not want you to get one of there HEALTH BELTS now nor to-morrow nor next week, for that matter, but first wish you to write for or call and get one of my little free books. I want you to thus have my whole story of this subject of VITALITY, so that you may judge for yourself. My HEALTH BELT, with suspensory attachment, is a complete treatment in itself; that is you place it comfortably around your waist nights when you go to bed and wear it at the time when you are asleep. The vitality which it produces and sends into your system hour after hour is felt as it flows in. There is no shock, but merely a pleasant, warm, soothing sensation which induces a sound, refreshing sleep. Weak back often disappears at once, and a better feeling is immediately experienced. Two or three months' wear is usually sufficient. The cost is nominal. With special attachments, my HEALTH BELT is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

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My book, as described above, will be sent in plain, sealed envelope to anyone who fills in the below coupon. It is fully illustrated with photo reproductions, printed on fine coated paper, and should be read by every man, young, middle aged or elderly, whether ailing or strong. Write or call to-day. Hours 9 to 6.

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

MEMORIES.

I still seem to hear through distant years,
A voice that has long since been stilled;
And I seem to hear through a vale of tears
Her prayer for a son wayward willed.

As I onward went, on self-pleasure bent,
I can yet hear my mother pleading,
For me to leave the vice and sins of the world,
And abide where God is leading.

...

But no, not so. I have waited too long;
The voice of my mother has fled.
No more on earth shall I hear her song,
For she's numbered now with the dead.

O brother mine be up and away,
Make haste to reach peace today.
The time is so short we are here to stay,
Tomorrow may be too late.

Don't let it be said, too late, too late,
To comfort your dear mother's heart;
Don't let it be said "too late too late,"
To do a son's noble part.

So soon will the call come to you and to me,
To lay all our burdens aside,
And may it be said we were ready to go
And with Him who is perfect abide.

When all the lessons of life have been learned,
And its pagens forever are closed,
The love that here has been cruelly spurned
Will triumph forever in heaven.

And if we could push ajar the gates of life,
And stand within, and all God's workings see,
We then could understand the doubt and strife,
And for each mystery could find a key.

—Esther Moore.

David Copperfield.

By Charles Dickens.

CHAPTER 1.

I Am Born.

Whether I shall turn out to be the hero of my own life, or whether that station will be held by any one else, these pages must show. To begin my life with the beginning of my life, I record that I was born (as I have been informed and believed) on a Friday, at twelve o'clock at night. It was remarked that the clock began to strike, and I began to cry, simultaneously.

In consideration of the day and hour of my birth, it was declared by the nurse, and by some sage women in the neighborhood who had taken a lively interest in me several months before there was any possibility of our becoming personally acquainted, first, that I was destined to be unlucky in life; and secondly, that I was priviliged to see ghosts and spirits, both these gifts inevitabiy attaching, as they believed, to all unlucky infants of either gender, born towards the small hours on a Friday night.

I need say nothing here on the first head, because nothing can show better than my history whether that prediction was verified or falsified by the result. On the second branch of the question, I will only remark, that unless I ran through that part of my inheritance while I was still a baby, I have not come into it yet. But I do not at all complain of having been kept out of this property; and if anybody else should be in the present enjoyment of it, he is heartily welcome to keep it.

I was born with a caul, which was advertised for sale, in the newspapers, at the low price of fiifteen guineas. Whether sea-going people were short of money about that time, that there was but one solitary bidding, and that was form an attorney connected with the bill-broking business, who offered two pounds in cash, and the balance in sherry, but declined to be guaranteed from drowning on any higher bargain. Consequently the advertisement was drawn at a dead loss—for as to sherry, my poor dear mother's sherry was in the market then—and ten years afterwards the caul was put up in a raffle down in our part of the country, to fifty members at half-a-crown a head, the winner to spend five shillings. I was present myself, and I remember to have felt quite uncomfortable and confused, at a part of myself being disposed of in that way. The caul was won, I recollect, by an old lady with a hand-basket, who, very reluctantly, produced from it the stipulated five shillings, all in halfpence, and twopence halfpenny short—as it took an immense time and a great waste of arithmetic, to endeavour without any effect to prove to her. It is a fact which will long be remembered as remarkable down there, that she was never drowned, but died triumphantly in bed, at ninety-two. I have understood that it was, to the last, her proudest boast, that she had never been on the water in her life, except upon a bridge; and that over her tea (to which she was extremely partial) she, to the last, expressed her indignation at the impiety of mariners and others, who had the presumption to go "meandering" about the world. It was in vain to represent to her that some conveniences, tea perhaps included, resulted from this objectionable practice. She always returned, with greater emphasis and with an instinctive knowledge of the strength of her objection, "Let us have no meandering."

Not to meander myself, at present, I will go back to my birth.

I was born at Blunderstone, in Suffolk, or "thereby" as they say in Scotland, I was a posthumous child. My father's eyes had closed upon the light of this world six months, when mine opened upon it. There is something strange to me, even now, in the reflection that he never saw me: and something stranger yet in the shadowy remembrance that I have of my first childish association with his white grave-stone in the churchyard, and of the indefinable compassion I used to feel for it lying out there alone in the dark night, when our little parlor was warm and bright with fire and candle, and the doors of our house were—almost cruelly, it seemed to me sometimes—bolted and locked against it.

An aunt of my fathers, and consequently a great aunt of mine, of whom I shall have more to rolate by and by, was the principal magnate of our family. Miss Troiwood, or Miss Betsy, as my poor mother always called her, when she sufficiently overcame her dread of this important personage to mention her at all (which was seldom), had been married to a husband younger than herself, who was very handsome, except in the sense of the homely adage, "handsome is, as handsome does,"—for he was strongly suspected of having beaten Miss Betsy, and even of having once, on a disputed question of supplies, made some hasty but determined arrangements to throw her out of a two pair of stairs' window. These evidences of an incompatibility of temper induced Miss Betsy to pay him off, and effect a separation by mutual consent. He went to India with his capital, and there, according to a wild legend in our family, he was once seen riding on an elephant, in company with a Baboon; but I think it must have been a baboo—or a Begum. Anyhow, from India tidings of his death reached home, within ten years. How they affected my aunt, nobody knew; for immediately upon the separation she took her maiden name again, bought a cottage in a hamlet on the sea-coast a long way off, established herself there as a single women with one servant, and was understood to live secluded, ever afterwards, in an inflexible retirement.

My father had once been a favorite of hers, I believe; but she was mortally affronted by his marriage, on the ground that my mother was "a wax doll." She had never seen my mother, but she knew her to be not yet twenty. My father and Miss Betsy never met again. He was double my mother's age when he married, and of but a delicate constitution. He died a year afterwards, and, as I have said, six months before I came into the world.

This was the state of matters on the afternoon of, what I may be excused for calling, that eventful and important Friday. I can make no claim, therefore, to have known, at that time, how matters stood; or to have any remembrance, founded on the evidence of my own senses, of what follows.

My mother was sitting by the fire, but poorly in health, and very low in spirits, looking at it through her tears, and desponding heavily about herself and the fatherless little stranger, who was already welcomed by some grosses of prophetic pins in a drawer upstairs, to a world not at all excited on a subject of his arrival; my mother, I say, was sitting by the fire, that bright, windy March afternoon, very timid and sad,' and very doubtful of ever coming alive out of the trial that was before her, when, lifting her eyes as she dried them, to the window opposite, she saw a strange lady coming up the garden.

My mother had a sure foreboding at the second glance, that it was Miss Betsy. The setting sun was glowing on the strange lady, over the garden fence, and she came walking up to the door with a fell rigidity of figure and composure of countenance that could have belonged to nobody else.

When she reached the house she gave another proof of her identity. My father had often hinted that she seldom conducted herself like any ordinary Christian; and now, instead of ringing the bell, she came and looked in at that identical window,

MOTHERHOOD SUGGESTIONS

Advice to Expectant Mothers

The experience of Motherhood is a trying one to most women and marks distinctly an epoch in their lives. Not one woman in a hundred is prepared or understands how to properly care for herself. Of course nearly every woman nowadays has medical treatment at such times, but many approach the experience with an organism unfitted for the trial of strength, and when it is over her system has received a shock from which it is hard to recover. Following right upon this comes the nervous strain of caring for the child, and a distinct change in the mother results.

There is nothing more charming than a happy and healthy mother of children, and indeed child-birth under the right conditions need be no hazard to health or beauty. The unexplainable thing is that, with all the evidence of shattered nerves and broken health resulting from an unprepared condition, and with ample time in which to prepare, women will persist in going blindly to the trial.

Every woman at this time should rely upon Lydia E. Pinkham's Vegetable Compound, a most valuable tonic and invigorator of the female organism.

In many homes once childless there are now children because of the fact that Lydia E. Pinkham's Vegetable Compound makes women normal, healthy and strong.

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

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Are a boon to every man who cares for his personal appearance.

Challenge Collars are not shiny rubber collars. They have a dull linen finish. In fact, you can't tell them from linen. Keep up appearances—keep down laundry bills.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

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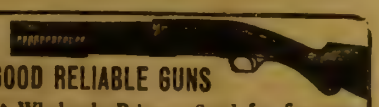

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pressing the end of her nose to the glass to that extent that my poor dear mother used to say that it became perfectly flat and white in a moment.

She gave my mother such a turn, that I have always been convinced I am indebted to Miss Betsy for having been born on a Friday.

My mother had left her chair in her agitation, and gone behind it in the corner. Miss Betsy, looking around the room, slowly and inquiringly, began on the other side, and carried her eyes on, like a Saracen's head in a Dutch clock, until they reached my mother. Then she made a frown and a gesture to my mother, like one who was accustomed to be obeyed, to come and open the door. My Mother went.

"Mrs. David Copperfield, I think?" said Miss Betsy; the emphasis referring, perhaps, to my mother's mourning weeds, and her condition.

"Yes," said my mother, faintly,

"Miss Trotwood," said the visitor. "You have heard of her, I dare say?"

My mother answered that she had had that pleasure. And she had a disagreeable consciousness of not appearing to imply that it had been an overpowering pleasure.

"Now you see her," said Miss Betsy. My mother bent her head, and begged her to walk in.

They went into the parlor my mother had come from, the fire in the best room on the other side of the passage not being lighted—not having been lighted, indeed, since my father's funeral; and when they were both seated, and Miss Betsy said nothing, my mother, after vainly trying to restrain herself began to cry.

"Oh tut, tut, tut!" said Miss Betsy, in a hurry. "Don't do that! Come, come!"

My mother couldn't help it notwithstanding, so she cried until she had her cry out.

"Take off your cap, child," said Miss Betsy, "and let me see you."

My mother was too much afraid of her to refuse compliance with this odd request, if she had any disposition to do so. Therefore she did as she was told, and did it with such nervous hands that her hair(which was luxuriant and beautiful) fell all about her face.

"Why, bless my heart!" exclaimed Miss Betsy. "You are a very baby!"

My mother was, no doubt, unusually youthful in appearance even for her years; she hung her head, as if it sobbing, that indeed she was afraid were her fault, poor thing, and said, she was but a childish widow, and would be but a childish mother if she lived. In a short pause which ensued, she had a fancy that she felt Miss Betsy touch her hair, and that with no ungentle hand; but, looking at her, in her timid hope, she found that lady sitting with the skirt of her dress tuckd up, her hands folded on one knee, her feet upon the fender, frowning at the fire.

"In the name of Heaven," said Miss Betsy, suddenly, "why Rookery?"

"Do you mean the house, ma'am?" asked my mother.

"Why Rookery?" said Miss Betsy. "Cookery would have been more to the purpose, if you had any practical ideas of life, either of you."

"That name was Mr. Copperfield's choice," returned my mother. "When he bought the house, he liked to think there were rooks about it."

The evening wind made such a disturbance just now, among some tall old elm trees at the bottom of the garden, that neither my mother nor Miss Betsy could forbear glancing that way. As the elms bent to one another, like giants who were whispering secrets, and after a few seconds of such repose, fell into a violent flurry, tossing their wild arms about, as if their late confidences were really too wicked for their peace of mind, some weather-beaten ragged old rook's nests burdening their higher branches, swung like wrecks upon a stormy sea.

"Where are the birds?" asked Miss Betsy.

"The—?" My mother had been thinking of something else.

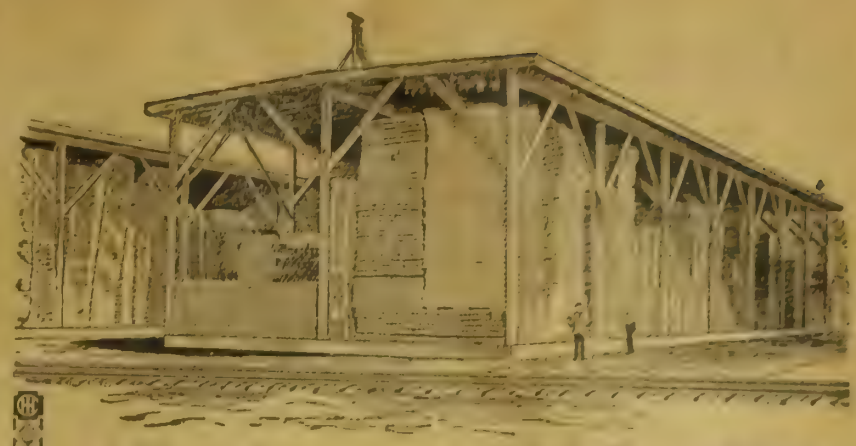
"The rooks—what has become of them?" asked Miss Betsy.

"There have not been any since we lived here," said my mother. "We thought—Mr Copperfie'd thought— it was quite a large rookery; but the nests were very old ones, and the birds have deserted them a long while."

"David Copperfield all over!" cried Miss Betsy. "David Copperfield from head to foot! Calls a house a rookery when there's not a rook near it, and takes the birds on trust, because he sees the nests!"

"Mr Copperfield," returned my mother, "is dead, and if you dare to speak unkindly of him to me—"

My poor dear mother, I suppose,



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THE SUMMER COMPLAINT OF INFANTS

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Cholera infantum can be quickly cured by the use of Dr. Fowler's Extract of Wild Strawberry. Mrs. David A. Cleveland, Apple River, N.S., writes:—"Last September my little boy, four years old, and little girl, two years old, were taken one afternoon with vomiting spells, and in a few hours they had cholera infantum. I had Dr. Fowler's Extract of Wild Strawberry in the house, and commenced using it. The cholera got so bad the next day, they passed nothing but blood. I kept on using the medicine, and in a few days they were cured. I always keep a bottle in the house, as I don't think there is anything better for summer complaint than Dr. Fowler's Extract of Wild Strawberry."

Some dealers may try to sell you something else, but for the good of your child's health, insist on having "Dr. Fowler's." It has been on the market for over sixty-five years, so you are not using a new and untried remedy. Price 35 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

had some momentary intention of committing an assault and battery upon my aunt, who could easily have settled her with one hand, even if my mother had been in far better training for such an encounter than she was that evening. But it passed with the action of rising from her chair, and she sat down again very meekly, and fainted.

When she came to herself, or when Miss Betsy had restored her, whichever it was, she found the latter standing at the window. The twilight was by this time shading down into darkness; and dimly as they saw each other, they could not have done that without the aid of the fire.

"Well?" said Miss Betsy, coming back to her chair, as if she had only been taking a casual look at the prospect; "and when do you expect—"

(To be continued.)

Fall Excursions to Montreal.

Montreal is always a city of interest, and especially so in early Autumn, when the weather is enjoyable the many stores crowded with seasonable novelties, and the places of amusement in fall swing. A visit there at this time of year cannot be otherwise than enjoyable, and with the very low rate prevailing on the Intercolonial Railway in connection with the Fall Excursions, the round trip can be made more cheaply than at any other time. On Sept. 12, 13 and 14 the round trip fare from St. John will be only $12.00, tickets good for return Sept. 30th. On Sept. 26, 27 and 28 the same rates will prevail with the return limit Oct. 14th. Travellers from the Maritime Provinces have the choice of two of the finest through trains on the continent the Ocean Limited and the Maritime Express, both renowned for the excellence of their sleeping and dining car service.

Saint John Exhibition Prize Winners.

(Continued from page 799.)

Produce of one cow, two animals, either sex, any age—1, Easton Bros.; 2 and 3, McIntyre Bros.

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Bull, 3 years old and upward— 1, J. D. Irving; 2 and 3, Harding Bros.; 4, Lea and Clark.

Bull, 2 years old—1, J. D. Irving.

Bull, senior yearling—1, J. D. Irving.

Bull, junior yearling—1, Lea and Clark; 2, Harding Bros.; 3, John A. Hughes.

Bull, senior calf—1, Harding Bros.; 2 and 4, Lea and Clark; 3, J. D. Irving.

Bull, junior calf—1 and 4, Lea and Clark; 2, Harding Bros.; 3, J. D. Irving.

Male sweepstakes—1 and 2, J. D. Irving.

Cow, 4 years old and upwards—1 and 4, J. D. Irving; 2, Lea and Clark; 3, Harding Bros.

Dry Cow, 4 years old and upward—1, J. D. Irving; 2, Lea and Clark; 3, Harding Bros.

Cow, 3 years old—1, J. D. Irving; 2, Lea and Clark; 3, Harding Bros.

Dry Cow, 3 years old—Lea and Clark; 2, J. D. Irving.

Canadian Cow, 3 years old and upwards—1 and 3, Lea and Clark; 2, Harding Bros.; 4, J. D. Irving.

Cow, 2 years old—1, J. D. Irving; 2, Harding Bros.; 3, Lea and Clark.

Heifer, 2 years old—1, Harding Bros.; 2, J. D. Irving; 3, Lea and Clark; 4, J. D. Irving.

Heifer, senior yearlings—1, J. D. Irving; 2, Harding Bros.; 3 and 4, Lea and Clark.

Heifer, junior yearlings— 1 and 3, J. D. Irving; 2, Harding Bros.; 4, Lea and Clark.

Female sweepstakes—1, J. D. Irving D. Irving.

Senior herd—1 and 4, J. D. Irving; 2, Lea and Clark; 4, Harding Bros.

Breeder's young herd—1, J. D. Irving; 2, Harding Bros.;; 3 and 4, Lea and Clark.

Bull and 3 of his get—1, Harding Bros.; 2, J. D. Irving; 3, Lea and Clark.

Cow and 2 of her offspring—1, Lea and Clark; 2, Harding Bros.; 3, J. D. Irving.

Heifer, senior calf—1 and 3, Lea and Clark; 2, Harding Bros.; 4, J. D. Irving.

Heifer, junior calf—1 and 4, Harding Bros.; 2 and 3, J. D. Irving.

3 Animals, the get of one bull— 1, Harding Bros.; 2, J. D. Irving; 3, Lea and Clark.

3 Animals, the offspring of one cow—1, Lea and Clark; 2, J. D. Irving; 3, Harding Bros.

GUERNSEYS.

Bull, 3 years and upwards—1, H. W. Corning; 2, Roper Bros.

Bull, 2 years old—1, H. W. Corning; 2, Roper Bros.

Bull, senior yearling—1 and 2, Roper Bros.

Bull, junior yearling—1, Roper Bros.

Bull, senior calf—1, H. W. Corning; 2, Roper Bros.

Bull, junior calf—1, H. W. Corning; 2 and 3, Roper Bros.

Male Sweepstakes—Diploma, H. W. Corning.

Heifer, junior calf—1, H. W. Corning; 2, Roper Bros.; 3, H. W. Corning.

Female Sweepstakes—Diploma, Roper Bros.

Senior herd—1 and 3, Roper Bros.; 2, H. W. Corning.

Breeders young herd—1 and 3, H. W. Corning; 2 and 4, Roper Bros.

Bull and 3 of his get—1, H. W. Corning.

Cow and 2 of her offspring—1, Roper Bros.

BUTTER PARCHMENT WRITE FOR SAMPLES AND PRICES PAPER.
Direct Importers and Printers
The D. F. Brown Paper Box & Paper Co. Ltd., ST. JOHN, N. B.
EGG BOXES MILK BOTTLE CAPS APPLE BARREL PULP HEADS

Learn to Be a Barber At Home for $2.00

Can you beat this offer?

A trade everyone should know.

For those who cannot enter a barber college, we are making this great offer.

For the above sum, we will send you, postpaid, three of the greatest books ever written on barbering, which tell you in simple words how to become a barber at home.

We have a limited number of these books, so do not hesitate, but write at once.

Money refunded within ten days if you are not satisfied.

T. I. PATTERSON,
P. O. Box 2202 - Montreal.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition
It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

Mercantile Assurance Association
P. O. Box 317
Halifax, Nova Scotia.

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervision of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

The E. B. EDDY COMPANY, Limited,
HULL, CANADA.
Makers also of Wooden Pails, Tubs, etc.

Advertise in The Maritime Farmer.

Home Dyeing
has no terrors for me - It's simply my delight
Even Professional Dyers can't equal my Perfect Results
That's because I use
DY-O-LA
ONE DYE FOR ALL KINDS OF GOODS

It's the CLEANEST, SIMPLEST, and BEST HOME DYE, one can buy--Why you don't even have to know what KIND of Cloth your Goods are made of.--So Mistakes are Impossible.

Send for Free Color Card, Story Booklet, and Booklet giving results of Dyeing over other colors.

The JOHNSON-RICHARDSON CO., Limited, Montreal, Canada.

MAXWELL'S "PURITY" FOOD-CUTTER

is entirely different from the ordinary food chopper. The barrel is in two closely fitting sections, clamped together by one set-screw. Canadian made machine.

Better in quality, capacity and price works better, better finished, less in price. Five different cutting plates.

"MAXWELL'S PURITY" is the only food cutter made in Canada--and in ease, convenience, perfect cutting and durability --is superior to anything imported. If your dealer does not handle "Maxwell's Purity" write us.

DAVID MAXWELL & SONS, St. Marys, Ont.

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A vast amount of ill health is due to impaired digestion. When the stomach fails to perform its functions properly the whole system becomes deranged. A few doses of Chamberlain's Tablets is all you need. They will strengthen your digestion, invigorate your liver, and regulate your bowels, entirely doing away with that miserable feeling due to faulty digestion. Try it. Many others have been permanently cured—why not you? For sale by all dealers.

St. Isidore, P. Q., Aug. 18, 1904. Minard's Liniment Co., Limited.

Gentlemen,—I have frequently used MINARD'S LINIMENT and also prescribe it for my patients always with the most gratifying results, and I consider it the best all-round Liniment extant.

Yours truly,
Dr. Jos. Aug. Sirois.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Cow, 4 years old and over—1 and 2, Roper Bros.

Cow, 3 years old—1 and 2, H. W. Corning; 3, Roper Bros.

Dry Cow, 3 years old—1, Roper Bros.

Canadian Cow, 3 years and over—1, Roper Bros.; 2 and 3, H. W. Corning.

Cow, 2 years old—1, Roper Bros.

Heifer, 2 years old—1 and 2, Roper Bros.

Heifer, senior yearling — 1, Roper Bros.; 2 and 3, H. W. Corning.

Heifer, junior yearling—1, 3 and 4—Roper Bros.; 2, H. W. Corning.

Heifer, senior calf— and 3, Roper Bros.; 2, H. W. Corning.

JERSEYS.

Bull, 3 years and up—1, S. Creighton & Sons; 2, Josselyn & Young; , H. S. Pipes & Sons.

Bull, 2 years old—1, Josselyn & Young; 2, H. S. Pipes & Sons.

Bull, junior yearling—1, H. S. Pipes & Sons; 2, Josselyn & Young.

Bull, senior calf—1, H. S. Pipes & Sons; 2 and 3, Josselyn & Young,

Bull, junior calf—1 and 3, H. S. Pipes & Sons; 2, Josselyn & Young.

Male sweepstakes—1, S. Creighton & Sons.

Cow, 4 years and up—1 and 3, Josselyn & Young; 2, H. S. Pipes & Sons; 4, S. Creighton & Sons.

Dry cow, 4 years and up—1, Josselyn & Young; 2, H. S. Pipes & Sons; 3 and 4, S. Creighton & Sons.

Cow, 3 years old—1, H. S. Pipes & Sons; 2, Josselyn & Young; 3, J. L. Flower.

Dry Cow, 3 years and up—1, 2 and 3, Josselyn & Young.

Heifer, 2 years old—1, Josselyn & Young; 2 and 4, H. S. Pipes & Sons; 3, S. Creighton & Sons.

Senior yearling—1 and 4, H. S. Pipes & Sons; 2, Josselyn & Young; 3, S. Creighton & Sons.

Canadian Cow, 3 years and up—1 and 3, Josselyn & Young; 2, H. S. Pipes & Sons.

Cow, 3 yea rs old—1, Josselyn & Young; 2 and 3, H. S. Pipes & Sons.

Heifer, junior yearling—1 and 3, H. S. Pipes & Sons; 2, S. Creighton & Sons; 4, Josselyn & Young.

Heifer, junior calf—1, H. S. Pipes Pipes & Sons; 2 and 4, Josselyn & Young.

Heifer, junior calf—W, H. S. Pipes & Sons; 2 and 3, Josselyn & Young; 4, S. Creighton & Sons.

Female sweepstakes—1, Josselyn & Young.

Senior herd—1, Josselyn & Young; 2, H. S. Pipes & Sons; 3, S. Creighton & Sons.

Breeders' young herd—1 and 3, H. S. Pipes & Sons; 2, Josselyn & Young.

Bull and 3 of his get—1, H. S. Pipes & Sons; 2, Josselyn & Young.

Cow and 3 of her offspring—1 and 2 Josselyn & Young; 3, H. S. Pipes & Sons.

DAIRY GRADES.

Cow, 4 years old and upwards—1, John B. Barton; 2 and 3, McIntyre Bros.

Dry Cow, 4 years old and upwards 1, Lea and Clark; 2 and 3, McIntyre Bros.

Cow, 3 years old—1, Lea and Clark; 2, McIntyre Bros.

Dry Cow, 3 years old—1, McIntyre Bros.

Cow, 2 years old—1, Lea and Clark; 2, McIntyre Bros.

Heifer, 2 years old—1,. Lea and Clark; 2, McIntyre Bros.

Heifer, senior yearling—1, Lea and Clark; 2, McIntyre Bros.

Heifer, junior yearling—1, McIntyre Bros.

Heifer, senior calf—1, McIntyre Bros.; 2, Lea and Clark.

Heifer, junior calf—1, Lea and Clark; 2, McIntyre Bros.

Herd—1, Lea and Clark; 2 and 3, McIntyre Bros.

Flour and Breadmaking.

(Continued from last issue)

BREADMAKING.

The object of the miller is to make all the flour that is possible from the wheat at his disposal and to separate this into the grades demanded by his customers. The baker's part is to make from the flour the maximum amount of bread of a good quality. To do this intelligently, he should not only be familair with the methods of manipulation, but he should also understand the nature of the materials he is working with, and, so far as is possible, the chemical and physical changes brought about during the process.

We have dealt with flour and it now remains for us to discuss some of the more important leavening materials and the changes which these and other agencies cause in the dough.

LEAVENING MATERIALS.

YEAST.

Yeasts are the natural agents which cause the fermentation of bread dough, familiar to every housewife as "raising." This fermentation of bread has been known as long as we have any recorded history, for early bible writers tell of leavened and unleavened bread, the former being raised with leaven (which we now know was yeast), and the latter being baked without previous raising. Although this phenomenon of the fermentation of bread was thus known from very early times, its real cause was not definitely proven until the last century, when between the years of 1830 and 1860 German and French scientists showed that different fermentations were caused by living organisms, and among these was the yeast organism, or, as it is commonly called, the yeast plant. Yeasts are also active in a number of other fermentations, viz., the brewing of beers, ales and wines, either commercial or home-made, the making of vinegar, the "spoiling" of canned fruit, and production of gassy curd in cheesemaking, etc.

Yeast plants are always microscopic no species being large enough to be seen with the naked eye. The individual yeast plants average only 1-3000 of an inch in diameter, hence to see them at all requires a very powerful microscope. Yeast as seen with the naked eye, in a yeast cake or otherwise, is made up of a mass of individual yeast cells or plants. If a bit of yeast is mixed with water, and examined under a high-power lens, there will be seen great numbers of cells such as shown in Fig.7, some nearly spherical, some oval, and some even quite elongated. They are colourless as seen under the microscope, although in masses they appear of a creamy white colour. The outline or cell wall is regularly and sharply defined. The contents of the cell usually shows one and sometimes two or more rounded clear spots, called vacuoles, and a number of small fat drops besides the slightly granular protoplasm which makes up the remainder of the cell contents.

When a bit of yeast is placed in a solution which contains the proper food, the yeast cells immediately begin to consume the food and grow and multiply by the method known as budding. Upon the side of the cell appears a small swelling or bud. This little bud increases in size until final

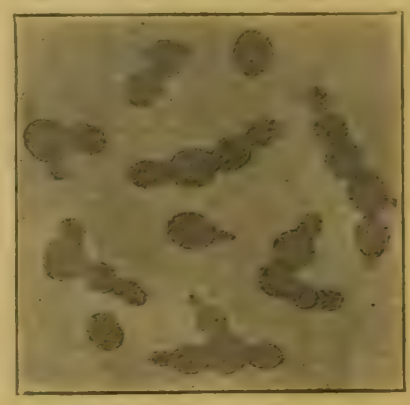

Fig. 7—Yeast Cells. Highly Magnified.

ly it becomes as large as the original cell, when it in turn may begin to bud. This budding continues until there are produced large irregular shaped groups. (Fig. 7.) Later these groups may be broken up and the cells go into a sort of resting stage, Each cell remaining by itself. Each of these single cells is capable ol growth and multiplication by budding as soon as it is placed in any material that furnishes the proper food for its development. Hence yeast may be likened to other plants

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. I know that my home treatment is a safe and sure cure for **Leucorrhoea** or Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse Scanty or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels**, bearing down feelings, nervousness, creeping feeling **up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters**, I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

The Advertisers in The Maritime Farmer are worthy your confidence.

THOUGHT SHE WOULD SURELY DIE

HAD PAINS AROUND THE HEART AND SMOTHERING FEELINGS

Mrs. Wm. Lee, Uhthoff, Ont., writes:—"I have taken three boxes of Milburn's Heart and Nerve Pills, and am now well. I had such pains around my heart and such smothering feelings that I thought I would surely die. My head used to be propped up with pillows to keep me from smothering. One day I read in a paper about your Milburn's Heart and Nerve Pills, and three boxes cured me."

Milburn's Heart and Nerve Pills are a specific for all run-down men and women, whether troubled with their heart or nerves, and are recommended by us with the greatest confidence that they will do all we claim for them.

Price 50 cents per box, or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

the seeds of which require, among other things, a favorable soil in which to germinate and reproduce the plant.

The most favorable food for the common species of yeast is sugar, and they will not grow rapidly unless sugar is present in considerable amounts. Bread dough ferments because it contains some sugar. Flour itself contains a large percentage of starch, part of which is changed to sugar, which is then fermented by the yeast present, with the result that there are formed two main products, alcohol and carbonic acid gas. It is the latter product that makes the sponge "raise." When the dough is baked, the alcohol is evaporated by the heat and the gas is expanded, making the loaf still larger and "lighter." Other chemical products than alcohol and carbonic acid gas are formed in small amounts during the fermentation, and these have some influence in determining the flavour of the bread.

It has been shown that suitable food is essential for favorable growth of yeast. Another essential for the most rapid growth is a favorable temperature, and this factor is one of extreme importance in successful breadmaking. The best temperature for different species of yeasts varies with the species, but the average is about 80 degs. F., or a little below blood heat. At low temperature the growth of the yeast is checked, and, consequently, fermentation does not proceed so rapidly. Cold temperatures do not kill the yeast, and when a favorable temperature is again furnished, growth proceeds as before. At temperatures above 100 degs. F., or body heat, the vitality of the yeast is weakened proportionately as the temperature increases, until at the boiling point it is entirely destroyed.

Although yeast is not killed or injured by low temperatures, yet, there is a disadvantage in allowing the temperature to get too low in preparing the sponge for bread. Flour frequently contains other organisms than yeasts (bacteria and molds), some of which are able to grow rapidly in the dough at temperatures lower than the optimum for yeasts, and form objects which impart an undesirable flavour to the bread. Even the commercial yeasts may contain such undesirable organisms.

The two types of trouble most commonly met with are sour bread and slimy bread.

Dough may sometimes appear to rise well, but after the bread is baked it is found to have an unpleasant sour taste. This is due to the development in the dough before baking of acids produced in the growth of bacteria which are present in the flour, in old, or impure yeast, or in unclean utensils used in the process.

In the case of slimy bread, the sliminess is not usually apparent when the bread is freshly baked, but appears in a few hours, caused by the growth of bacteria that were not killed in the baking process. These slime-producing bacteria may arise from the same sources as the acid-producing bacteria. The remedy in either case is to use clean, high-grade flour, fresh, pure yeast, and to see that all utensils are scrupulously clean. In addition to these precautions, it should be remembered that correct temperature is the most essential for the normal development of yeast.

OTHER METHODS OF LEAVENING BREAD.

Many attempts have been made to prepare materials that will replace yeast in breadmaking. It is evident that if a compound or mixture of compounds could be prepared that would give off carbon dioxide regularly, it might take the place of yeast as a leavening material. But nothing has been devised that has proved a success. Baking powders act well for biscuits and such work, but they have not given good results in the large mass of dough prepared in breadmaking. The "self rising" flour sometimes advertised is really flour mixed with materials of this nature. The chief objection to the use of any of these yeast substitutes is that they may be inefficient or harmful; that they are easily adulterated, and that the bread made from them is lacking in the flavour and aroma good yeast fermentation produces.

In some places "aerated bread" is made. The details of the process are kept more or less secret, but the dough is made to "rise" by means of carbon dioxide injected into the dough in various ways. Sometimes a little fermented barley infusion from a brewery is put into the water used in making the dough. This appears to render the gluten more elastic and imparts some of the same flavour resulting from yeast fermentation.

The leavening of "salt rising" bread is dependent upon ferments originally present or acquired from the air. A common method of making it is to prepare a slack batter of milk and flour and allow it to stand at a temperature of about 100 degs. F., until the ferments permeate the whole mass, or until it becomes sour. This is then mixed with a sponge prepared with hot water and flour, to which a little salt has been added. After thoroughly kneading the batter and the sponge together, it is put away in a warm place and the leavening action started in the batter spreads through the whole mass and produces a light, porous loaf of bread. It is an illustration of a self-raised bread, but as it is dependent upon the natural ferment content of the flour and the ferments that may get into it from the air, the method is uncertain.

(Continued in next issue)

BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught, through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

O.K. Canadian Potato Digger

Don't try to plow up the potatoes, or dig them out with a fork or hoe. It's back-breaking, disagreeable work and you always lose a percentage of the potatoes, which are missed. Let the horses and the **O. K. Canadian** dig your potatoes, and save you a long, tiresome job.

O. K. Canadian does all the work—digs all the potatoes. Soon pays for itself in the bushels of potatoes it saves that the old method would lose.

Write for our catalogue fully describing this great machine.

Canadian Potato Machinery Co. Limited. Galt, Ont.

12

T-A Wheels Defy Bad Roads

These Wide-Tire Steel Wheels are built especially to overcome the troubles of travelling over rocky, sandy or muddy roads. They carry 25 to 50 per cent. heavier loads without causing any heavier draft on the horses.

Built low for ease of loading and unloading

Get a T-A Handy Farm Wagon—It's just the kind you need on your farm. This sturdy little wagon will get over the ground quicker and with less strain on your horses than any other wagon that's made.

TUDHOPE-ANDERSON CO. Ltd., Orillia, Ont.

Drop us a card and get our catalogue telling all about

T-A Handy Farm Wagons and Wide Tire Steel Wheels

Churning is so EASY When You Have MAXWELL'S FAVOURITE CHURN

The light but rigid angle steel frame, the bolted trunnions the combined foot and hand drive, the roller bearings, the strength and durability—these are features that have made Maxwell's "Favourite" famous the world over.

8 sizes—ask your dealer or write for catalogue.

DAVID MAXWELL & SONS, St. Mary's, Ont.

135

Stiff Competition the Salvation of the Manufacturer.

Absolutely no improvements are made in the quality of the product in any line where the manufacturers get together under a so-called "gentlemen's working agreement." The members of this agreement become stagnant. They are contented to drift along making a product as good as that produced by their competitors. Just as soon as competing manufacturers enter into a working agreement covering prices, terms, trade discounts or volume of production, they cease to reach out for improvements in quality, efficiency, durability, attractiveness of package and other trade winning advantages, till some day they awake with a jolt to find that their supposedly security intrenched position has been undermined and their trade is slowly slipping away.

Nothing in this world can stand absolutely still; so the manufacturer today must either go backward or forward—there is no middle ground.

A notable instance of this is shown today in the embroidery silk industry A few years ago some of the largest manufacturers of this commodity came to the conclution that they were not making a big enough profit and that the retailer was demanding too many free show cases and other trade helps. So they entered into a "gentlemen's working agreement" which proved to be a panacea for the trouble. They no longer fought each other tooth and nail for business, neither did they spur their factory superintendents on to innovations in an effort to reduce the cost of manufacture and improve the quality of the goods.

During this inactive period on the part of the leading silk manufacturers up sprung a new competitor, the manufacturer of mercerized embroidery silk. And when the silk manufacturers woke up, they found that the maker of cotton embroidery floss had secured a permanent hold on the embroidery business, something which they had never been able to do in the years gone by, in spite of repeated efforts to do so. Today the silk manufacturer has come to recognize the maker of cotton floss as a foeman worthy of his steel.

There are innumerable instances in trade such as cited above. But let us now turn to a group of manufacturers who from infancy have fought each other at every turn of the road. When acquaintances sit down in a friendly poker game they tack a sign on the wall that reads: "Here is where all friendship ceases," and this has been the slogan of the manufacturers of ready roofing.

The makers of ready-to-lay roffing in order to dispose of their product had to first convince the building owner that there was no reason why he should continue to use wooden shingles simply because his grandfather before him adopted that particular style of roof covering. As a matter of fact, grandfather had no choice of materials and wooden shingles in the early days were of much better quality and cost less than they can be bought for today.

Then came the fight against slate, tile and metal, a more modern product, but at a cost almost beyond the reach of the man of ordinary These materials are expensive beyond reach of the man of ordinary means. cause of the weight and consequent excessive cost of transporting. In addition they are expensive to lay and to make a perfectly satisfactory roof covering should be underlaid with a waterproof material which also adds to the total cost.

In the fight against wooden shingles metal, tile and slate, the manufactur-

A New Tea Offer:

Take advantage now. Your dealer has a package of rich, full flavored tea ready for you to buy on this understanding:

If you do not like the flavor so exceptionally well that you want to enjoy the whole package (and more too) please return the broken package and get your money back.

Could anything be fairer? The 40c. grade is specially recommended.

35, 40, and 50c. per lb.

Sherlock-Manning 20th Century Piano "Canada's Biggest Piano Value"

If you want your Summer Home to be more than "comfortably furnished," put this superb little **Sherlock-Manning 20th Century Style 70 Piano** in it.

Beautifully finished in Walnut or Mahogany—handsome in appearance—and dainty in design. This exquisite little instrument is particularly appropriate for the Summer Home whatever its size or its style.

This **great** little piano is easily moved, and occupies only a small space—but at the same time, it has all the **superior features** of the regular, full-sized **Sherlock-Manning 20th Century Instruments.**

Find out about this handy little instrument before you decide on any piano for your Summer Home. Come and see it, if possible. We will be pleased to tell you all about it, without placing you under any obligation to buy.

Style 70

THE PIANO PAR EXCELLENCE FOR YOUR SUMMER HOME.

Write **direct to us, asking how you may own this splendid and convenient little instrument—one of the world's finest pianos—and at the same time save $100.**

Sherlock-Manning Piano & Organ Co.

London (No Street address necessary) **Canada**

7% GUARANTEED 7%

THE SIEMON COMPANY LIMITED

Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year**, on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

NATIONAL SECURITIES CORPORATION LIMITED

Confederation Life Building, Toronto, Canada.

SUNSHINE FURNACE

Guaranteed by McClary's to save fuel—to cut out dust, fuss and bother and to heat your house evenly and comfortably in the coldest weather. We guarantee the "Sunshine" Furnace to save enough to pay for itself quicker than any other furnace you can buy.

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McClary's

25 HANDSOME POST CARDS FOR 25c
No two alike. These lovely Art Post Cards in beautiful colors and exquisite gold embossed designs comprise one of the prettiest collections ever offered. Send 25 cents at once and we will give you 100 ADDITIONAL POST CARDS FREE. All postpaid. Satisfaction guaranteed. Address, INTERNATIONAL EMPORIUM, BEEBE, QUE.

Dates to be Remembered

Halifax Exhibition, Sept. 11-19, 1912.

Charlotte County Exhibition, St. Stephen, N. B., Sept. 10-13 1912.

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th., 1912.

Charlottetown Exhibition, Sept. 24th., 25th., 26th., 27th., 1912.

Cape Breton Island Exhibition, Sydney, N. S., Sept September 24, 25, 26, 27, 28, 1912.

Yarmouth County Exhibition, Yarmouth N. S., September 25, 26, and 27, 1912.

Nova Scotia Agricultural College Long Course begins November 5th. 1912.

Nova Scotia Agricultural College Short Courses for ladies and gentlemen begin January 7th., 1913.

Up-to-date Specialties

Card Systems,
Loose Leaf Systems,
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Farmer's Accounts,
Joint Stock Accounts,
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Gammeter Multigraph,
General up-to-dateness,
Send for our new Catalogue.

THE ST. JOHN Business COLLEGE
S. KERR & SON

S. KERR Principal.

ers of Rubber Roofing were all of one mind, but each manufactnrer was working out his own salvation in his own way. The struggle for trade was fast and furious. At times when the smoke of the battle lifted, it was fodnd that certain manufacturers had sustained mortal wounds from which recovery was impossible.

Each manufacturer was constantly striving to improve his product and at the same time reduce the cost of making as well as selling. The resolt is today the builder can obtain an excellent quality of durable weather proof and water proof ready roofing at a price so low that he cannot afford to use any other style of material. Consequently the users of modern easy-to-lay Ready Roofing are saving thousands of dollars and the sale of ready roofing is growing by leaps and bounds. The man in the city and village, as well as the farmer, find by actual test that it is the best and most inexpensive roof covering obtainable.

One of the most enterprising manufacturers sells his product under a coined trademark name —Certain-teed—meaning Quality Certified and Durability Guaranteed. Instead of making a lot of extravagant claims for his Certain-teed Rubber Roofing he has settled the question of durability by guaranteeing it to last for a period of fifteen years. He also produces his modern roofing in the shape of Shingles as well as convenient Rolls.

The Certain-teed Shingles will be a revelation to the man who has never used them. They are a beautiful gray in color, similar in tone to slate, combining all the artistic beauty and attractiveness of other styles of roofing, without any of the drawbacks. As a consequence the Certain-teed Shingle is being specified by the owners of bungalows, expensive city and suburban homes—by the man who takes a pride in every detail of his building—those who aim for artistic effect, durability and economy— every one who appreciates a roof covering of attractive appearance.

Just so surely as stiff competition has been the salvation of the roofing industry, just so surely will it prevent dry rot and retrograding in any manufacturing industry.

By writing the General Roofing Mfg., Co., of Winnipeg, you can secure a copy of their book, "How to Build for Less Money," which contains many helpful ideas for those contemplating building or repairing any old building. Be sure to mention The Maritime Farmer.

Smut in Oats.

(Continued from page 795)

In the second August issue of the Maritime Farmer, W. M. Lea, a prominent, P. E. Island farmer states:—

"Sow as good seed as you can secure and treat it with blue stone or formalin to destroy the smut. This province is going to lose thousands of dollars this season with smut in the oats. Never in my experience have I seen it so bad. While on a ten mile drive through the country the other day I noticed many fields that have at least one third of the heads destroyed by smut, and one field particularly that I noticed where treated seed was sown did not contain any. We tried it this year on part of one field and the difference is amazing between the treated and the untreated seed."

In fields where the following treatment was applied to oats last spring I found no smut. One pint of formaldehyde in 40 gallons of water will treat 40 bushels of oats. The equipment used is a clean floor, a barrel, sprinkling can, scoop-shovel and plenty of sacks.

First, about 40 bushels of oats are

A Dirty Carpet
Or a Clean Painted Floor!
WHICH IS BETTER?

You KNOW which YOU would sooner have. You know which LOOKS the best and is the easiest to KEEP clean. Better decide now to freshen things up right away with a tin or two of M-L Floor Paint.

M-L

You should use M-L Pure Paint to paint anything that needs painting. It protects the surface covered better and longer than most other paints. You buy it in tins—all ready to apply. Made of guaranteed pure materials, mixed with twenty years' knowledge of paint-making for practical painters.

Think what a difference a few dimes' worth of M-L Pure Paint would make about the house. It would make some of the wood-work look like new—or a worn-bare, shabby-looking floor made spic and span as when you first walked on it with M-L Floor Paint.

PURE PAINTS

Paint the WALLS and CEILINGS with M-L Flat Wall Colors. You'll find it far easier to keep them clean and sanitary as well as brighter looking. Easiest to apply. The colors are clearer and brighter; keeps its FRESH LOOK longest. Artistic, sanitary, durable, washable and VERY economical.

M-L

M-L Is The Most Economical Paint You Can Buy

Made in forty-seven colors for every paint purpose by Imperial Varnish & Color Co., Limited, Toronto. Sold by dealers who believe in giving you your full money's worth.

For Floors Get M-L Floor Paint Dries Hardest Wears Longest

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DEAR SIRS:—Please send me, free of all charge, full information about M-L Paints and your suggestions for decoration, inside and out.

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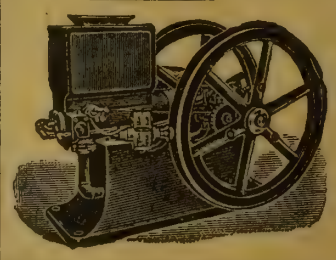
Address .....

A New Name For The Best Farm Engine



Made in Air-Cooled or Water-Cooled Styles. Sizes 1 1-2 to 20 h.p.. Send for catalogue, prices and buying terms for farmers.

We have changed the name of our famous "CANADIAN" air-cooled and water-cooled engines to a name that also signifies quality.

Hereafter, these engines will be known as the "MONARCH."

It is a Monarch among farm engines. No engine runs better, is more compact, easier started, surer and steadier than this. Always remember the 'MONARCH.'

Every part is true to 1-500 in. or less. Experts work on each part. Material is the best money can buy. Bearings are big and wide, The design is compact, and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name, too:—

THE CANADIAN ENGINES LIMITED
Formerly CANADIAN-AMERICAN GAS & GASOLINE ENGINE CO. Limited.
DUNNVILLE, Ont.

FROST & WOOD Limited, Smith's Falls, Sole selling agents for Eastern Ontario, Quebec and Maritime Provinces.

spread on the floor 5 or 6 inches deep. Second, oats are sprinkled with formaldehyde mixture until saturated. One man does the shoveling of oats while the other man sprinkles. Third, after saturation the pile is covered with blankets and sacks so as to keep the gas where it is effective. The pile is left covered for about 8 hours. The oats are then spread out to dry. Shoveling from time to time is necessary until the oats are thoroughly dried.

After applying this treatment the drill must be adjusted so as to make allowance for the swollen oat grain. The cost of this treatment amounts to about 25 cents for formaldehyde, and 25c. in labor for every 50 acres. Why not follow out the old proverb, "sow and ye shall reap," and in this case sow about 50 cts. and reap from $5 to $10?

Cause of European Foul Blood

The steps taken in the writer's endeavor to find the cause of European foul brood may be briefly summarized as follows:

(1) Bacillus alvei, which has been so generally spoken of as the cause of foul brood was isolateh from diseased brood, and pure cultures of the organism in both the vegetative and spore forms were repeatedly fed to colonies of healthy bees with the result that foul brood was not produced in any instance. This cast a suspicion that Bacillus alvei was probably not the cause of a disease.

(2) By a study of many larvae in samples of European foul brood it was frequently found that there were larvae apparently dead of the disease that contained Bacillus alvei only in small numbers or not at all. This increased the suspicion that Bacillus alvei was not the exciting cause of the disorder.

(3) In 1907 the writer proved that by feeding pure cultures of Bacillus larvae to healthy bees American foul brood could be produced. This fact still further emphasized the doubt that was already entertained concerning the possibilities of Bacillus alvei in the etiology of American foul brood.

(4) By feeding diseased larvae to healthy colonies it was found that European foul broad could be artificially produced showing that this disease, too, could be produced by feeding, and that the virus was contained in the diseased brood.

(5) Tne sick larvae of the disease thus artificially produced were frequently found, when examined, to be free from Bacillus alvei. This evidence, too, was damaging to the theory that Bacillus alvei is the cause of a braod disease.

(6) Bacillus alvei in this way was tentatively eliminated from the list of possible exciting causes of European foul brood. In a quite similar manner the other bacteria—Streptococcus apis, Bacillus mesenterious vulgaris, Bacillus orpheus, and Bacterium eurydice—were likewise eliminated from the list.

(7) Con?iderable quantities of filtrate from aqueous suspensions of crushed diseased larvae were fed to healthy colonies and in no instance was European foul brood produced This eliminated tentatively the probability of there being an ultramicroscopic virus in European foul brood the only factor that was not so capable of producing the disease.

(8) Bacillus pluton, therefore, was eliminated from the list of possible exciting causes of the disease and became thus the probable exciting causes of the disease and became thus the probable exciting cause of European foul brood.

(9) When this organism was studied in larvae in which the disease could be suspected by inspection one or more species of bacteria were sometimes found to be present also. These, when present, however, occurred in relatively small numbers.

(10) The disease was then studied in a still earlier stage—i. e., before its presence could be detected by gross examination of the larvae. This was done by cultures in part, but principally by fixing and sectioning larvae during the incubation period of the disease. This study demonstrated that in the production of the disease Bacillus pluton was the first invader of the healthy larvae.

It will be noticed, therefore, that in the determination of the primary exciting cause of European foul brood two objects were accomplished: (1) All the factors in the list of possible exciting causes of the disease were eliminated except the one organism, Bacillus pluton, and (2) by the study of infected larvae soon after the infection took place, this parasite was found to be the first invader.

As a conclusion, it is the belief of the writer that sufficient evidence has now been obtained to justify the statement that Bacillus pluton is the primary exciting cause of a brood disease. This brood disease is now generally known in America as European foul brood. This opinion is rendered in accordance with views now generally accepted relative to the etiology of animal diseases.

There are, then, three principal brood diseases. Two of these—American fodl brood, caused by Bacillus larvae, and European foul brood, caused by Bacillus pluton—are known to be infectious. From these two diseases there must be differentiated the third one, an apparently non-infectious disorder, the so-called "pickled brood." Larvae dead of this latter disease are particularly free from micro organisms. The exciting cause of thie disorder is not yet known.—Summary of a bulletin issued by the United States Department of Agriculture.

Crop Rotation and Soil Cultivation.

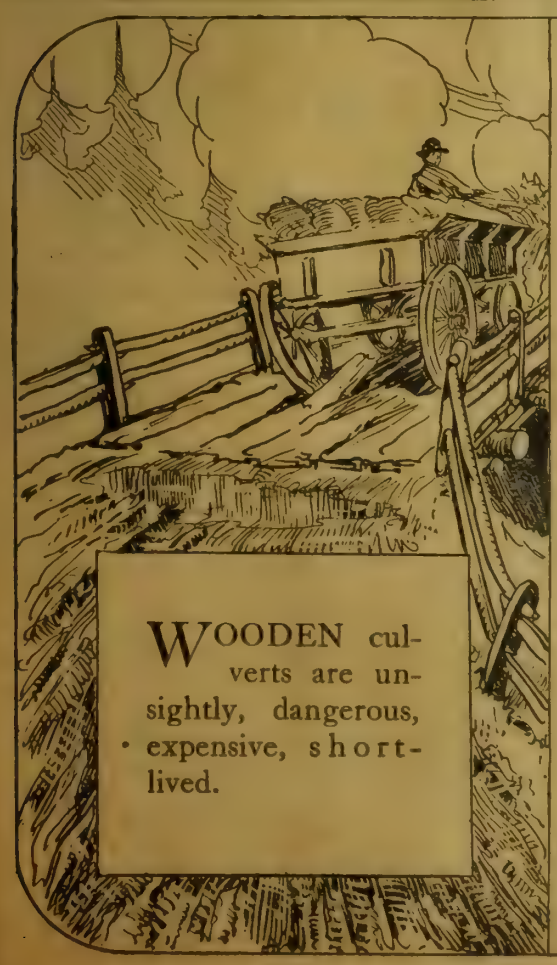
There has recently been received from Ottawa a pamphlet on crop rotation and soil cultivation. It embodies an address delivered by J. H. Grisdale, Director of Experimental Farms, during the past session of Parliament before the Standing Committee of the Senate on Agriculture and Colonization.

At the outset the point is made that crop returns depend on soil and soil management. The phamphlet then goes on to deal with soil functions, requirements of crops, rotation, cultivation, moisture, warmth, plant food, cultural operations and implements. Tnese subjects are subdivided until the field of successful crop growing is well covered. Under crop rotations, seven are described and explained. The three year rotation hoed crop, grain, hay—is highly recommended, more especially for farms that include considerable areas of rough land fit for pasture, but not available for crop production. Farms that are mostly arable are better served by a four year course which adds one year's pasture to the three year rotation mentioned. Any of the seven rotations, described if carefully followed and the cultural operations therewith performed at the right time and in the right way, are claimed by the author, to increase tremendously the crop production of any given farm and at the same time increase but slightly, if at all, the cost of production. This pamphlet which covers thirteen pages, is available to all who apply for it to the Publications Branch, Department of Agriculture, Ottawa.

The Song of the Shiftless Farmer.

My neighbor's been to big expense, to mow the weeds along his fence. He's worked away from morn till night, to get the wire stretched up tight. He's drove a new post here and there, and tacked the wire on with care. The fence looks better, I'll admit, but he won't get no cash for it. His work is wasted, seems to me, he'd better let the old fence be.

My weeds have all grown up so high, my fence don't show as folks go by. Some posts are gone, the wire's loose, but it don't show, so what's the use? Some folks are kicking on my weeds, they say that they will furnish seeds, to seed the country round about, but surely that's not my lookout! I'm satisfied the way it is, and if they want to kick, gee whiz! I'll just sit down awhile and smoke, and let them have their little joke.—Prairie Farmer.



WOODEN culverts are unsightly, dangerous, expensive, short-lived.

Which kind of a culvert does your waggon cross?

DOES the road *you* use pass over rickety, dangerous wooden culverts, that are constantly in need of repairs and often washed away entirely? Or is it carried safely across the low places by modern, everlasting culverts? Build your

CULVERTS OF CONCRETE

which not only cannot be washed away, but actually grow stronger with age and use.

Every farmer owes it to himself to insist that the money he pays for road-taxes be spent to the best advantage. As a ratepayer, he is entitled to the best roads that can be made with that money. When culverts are washed out, and the road rendered impassable, he not only suffers inconvenience but may also be caused financial loss by inability to get necessary supplies in time for spring planting. And at best, with wooden culverts, part of the money that should be used to make better roads must be spent every year for repairs.

Insist upon Concrete Culverts

It will pay you and everybody else in your county.

Canada Cement Company Limited
505-561 Herald Building, Montreal

LET us send you a copy of our free book, *"What the Farmer Can Do With Concrete."*

PORTLAND CANADA CEMENT — CANADA CEMENT COMPANY LIMITED MONTREAL

IF you want to know more about Concrete Culverts, write our Information Department.

CONCRETE culverts are neat, safe, need no repairs, and are ever-lasting.

Our Guarantee Bond

Signed, Sealed and duly executed, is furnished with every

ENTERPRISE MONARCH STEEL RANGE

certifying that we, as manufacturers, fully warrant and guarantee the Range represented by such Certificate.

Thus back of every MONARCH sold are our years of experience in stove making, and when we tell you that it is the best range we have ever produced, you will agree with us that it is (as the boys say) Some Class.

For Economy, Durability, Beauty of Design and special fitness for the work required, the MONARCH is recognized by stove dealers, housekeepers and Domestic Science teachers, as ahead of anything now on the market.

Ask your dealer to show you this range, or write us direct for illustrated circular.

The Enterprise Foundry Company,
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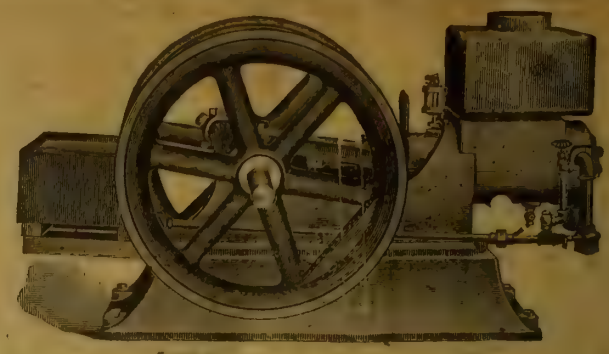

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are what count in an engine—you get all these in

The Sussex Motor Co's.

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Send for our latest catalog and Agent's proposition.

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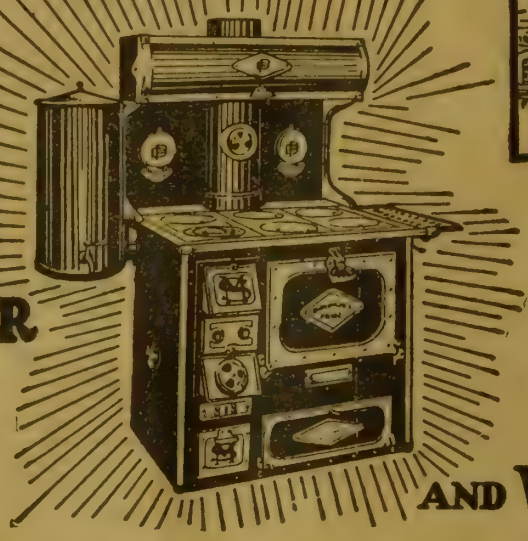


SAVE OVER $25 WHEN BUYING YOUR RANGE THIS FALL.

$41.00 TO $49.00

AND WE PAY THE FREIGHT

You can buy DOMINION PRIDE RANGE at Factory Price

Direct from the Largest Malleable Range Works in Canada

THE price which the Dealer quotes you on a Range is made up like this — Manufacturing Cost + Manufacturer's Profit + Jobber's Expense of Handling and Selling + Jobber's Profit + Retailer's Expense of Handling and Selling + Retailer's Profit + Freight.

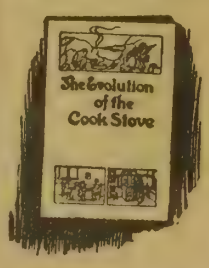
By our direct "Factory to Kitchen" selling plan all these charges are cut out except the actual manufacturing cost, a small profit, and freight. The difference to you is the difference between the $41 to $49 which you pay for a "DOMINION PRIDE" Range and the $69 to $78 which you would have to pay the Dealer for a Range which cost as much to make.

Are you anxious to contribute $25 or $30 to the middlemen?

In the—

Here is a Book Worth Having

IT tells about cooking from the time the Cave Dwellers used to put hot stones in the pot to boil it. The Book contains interesting information gathered from many sources and is illustrated profusely.



The "Evolution of the Cook Stove"

also tells all about the "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy this book.

Write for free copy.

"DOMINION PRIDE RANGE"

you get a full dollar's worth of actual stove value for every dollar you pay.

The "DOMINION PRIDE" is made of tough, strong malleable iron and the best blue polished steel—materials that will neither warp, crack nor break, so that it will last a lifetime. It is made in the largest Malleable Iron Range Works in Canada, and each range is backed by our unconditional guarantee.

The "DOMINION PRIDE" looks well, cooks well, saves fuel and is easily cleaned. You'll be proud of its neat, handsome appearance in your kitchen, and of the appetizing food it will cook to perfection for you. You'll appreciate the ease of keeping its blue polished steel surface and the bright polished top spick and span with a few rubs of a cloth. Your husband will be more than pleased with the reduction in the coal or wood bill—for the "DOMINION PRIDE" saves, by actual tests, 30% of the fuel.

A "DOMINION PRIDE" Range, with High Closet Shelf and Elevated Tank or Flush Reservoir, with Zinc Sheet to go under range, 8 sections Blue Polished Steel Pipe and 2 Elbows, will be delivered to any Station in Ontario, Quebec or the Maritime Provinces for $41, or to any Station in the Four Western Provinces for $49—$5 to be sent with order and balance to be paid when Range is delivered at your Station. If not convenient to pay cash we will arrange to accept your note.

Canada Malleable & Steel Range Mfg. Co. Limited, Oshawa, Ontario.

When writing it will be a distinct favor to us if you will mention this paper. 6

Saint John Exhibition Prize Winners.

(Continued from page 792)

GARDEN VEGETABLES.

Onions, red—1, Geo. Stiven; 2, Eben Scribner; 3, Edgar Harrison.

Onions, white, pickling—1, Orchard Hill Farm; 2, E. Scribner; 3, Orin Hayes.

Onions, yellow, pickling—1, Orin Hayes; 2, B. Goodspeed.

Potato onions—1, Eben Scribner; 2, B. Goodspeed; 3, Donald Innis.

English P. Onion—1, E. Scribner; 2, D. Innis.

Corn, sweet—1, Eben Scribner.

Beans, dwarf, wax podded—1, Geo. Stiven; 2, E. Harrison; 3, Orchard Hill Farm.

Beans, green, podded, dwarf—1, Geo Stiven; 2, Orchard Hill Farm; 3, A. R. Gorham.

Garden Herbs.—1, A. B. Gorham; 2, B. Goodspeed.

Squash, marrow—1, Eben Scribner; 2, F. B. Waters.

Squash, mammoth—1, Orin Hayes.

Squash, Hubbard—1, Orin Hayes.

Squash, English vegetable—1, F. B. Waters.

Squash, any other variety—1, Orin Hayes.

Musk Melon—3, Eben Scribner.

Cucumbers—1, Geo. Stiven.

Sweepstakes, garden vegetables—1, F. B. Waters; 2, B. Goodspeed.

Best and largest collection of garden vegetables—1, B. Goodspeed.

Horticulture

APPLES AND PEARS.

Export barrels ready for shipment.—1, A. R. Gorham, Gorham's Bluff; 2, S. L. Peters & Sons, Queenstown.

Export boxes ready for shipment—1, A. R. Gorham; 2, Isaac Stephenson; 3, S. L. Peters & Sons.

Domestic barrels ready for shipment—1, A. R. Gorham; 2, S. L. Peters & Sons.

Boxes ready for shipment —1, A. R. Gorham; 2, Isaac Stephenson; 3, S. L. Peters & Sons.

Baskets ready for shipment—1, H. D. Johnson; 2, A. R. Gorham.

Dessert Varieties—Any other variety, plates of 5 each, properly named —1, H. D. Johnson; 2, Mrs. S. J. Darcus; 3, Isaac W. Stephenson.

Any new variety, plate of 5—1, A. R. Gorham; 2, Harold D'Almaine.

Any seedling, plate of 5—1, A. R. Gorham; 2, H. D. Johnson.

APPLES.

Alexander—1, Harold D'Almaine; 2, H. D. Johnson; 3, S. L. Peters & Sons.

Duchess of Oldenburg—1, Mrs. S. J. Darcus, 2, S. L. Peters & Sons; 3, Isaac W. Stephenson.

Gravensteins—1, S. L. Peters & Sons; 2, Harold D'Almaine; 3, Isaac W. Stephenson.

Maiden's Blush—1, Harold D'Almaine; 2, H. D. Johnson; 3, Eric D'Almaine.

Red Astrachan—1, 1, Harold A. D'Almaine; 2, H. D. Johnson; 3, A. R. Gorham.

Ribston Pippin—1, H. D. Johnson; 2, Harold D'Almaine; 3, H. O. Johnson.

Snow or Fameuse—1, Mrs. S. J. Darcus; 2, W. P. & F. L. Fox; 3, H. D. Johnson.

St. Lawrence—1, H. D. Johnson; 2, Harold A. D'Almaine; 3, Isaac W. Stephenson.

Baxter—1, Isaac W. Stephenson; 2, Wm. R. McFate.

Wolf River—1, Wm. N. Steritt; 2, H. D. Johnson; 3, Harold D'Almaine.

McIntosh Red—1, Mrs. S. J. Darcus; 2, Isaac W. Stephenson; 3, Harold A. D'Almaine.

Wealthy—1, Mrs. S. J. Darcus; 2, H. D. Johnson; 3, W. P. & F. L. Fox.

Blenheim Pippin— 1, Harold D'Almaine; 2, Eric D'Almaine; 3, H. D. Johnson.

Any other variety—1, H. D. Johnson; 2, A. R. Gorham; 3, W. P. & F. L. Fox.

Best display of Crab Apples, 5 of each kind—1, Harold A. D'Almaine; 2, H. D. Johnson; 3, Eric D'Almaine.

Pears, 5 varieties—1, H. D. Johnson; 2, Harold A. D'Almaine; 3, S. L. Peters & Sons.

Pears, 6 fall varieties—1, H. D. Johnson; 2, Harold A. D'Almaine; 3, Eric D'Almaine.

Pears, 5 varieties—1, H. D. Johnston; 2, Harold D'Almaine; 3, S. L. Peters & Sons.

Pears, 6 fall variety-1, H. D. Johnston; 2, Harold A. D'Almaine; 3, Eric D'Almaine.

PLUMB, PEACHES, GRAPES, Etc.

Plums, green or yellow—1, H. D. Johnson; 2, Harold D'Almaine.

Plums, red or blue—1, Harold A. D'Almaine; 2, H. D. Johnson.

Grapes, grown in open air—1, Harold A. D'Almaine; 2, Eric D'Almaine.

Grapes, grown under glass— 1, Geo. Stiven.

FRUITS — COUNTY COMPETITION.

Collection of fruits grown in Albert County—1, W. A. Colpitts.

Exhibits in Kings County—1, A. R. Gorham.

Collection of fruits grown in St. John County—1, Wm. R. McFate.

Collection of fruits in Queens Co.—1, W. P. & F. L. Fox; 2, S. L. Peters & Sons.

Collection of fruits grown in Sunbury County—1, Isaac W. Stephenson.

Collection of fruits grown in Victoria County—1, S. L. Peters & Sons.

Best collection of tender fruits shown in natural condition—1, A. R. Gorham; 2, S. L. Peters & Sons.

Best collection of hardy fruits shown in natural condition—1, A. R. Gorham; 2, S. L. Peters & Sons; 3, W. A. Colpitts.

Best collection of small fruits in glass—1, S. L. Peters & Sons; 2, A. R. Gorham.

Dairy Products

BUTTER.

Box for export (28 or 56 lbs.)—1, Deurk River Dairy Company; 2, Sussex Cheese & Butter Co., 3, J. H. LeClerc, Foster Que.; 4, J. P. Simmons, Dunstaffnage, P. E. I.

Prints (20 lbs.) —1, Deurk River Dairy Company; 2, Sussex Cheese & Butter Co.; 3rd, J. P. Simmons; 4, J. H. LeClerc.

Crock or tub (10 lbs.)—1, Mrs. Benjamin Lester, Apohaqui; 2, Mrs. W. Illingworth, Fredericton; 3, Bertram Goodspeed; 4, Clementine Drake.

Print (10 lbs.) —1, Mrs. Benjamin Lester; 2, Mrs. W. Illingworth; 3, W. A. Smith; 4, Bertram Goodspeed.

CHEESE.

Cheese, 2 cheddar colored—1, Wm. Clark, Emerald, P. E. I.; 2, Adrain McInnis, Red Point, Lot 46; 3, Leo Hughes, Kensington, P. E. I.

Cheddar white—1, Wm. Clark; 2, Leo Hughes; 3, Adrain McInnis.

Cheese, 3 flats colored—1, William Clark; 2, Adrain McInnis; 3, Jos. H. McDonald.

Cheese, not less than 10 lbs., home made dairy—1, Clementine Drake, Croomwall, P. E. I.; 2, Isaac W. Stephenson.

Poultry

PIGEONS.

Pair White Pouters—1, Hartland Poultry Yards.

Pair Carriers, Dun—1, Hartland Poultry Yards.

Pair Dragoons—1, Robt. Romney.

Pair Tumblers, short faced—1 Hartland Poultry Yards; 2, Robt. Romney; 2 and 3, Bert Evans.

Pair Tumblers, any other variety—1, 3 and 4, Robt. Romney; 2, Bert Evans; 5, Hartland Poultry Yards.

Pair Fantail, blue—1, Hartland Poultry Yards.

Pair Fantail, white—1, Maritime Poultry Supply Co.; 2, Hartland Poultry Yards, 3, Robt. Romney.

Pair Fantail, any other color—1, 3, 4 and 5, Robt. Romney; 2, Maritime Poultry Supply Co.

Pair Jacobins, any color—1, Maritime Supply Co.; 2, Hartland Poultry Yards.

Pair Antwerps, short faced, any color—1 and 2, Robt. Romney.

Pair Swallows—1, Hartland Poultry Yards.

Pair Pigeons, any other variety—1 and 2, Robt. Romney.

Pair Magpies—1, Hartland Poultry Yard.

Pair Homers—1 and 2, Maritime Poultry Supply Co.; 3, Robt. Romney.

ORNAMENTAL AND MISCELLANEOUS.

Pair Guinea Fowl—1, Hartland Poultry Yards; 2, F. M. Merritt; 3, Maritime Poultry Supply Co.; 4, Mrs. Wm. Mullen.

Pair English Pheasants—1, Hartland Poultry Yards.

Pair Golden Pheasants—1, Maritime Poultry Supply Co.

Pair Silver Pheasants 1, Maritime Poultry Supply Co.

Pair Ferrets—1 and 2, Maritime Poultry Supply Co.

Pair Guinea Pigs—1, Herbert Tracy; 2, H. B. Purchase.

Pair White Rats—1, Robt. E. Knowles.

Pair Rabbits—1, Hartland Poultry Yards; 2, Josslyn & Young.

Light Brahma cock—1, Hartland Poultry Yards; 2, Frank E. Josslyn.

Light Brahma hen—1, 1, Hartland Poultry Yards; 2 and 4, E. C. Campbell; 3, F. E. Josslyn.

Light Brahma cockerel—1, Hartland Poultry Yards; 2, Scott & Warren.

Light Brahma pullet—1, Hartland Poultry Yards; 2 and 3, E. C. Campbell.

Dark Brahma cock—1, F. M. Merritt

Dark Brahma hen—1 and 4, Hartland Poultry Yards.

Dark Brahma cockerel—1, F. M. Merritt.

Dark Brahma pullet—1 and 2, F. M. Merritt.

Buff Cochin cock—1 and 3, Hartland Poultry Yards; 2, W. H. Jackson.

Buff Cochin hen—1 and 2, Hartland Poultry Yards; 3, W. H. Jackson.

Buff Cochin cockerel—1, Hartland Poultry Yards.

Buff Cochin pullet— 1, Hartland Poultry Yards.

Partridge Cochin cock—1, Hartland Poultry Yards.

Partridge Cochin hen—1, Hartland Poultry Yards.

Partridge Cochin cockerel—1, 3 and 4, E. C. Campbell; 2, Hartland Poultry Yards.

Partridge Cochin pullet-1, 2, and 3, E. C. Campbell.

Black Langshan cock—1, Hartland Poultry Yards.

Black Langshan hen—1, Hartland Poultry Yards.

White Langshan cock—1, Hartland Poultry Yards.

White Langshan hen— 1 and 3, E.

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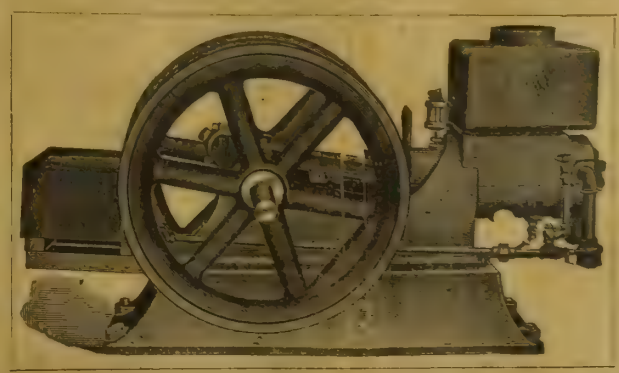

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White Langshan pullet—1, Hartland Poultry Yards.

Barred Plymouth Roch cock—1, D. Vanwart; 2, Glen View Poultry Yard; 3 and 4, Watson Lutz; 5, F. E. Josselyn.

Barred Plymouth Rock hen——1, F. E. Josselyn; 2 and 3, Glen View Poultry Yards; 4, John Frost; 5, Watson Lutz.

Barred Plymouth Rock cockerel—1, John Frost.

Barred Plymouth Rock pullet—1, John Frost; 2, E. C. Campbell.

White Plymouth Rock cock—1, Geo. Calbeck; 2 and 3, John F. Ives; 4, Hartland Poultry Yards; 5, A. E. S. Hatfield.

White Plymouth Rock hen—1, Geo. Calbeck; 2, A. E. S. Hatfield; 3 and 4, John F. Ives; 5, F. M. Merritt.

White Plymouth Rock cockerel— 1, Geo. Calbeck, Hartland Poultry Yards.

White Plymouth Rock pullet—1, Hartland Poultry Yards; 2, George Calbeck.

Buff Plymouth Rock cock—1, F. M. Merritt; 2, A. E. S. Hatfield; 3 Hartland Poultry Yards.

Buff Plymouth Rock hen—1, F, M. Merritt; 2, Hartland Poultry Yards; 3, A. E. S. Hatfield.

Buff Plymouth Rock cock—1, A. E. S. Hatfield.

Buff Plymouth Rock pullet—1, A. E. S. Hatfield; 2, Hartland Poultry Yards.

White Wyandotte cock—1, F. M. Merritt; 2, Maritime Poultry Supply Co., 3, Glen View Poultry Yards, 4, I. D. Vanwart.

White Wyandotte hen—1 and 2, F. M. Merritt; 2, Maritime Poultry Supply Co.; 3, R. R. Black; 4, I. D. Vanwart.

White Wyandotte cockerel—1, R. R. Black; 2, F. M. Merritt.

White Wyandotte pullet—1 and 2, R. R. Black; 3, F. M. Merritt.

Silver Laced Wyandotte cock—1, Hartland Poultry Yards.

Silver Laced Wyandotte hen—1 and 2, Scott & Warren.

Golden Laced Wyandotte cock—1, F. M. Merritt.

Golden Laced Wyandotte hen—1 and 3, F. M. Merritt; 2, Hartland Poultry Yards.

Golden Laced Wyandotte cockerel—1, F. M. Merritt; 2, Hartland Poultry Yards.

Golden Laced Wyandotte pullet—1, Hartland Poultry Yards; 2 and 3, F. M. Merritt.

Buff Wyandotte cock—1, F. M. Merritt; 2, Hartland Poultry Yards.

Buff Wyandotte hen—1, Hartland Poultry Yards; 2, F. M. Merritt.

Buff Wyandotte cockerel—1, F. M. Merritt.

Buff Wyandotte pullet—1, F. M. Merritt.

Black Wyandotte cock, hen, cockerel and pullet—1, Hartland Poultry Yards.

Columbian Wyandotte cock, hen, cockerel and pullet—1, Orchard Hill Farm.

Partridge Wyandotte cockerel and pullet—1, F. M. Merritt.

Black Java hen and pullet—1, Hartland Poultry Yards.

Single Comb Rhode Island Red cock—1 and 2, Thos. S. Kyle; 3, F. M. Merritt; 4 and 5, Glen View Poultry Yards.

Single Comb Rhode Island Red hen—1 and 4, F. M. Merritt; 2 and 3, T. S. Kyle; 5. I. D. Vanwart.

Single Comb Rhode Island Red cockerel—1 and 2, T. S. Kyle; 3 and 4, F. M. Merritt.

Single Comb Rhode Island Red pullet—1 and 2, T. S. Kyle; 3, F. M. Merritt.

Rose Comb Rhode Island Red cock—1, Hartland Poultry Yards; 2, F. E. Josselyn.

Rose Comb Rhode Island Red hen—1, Geo. H. Seaman; 2, Hartland Poultry Yards; 3, F. E. Josselyn.

Rose Comb Rhode Island Red cockerel...1, F. E. Merritt; 2, Hartland Poultry Yards.

Rose Comb Rhode Island Red pullet—1 and 2, F. M. Merritt; 3, Hartland Poultry Yards.

Silver Gray Dorking cock and hen—1, Hartland Poultry Yards.

White Dorking cock and hen—1, Hartland Poultry Yards.

Buff Orpington cock and hen—1, R. R. Black.

Black Orpington cock—1, F. M. Merritt.

Black Orpington hen—1, F. M. Merritt; 2, Hartland Poultry Yards.

Black Orpington cockerel—1, Hartland Poultry Yards.

Black Orpington pullet—1, Hartland Poultry Yards; 2, F. M. Merritt.

White Orpington cock—1, A. E. S. Hatfield; 2, Hartland Poultry Yards. 3, E. C. Campbell.

White Orpington hen—1, A. E. S. Hatfield; 2 and 4, E. C. Campbell; 3, I. D. Vanwart; 4, Hartland Poultry Yards.

White Orpington cockerel—1, A. E. S. Hatfield; 2, E. C. Campbell; 3, Hartland Poultry Yards.

White Orpington pullet—1 and 2, E. C. Campbell; 3, A. E. S. Hatfield; 4, Hartland Poultry Yards.

Houdan cock and hen—1, Hartland Poultry Yards.

Houdan cockerel and pullet—1, E. C. Campbell.

Black Hamburg cock and hen—1, Hartland Poultry Yards.

Black Hamburg cockerel—1, F. M. Merritt; 2 and 3, Hartland Poultry Yards.

Black Hamburg pullet—1, F. M. Merritt; 2, Hartland Poultry Yards.

Golden Pencilled Hamburg hen and pullet—1, Hartland Poultry Yards.

Silver Pencilled Hamburg cock, hen, cockerel and pullet—1, Hartland Poultry Yards.

Silver Spangled Hamburg coch, hen and cockerel—1, F. M. Merritt.

Silver Spangled Hamburg cock— 1, Hartland Poultry Yards; 2, F. M. Merritt.

Silver Spangled Hamburg hen, cockerel and pullet—1 and 2, F. M. Merritt.

Red Cap cock, hen, cockerel and pullet—1, Hartland Poultry Yards.

Single Comb White Leghorn cock, cockerel and pullet—1 and 2, F. M. Merritt.

Single Comb White Leghorn hen—1, 2, 3, and 5, F. M. Merritt; 4, I. D. Vanwart.

Rose Comb White Leghorn cock, hen and pullet—1, Hartland Poultry Yards.

Rose Comb White Leghorn cockerel —1, Hartland Poultry Yards; 2, F. M. Merritt.

Rose Comb Brown Leghorn cock—1, 4 and 5, Scott & Warren; 2, Hartland Poultry Yards; 3, F. M. Merritt.

Rose Comb Brown Leghorn hen—1, 3 and 5, Scott & Warren; 2, Hartland Poultry Yards; 4, F. M. Merritt.

Rose Comb Brown Leghorn cockerel and pullet—1, Hartland Poultry Yards; 2, Scott & Warren.

Single Comb Brown Leghorn cock—1, Glen View Poultry Yards; 2 and 3, Scott & Warren.

Single Comb Brown Leghorn hen—1 and 4, Scott & Warren; 2 and 3, Glen View Poultry Yards.

Single Comb Brown Leghorn cockerel—1 and 2, Scott and Warren.

Single Comb Brown Leghorn pullet—1 and 2, Scott & Warren; 3 and 4, F. M. Merritt.

Black Leghorn cock, hen, cockerel and pullet—1, Hartland Poultry Yds.

Buff Leghorn cock, cockerel and pullet—1, Hartland Poultry Yards.

Buff Leghorn hen—1 and 2, Maritime Poultry Supply Co.; 3, Hartland Poultry Yards.

Rose Comb Black Minorca cock—1, F. M. Merritt; 2, Scott & Warren.

Rose Comb Black Minorca hen— 1, and 3, Scott & Warren; 2, Hartland Poultry Yards.

Single Comb Black Minorca cock—1 Scott & Warren.

Single Comb Black Minorca hen—1 and 2, Signius Hansen; 3, Scott & Warren.

White Minorca cock, hen, cockerel and pullet—1, Hartland Poultry Yards.

Spanish cock and hen—1 and 2, Hartland Poultry Yards; 3, Scott & Warren.

Andalusian cock and hen—1, Hartland Poultry Yards; 2, E. C. Campbell; 3, Scott & Warren.

Andalusian cockerel and pullet —1, Hartland Poultry Yards.

Silver Unbearded Poland hen—1, Hartland Poultry Yards.

Silver Unbearded Poland pullet—1, Hartland Poultry Yards.

Golden Unbearded Poland cock—1 and 3, E. C. Campbell; 2, Hartland Poultry Yards.

Golden Unbeared Poland hen—1, E. C. Campbell; 2, Hartland Poultry Yards.

Golden Unbearded Poland cockerel and pullet—1, Hartland Poultry Yards.

White Crested, Black Poland cock, hen, cockerel and pullet—1, E. C. Campbell.

Silver Bearded Poland hen—1, Hartland Poultry Yards; 2, E. C. Campbell.

Black Red Game cock and hen—1, W. H. Jackson.

Brown Red Game cockerel—1, Walter Joyce.

Brown Red Game pullet—1, Walter Joyce.

Black Sumatra hen—1, Hartland Poultry Yards.

Pyle cock—1, W. H. Jackson.

Pyle hen—1, 2 and 3, W. H. Jackson.

Duckwing cock and hen—1, W. H. Jackson.

Indian Laced cock—1, F. M. Merritt; 2, Hartland Poultry Yards.

Indian Laced hen—1 and 2, F. M. Merritt; 3, Hartland Poultry Yards.

Indian Laced cockerel—1, F. M. Merritt; 2 and 3, Hartland Poultry Yards.

Indian Laced pullet—1 and 2, F. M. Merritt.

Any other variety Game cock—1, W. H. Jackson and Signius Hansen; 2, E. C. Campbell.

Any other variety Game hen—1, W. H. Jackson and Signius Hansen.

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Silkie cock, hen, cockerel and pullet—1, F. M. Merritt.

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Heaviest Dozen White Eggs—1, Wm. H. Jackson.

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LINCOLNS.

Ram, 2 shears and over.—1st. Albert Boswall.

Shearling ram—1st, Albert Boswall; 2nd, Chas. Symes.

Ram Lamb.—1st, Albert Boswall.

Ewe, 2 shears and over—1st, Albert Boswall; 2nd and 3rd, Chas. Symes.

Shearling ewe—1st, Albert Boswall; 2nd and 3rd, Chas. Symes.

Ewe Lamb.—1st and 3rd, Albert Boswall; 2nd, Almon D. Boswall.

Pen, 1 Ram and 4 Ewes.—1st, Albert Boswall; 2nd, A. D. Boswall.

Pen Lambs, 1 ram and 4 ewes.—1st, Albert Boswall.

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Ram, 2 years old.—1st, Burder Goodwin; 2nd, Jas. E. Baker & Sons.

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Ram Lamb.—1st and 2nd, B. Goodwin; 3rd, Jas. E. Baker & Sons.

Ewe, 2 shears and over.—1st 2nd and 3rd, B. Good win.

Shearling Ewe.—1st, Jas. E. Baker & Sons; 2nd and 3rd, B. Goodwin.

Ewe Lamb.—1st and 2nd, B.Goodwin; 3rd, J. E. Baker & Sons.

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Pen Lambs.—1st, B. Goodwin; 2nd, J. E. Baker & Sons.

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Ram, 2 shears and over—1, Geo. L. Boswall; 2, Cephas Nunn.
Shearling ram—1, Cephas Nunn; 2, and 3, Geo. L. Boswall.
Ram Lamb—1 2 3, Geo. L. Boswall.
Ewe, 2 shears and over—1 and 3, Geo. L. Boswall; 2, Cephas Nunn.
Shearling ewe—1, Cephas Nunn; 2, and 3, Geo. L. Boswall.
Ewe Lambs-1, 2, 3, Geo. L. Boswall
Aged pen, 1 ram and 4 ewes—1 Geo. L. Boswall;2, Cephas Nunn.
Pen of lambs, 1 ram and 3 ewes—1, Geo. L. Boswall.

SOUTHDOWNS.

Ram, 2 shears and over—1, Cephas Nunn; 2, J. E. Baker & Sons.
Shearling ram—1, Cephas Nunn; 2, 3, J. E. Baker & Sons.
Ram Lamb—1, Cephas Nunn; 2, J. E. Baker & Sons.
Ewe, 2 shears and over—1, J. E. Baker & Sons; 2, 3, Cephas Nunn.
Shearling ewe—1 and 3, Cephas Nunn; 2, J. E. Baker & Sons.
Ewe lamb—1, Cephas Nunn; 2, J. E. Baker & Sons.
Aged pen—1, Cephas Nunn; 2, J. E. Baker & Sons.
Pen lambs—1, Cephas Nunn; 2, J.
Pen lambs—1, Cephas Nunn; 2, J. E. Baker & Sons.

DORSETS.

Ram, 2 shears and over—1, Geo. L. Boswall.
Shearling ram—1, Geo L. Boswall.
Ram lamb—1, Cephas Nunn; 2, Geo. L. Boswall.
Ewe, 2 shears and over—1, 3, Geo. L. Boswall; 2, Cephas Nunn.
Shearling ewe—1, Geo. L. Boswall; 2, Cephas Munn.
Ewe lamb—1, 2, Geo. L. Boswall; 3, Cephas Nunn.
Aged pen—1, Geo. L. Boswall; 2, Cephas Nunn.
Pen lambs—1, Geo. L. Boswall.

HAMPSHIRES.

All prizes in this class went to Cephas Nunn without competition.

SUFFOLKS.

Ram, 2 shears and over—1, Albert Boswall.
Shearling ram—1, A. D. Boswall.
Ram lamb—1, Albert Boswall; 2, A. D. Boswall.
Ewe, 2 shears and over—1, Albert Boswall; 2, A. D. Boswall.
Shearling ewe—1, 2, Albert Boswall; 3, A. D. Boswall.
Ewe lamb—1, Albert Boswall; 2, 3, A. D. Boswall.
Aged pen—1, Albert Boswall; 2, A. D. Boswall.
Pen lambs—1, Albert Boswall.

CHEVIOTS.

Ram, 2 shears and over—1, 2, Chas. Symes; 3, Geo. A. Symes.
Shearling ram—1, Chas. Symes; 2, Geo. A. Symes.
Ram lamb—1, 2, Geo. A. Symes; 3, Chas. Symes.
Ewe, 2 shears and over—1, 2, Geo. A. Symes; 3, Chas. Symes.
Shearling ewes—1, Chas. Symes; 2, 3, Geo. A. Symes.
Ewe lamb—1, 3, Geo. A. Symes; 2, Chas. Symes.
Aged pen—1, Geo. A. Symes; 2, Chas. Symes.
Pen lambs—1, Geo. A. Symes; 2, Chas. Symes.

LEICESTERS.

Ram, 2 shears and over—1, Albert Boswall; 2, Retson Bros.; 3, S. L. Boswall.
Shearling ram—1, Retson Bros.; 2, Albert Boswall.
Ram lamb—1, Albert Boswall; 2, Retson Bros.; 3, S. L. Boswall.
Ewe, 2 shears and over—1, Albert Boswall; 2, S. L. Boswall; 3, Retson Bros.
Shearling ewe—1, Albert Boswall; 2, 3, S. L. Boswall.
Ewe lamb—1, 2, 3, Albert Boswall.
Aged pen—1, Albert Boswall; 2, Retson Bros.; 3, S. L. Boswall.
Pen lambs—1, Albert Boswall; 2, Retson Bros.; 3, S. L. Boswall.

FAT SHEEP.

Ewe, over 1 year—1, Cephas Nunn; 2, Burder Goodwin.
Ewe lamb—1, Geo. L. Boswall; 2, S. L. Boswall.
Wether, over 1 year—1, Cephas Nunn; 2, Geo. L. Boswall.
Wether lamb—1, S. L. Boswall; 2, Geo L. Boswall.

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Boar, over 2 years—1st, Thos. Barrett; 2nd, J. W. Calbeck.
Boar, 1 year and under 2 years—1st, J. W. Calbeck; 2nd, Josselyn and Young.
Boar, over 6 months but under 1 year—1st, J. W. Calbeck.
Boar, under 6 months—1st, J. W. Calbeck; 2nd, John A, Hughes; 3rd, Josselyn and Young.
Sow, over 2 years—1st, Geo. Calbeck; 2nd, J. W. Calbeck; 3rd, Thos. A. Barrett.
Sow, over 1 year and under 2 years—1st, J. W. Calbeck; 2nd, Josselyn and Young; 3rd, Geo. Calbeck.
Sow, over 6 months but under 1 year—1st, J. W. Calbeck; 2nd, Geo. Balbeck; 3rd, Josselyn and Young.
Sow, under 6 months—1st, J. W. Calbeck; 2nd, Geo. Calbeck; 3rd, John A. Hughes.
Sow and litter—1st, J. W. Calbeck; 2nd and 3rd, Thos. A. Barrett.
Herd, boar and 3 females—1st, J. W. Calbeck.

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H. W. Corning captured all the prizes in the Chester White class, without competition.

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Boar, over 2 years—1st, Chas. Symes.
Boar, over 1 year but under 2 years—1st, Chas Servant.
Boar, 6 months but under 1 year—1st, Chas Symes.
Boar, under 6 months—1st, Chas Servant; 2nd, Chas. Symes.
Sow, over 2 years—1st, Chas. Servant; 2nd, Chas. Symes.
Sow, 1 year but under 2 years—1st, Chas. Symes.
Sow, under 6 months—1st and 2nd, Chas. Servant; 3rd, Chas Symes.
Herd, boar and 3 females—1st, Chas. Servant.

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The difference between what it costs to bale hay and the increase you get in price per ton, gives you a bigger margin of profit on your work than anything else you do on a farm. You can bale easily from 8 to 16 tons a day and under certain conditions, several tons more. Baled hay can be made as much a big cash crop to you as your wheat, corn, or oats. All you need is the right kind of hay press. There is money in owning an

I H C Hay Press

An I H C pull power press in either one or two-horse style, or an I H C motor press with a 3, 4, or 6-horse power I H C engine, will do the work required on any farm cheaper, quicker, and with less attention than any other hay press so far designed.

It has taken years of field testing to make these presses the best that you can buy. They are that now. The horse power presses have greater capacity than any other horse press of equal size. They are lighter draft and easier on the horses. The step-over is the lowest and narrowest made. They have an adjustable bale tension, which insures compact bales. They are equipped with a roller tucker to turn in all straggling ends, thus making each bale neat in appearance.

I H C motor presses consist of a bale chamber and an I H C engine mounted on substantial trucks. The bale chamber of the motor press corresponds in size to the bale chamber of the horse press—14x18 inches, 16x18 inches, and 17x22 inches. No time is lost in setting up the machine. It can be moved easily from place to place, backed to the stack or barn, and started to work at once. The engine does not need a man to watch it and there is no danger from sparks. When not baling hay, the engine can be detached. Two extra wheels, an axle, and a belt pulley are furnished, so that with a little adjusting, you have a regular portable I H C engine ready for business 365 days each year. You can operate a small thresher or corn shredder, saw wood, shell corn, grind feed, pump water, generate electricity, or run a cream separator. You thus purchase two useful machines in one. There is profit in the hay press and unlimited work in the engine.

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JERSEY BULL FOR SALE—Three years old. Register No. 1254, Dam, Pedro's Sweet Alice; Sire Pogis 40th of Hood Farm. Write EDGAR SHAMPER, Kingston, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Send $1.00 receive by return mail postpaid, two Fall and Winter dresses for little girls, age 1 to 10, material is soft warm winter goods in pretty patterns add 16c for postage, STANDARD GARMENT CO., 3 Standard Building, London, Ont.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shddiac, N. B,, during the week ending April 20th ; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

YOUNG BERKSHIRE PIGS OF BOTH SEXES FOR SALE—These pigs are from large two and three year old sows—the best that can be obtained. As usual my customers will get only good ones. I have shipped pigs all over these Provinces and they have always given satisfaction. Send a trial order. Barred Plymouth Rocks, Cockerels and Pullets of the best breeding, fine laying strain. Write for low prices. W. S. POOLE. Box 414, St. Stephen, N. B.

JOHN RICHARDS,
Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Raspberry Plants

Set them, and other Bush Fruits this fall. We have the leading varieties of Yellow, Red, Brown and Black Raspberries, Blackberries, Currants and Gooseberries.

Special prices for Fall delivery

Orders booked now for Strawberry Plants Fruit trees and other Nursery stock, for Spring Delivery. Let us quote you on Home Grown Plants.

E. L. COLPITTS,
Petitcodiac, N. B.

The Construction of Pig Sties.

(Continued from page 792)

oughly tarred felt. In the case of lean-to sties, the roof should be not less than 4 leet 6 inches above the floor at its lowest part, and about 7 feet at the back. This is necessary in order to allow the sty to be thoroughly cleaned, and also to enable the animals to be examined and tended in case of sickness. It also insures sufficient air-space, and facilitates proper ventilation.

AIRSPACE AND VENTILATION.

The air-space should not be so large that the buildings are cold, nor yet so small that, in order to secure sufficient ventilation, draughts are unavoidable. Ventilations should be secured by openings in the wall and roof. Lighting, which is most easily done by panes of glass in the roof, should be sufficient. In order to avoid scorching of the pigs, the glass should be roughened and thick. Sunlight is a good and cheap disinfectant, apart from its direct effect on the health of animals.

DRAINAGE.

Drainage is a most important point. It may be laid down as a general rule that there should on no account be a closed drain in any sty, and furthermore the drainage from each sty should be conducted separately to a main drain outside. The plan of draining a row of sties by one channel which passes through each in turn should never be adopted; the lower ones are apt to be wet and unhealthy, and if disease—e. g., husk—breaks out in any sty, all the pigs below it are likely to become infected by means of the drain.

TROUGHS.

The simplest and best trough is made of glazed fireclay, semi-circular in section, and set in concrete. It should be set in the centre of a partition which, immediately above the trough, should consist of a hanging door supported on an iron rail. When hanging freely, this door is immediately over the centre of the trough, but it may be pushed inwards, thus completely shutting off the trough from the sty, or it may be pulled outwards, leaving the trough open to the pigs. The advantages of the system are obvious; the pigs can be fed, or the trough cleaned out, without the attendant entering the sty, while ehere is no chute where food is apt to lodge.

COURTS AND RUNS.

Whether separate courts for the sties are provided or not, an extensive outdoor run is essential for sows and young pigs, and if possible a, dry, sunoy paddock should be provided for the purpose.—Journal of the Board of Agriculture.

Nova Scotia Provincial Exhibition, September 11th to 19th.

The Provincial Exhibition which opens at Halifax on September 11th will have many features that have never been seen before at a Provincial Fair. The foot races on the scale now contemplated are something new; The rivalry between the atheletic men of the college should draw a big crowd of devotees of the running track. The Mount Allison team have intimated their intention of coming to Halifax several days before the exhibition opens in order that they may train and get into the best of condition. There are races for other amateurs besides the college men and a good prize is offered for boys under 16 years.

The Horse Races are always interesting and sixteen of them for purses aggregating $6,800, the biggest yet.

The greatest feature of the Exhibition will be the Aeroplane flights by Walsh on a Curtiss machine, never before has an aeroplane been in Nova Scotia or indeed in the Maritime Provinces and this will be the first opportunity our people have had of seeing this form of aerial navigation. Far different from the old Balloon method now practically a thing of the past.

The Vaudeville will consist of seven acts headed by Cedora of the Golden Globe of death.A night performance in front of the Grand Stand will be completed with a magnificent and unexpected display of fireworks.

CONKEY'S POULTRY REMEDIES

EVERYTHING YOU WANT IN THE LINE OF

Poultry Feed, Remedies -or Supplies

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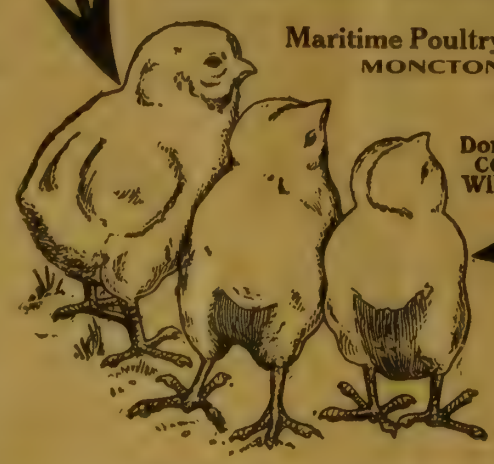
Maritime Poultry Supply Co.,
MONCTON, N. B.



To Feed Oats or Bran.

J. B. K., P. E. I.—Will you kindly tell me which will be the better thing to do, sell oats at 45 cents a bushel and buy bran at $30.00 a ton, or get the oats ground and feed it ?

Ans.—Oats at 45 cts. a bushel make them worth $26.47 per ton. Oats can be usually crushed for about 4 cents per bushel, or $2.35 per ton, which increases the cost of ground oats to $28.82 Since one pound of ground oats is equal to one pound of bran foe milk-making purposes, it is cheaper to feed oats at 45 cents per bushel, than to purchase bran at $30. per ton.

"Were all medicines as meritorious as Chamberlain's Colic, Cholera and Diarrhoea Remedy the world would be much better off and the percentage of suffering greatly decreased," writes Lindsay Scott, of Temple, Ind. For sale by all dealers.

FOR SALE

20 head of Registered Southdown Ewes and ewe lambs, also 3 extra good rams, these sheep are all bred from imported stock and are a first class lot.

D. R. McKAY. *Hopewell, N. S.*

FOR SALE

Six June bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Foehallk, St. John O'Dreamwild.

JOSSELYN & YOUNG.

PURE BRED HACKNEY STALLION FOR SALE

The Best Hackney in the Maritime Provinces, "Risplith Garton Duke")14547)-616—Imported Sept. 1911, Foaled, 1908. A splendid animal of fine quality and action. Bay with a little white on hind pastern. Weighs nearly 1200 lbs. Sound and broken to harness. He left 12 colts in England and 4 of these won prizes there. He is of marked coach-horse type, big and upstanding. Sire, Garton, Duke of Connaught, (champion); Dam, Lady Walton (15962), prize winner; Grand-dam, Samarimis (10497), prize winner. Apply P. O. Box, 600, Yarmouth. Nova Scotia,

Money Makers on the Farm

As I have so many enquiries about the care and management of turkeys, that to answer all and to give all the information required is so much of an undertaking and takes so much time I have gotten out a little book covering the whole subject, from the care and selection of breeding stock to the final chapter on fattening and marketing the birds. I am sure any one able to read can follow this and raise turkeys successfully. Complete details are given for getting up little coops for each brood costing no more than 25 cents each, and serviceable for many seasons. This book I will send for 23c to cover cost of printing and mailing. As I have only a limited number of this edition any one interested in raising 95 p.c. of all turkeys hatched should get a copy. Get this book and find out how turkeys may be reared as easily as chickens.

Sarah E. Moses Smith,
Woodward's Cove, Grand Manan.

Annappolis Valley Fruit Farm
$3050 Income Last Year

No man able to buy a farm can afford to miss the chance to get this 220 acres on the famous Minas Basin; 5 minutes walk to P. O. and boat landing; 8-room painted house, running water; large barn; orchard producing 400 bbls. apples in season; no better orchard land in the Valley; set to apples and a little time will make this equal to farms selling here for $40,000; cuts 30 tons hay besides large acreage used for crops; wood and timber valued at more than $1000; pasture for 40 head; extreme age of owner necessitates immediate sale; price only $3200, part cash, easy terms; for set of pictures, full details and traveling instructions to see this and other Nova Scotia farms, see page 62, our New Mammoth Farm Catalogue, No. 35 Box D, Sussex, N. B.

FOR SALE

Choice Cocks, Hens, Cockerels and Pullets in the following varieties; Rose and Single Comb, R. I. Red and Single Comb Brown Leghorns.

WRITE FOR PRICES.

W. H. HENRY, Shubenacadia, N. S.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N. B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jas. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

Springbrook Ayrshires!

Champions in the show ring dairy teats, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

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Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

BEE-KEEPERS' SUPPLIES

We are Headquarters in the Maritime Provinces for the most modern appliances for Bee-keepers.

PRICE LIST FREE

E. L. COLPITTS, Petitcodiac, N. B.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

FOR SALE

A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, including the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

$10 takes them. Money refunded if not as represented. Address

P. WELLER,
11 Oakland Road,
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141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

EGGS FOR HATCHING.

Now is the time to look ahead and look spry. Eggs for hatching from Barred P. Rocks, White Rocks, R. C. Reds, Buff Orpingtons and Imperial Pekin Ducks $1.00 per setting, all orders booked ahead and shipped in rotation.

EGBERT DEYOUNG,
Box 120 Dartmouth, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, Shubenacadie, N.S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

RIVERSIDE HOLSTEINS

We have for sale a splendid lot of young stuff both males and females that we are showing this Fall. We can fit you out with an ideal foundation herd or individuals of great merit at a very reasonable figure.

LEA & CLARKE, - Victoria, P. E. I.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

FOR SALE
AYRSHIRE HEIFERS

2 Dropped Nov. 1911
1 " May 1912

Write for prices or come and see them.

ALLANDALE FARM, Hampton, N. B.

FOR SALE

25 S. C. Brown Leghorn Hens at $1.00 each. 100 S. C. Brown Leghorn Chicks, 6 weeks old at 50c. each. 1 Cyphers incubator 244 egg capacity. Price $20.00.

W. H. HENRY,
Shubenacadie, N. S.

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

FOR SALE

One Yorkshire sow nine months old, due to farrow in Sept. also three litters that will be ready to ship in July.

JOSSELYN & YOUNG.
"Rose Bank Farm" Silver Falls, St. John, N. B.

Big Money in Raspberries

$180.00 from 1-4 acre in 1911 is record of a grower here. Fall planting is perfectly satisfactory.

We have for sale plants of the celebrated "Herbert" harvest yielder and frost-proof also King a new early Hiram Eaton and others. Write for prices.

ORCHARD HILL FARM, Brown's Flats, N. B.

FRIESIAN HOLSTEINS

male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
Buctouche, N. B.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
HALIFAX, N. S.

"Ideal" Gas and Gasoline Engines

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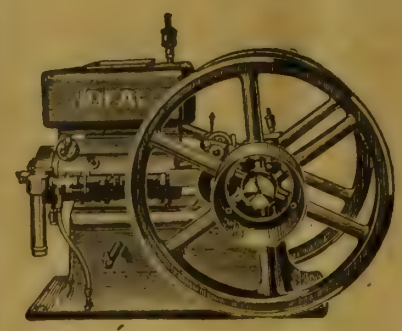

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We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

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Good Live Agents Wanted in Unrepresented Territory

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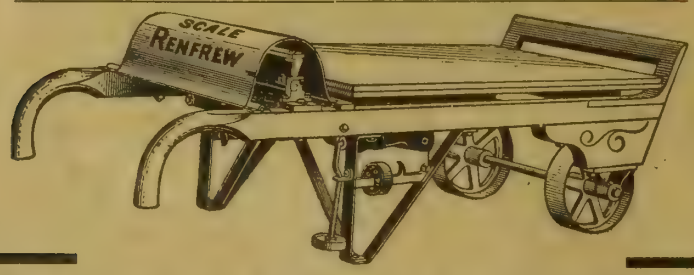
A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

Wheel The Scale To What You Want To Weigh



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Saves Money for Farmers and Dairymen

Thousands of farmers are losing money yearly through the inaccuracy of their scales.

It was to protect the farmers against these losses that the Renfrew Truck Scale was designed and built.

And it does protect them—by being absolutely accurate.

Gives the farmer ALL his profits on everything he sells by weight.

Saves for him time and labor—simply wheel the scale to what you want to weigh.

Weighs everything from 1 pound to 2000 lbs—and weighs it right.

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AGENTS:-- Saskatoon, Western Distributors Co., Ltd.; Calgary, Reynolds & Jackson; Edmonton, Race, Hunt & Giddy; Manitoba, Clare & Brockest.

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Please send me Free of charge, booklet "The Profit in The Last Ounce."

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The RENFREW SCALE CO., Renfrew, Ont.

Prince Edward Island's Greatest Exhibition

Being the Twelfth Inter-Provincial at Charlottetown

Sept. 24 25, 26 *and* 27th

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Over $6000 in Exhibition Prizes

2 Days Horse Racing, 7 Classes

$1850.00 in Race Purses

Magnificent attractions in front of the Grand Stand including :—

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FOR PRIZE LISTS AND ALL INFORMATION WRITE

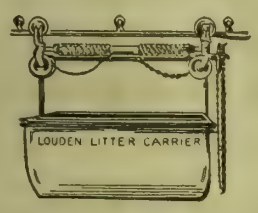
C. R. SMALLWOOD, Sec.-Treas., Charlottetown, P.E.I.

The Model Farm

Labor-Saving and Money-Making Equipment

A LOT HAS BEEN SAID about the scarcity of good farm help, and the difficulty our farmers have of keeping their sons on the farm. Well, most farmers have gone through the mill themselves, and can perhaps sympathize with the boy who seeks to get away from the drudgery that he imagines farm life has in store for him.

BUT WHY DRUDGERY? ABOUT the worst back-breaking work on a farm is stable-cleaning with old-fashioned methods. It certainly is a job any man would like to pass up. But fortunately modern methods with modern machinery have taken the drudgery out of stable-cleaning.

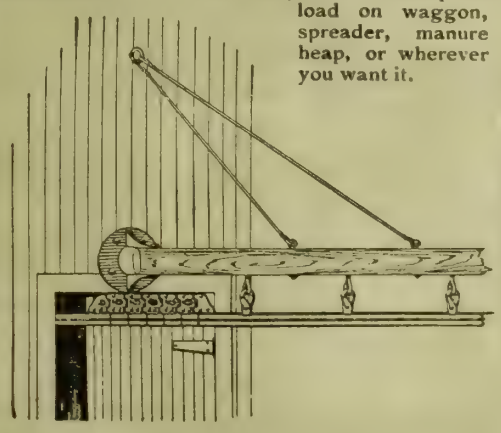


Nowadays, you fill a Louden Litter Carrier—raise it by a light pull on a chain—push the load easily and quickly to wherever you want it. Not much hard work for you in that, is there?

ALL EXPERTS AGREE THAT Liquid Manure is 50% more valuable than solid manure. Are you losing this 50%?

A Louden Litter Carrier will save it for you—and not only prevent the waste, but will make stable-cleaning an easy "chore."

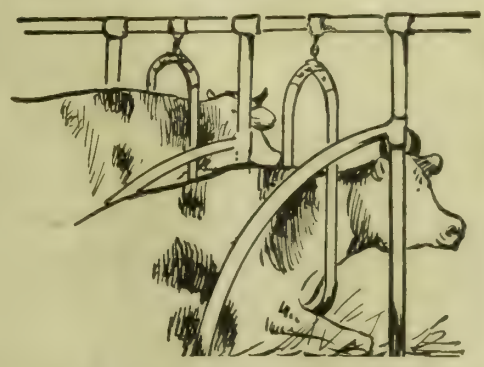
The Louden swinging equipment is an ideal way of disposing of manure. With it you get a twenty or a thirty foot swing, and can dump the load on waggon, spreader, manure heap, or wherever you want it.



A DISTINCT LOUDEN FEATURE is that you can run the loaded carrier right on to the pole while swinging at any angle. You do not have to straighten the track each load.

The *flexible hinge* permits the carrier to run over it while at an angle.

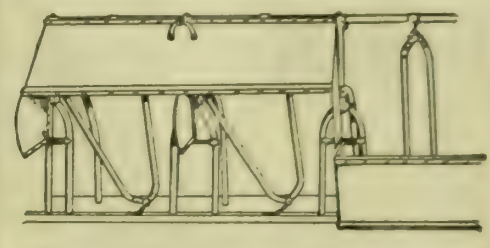
THE SUN-SHINY SIDE OF farming is the money-making side. An equipment that makes money is Steel Sanitary Stalls and Stanchions for cows. Now there is no doubt that a contented, comfortable, dreamy-eyed cow will give more milk than one housed in unsanitary, badly-ventilated quarters, where it has little freedom and comfort. And when you are thinking of cow profits, you must think of these things.



The most successful Farmers and Dairymen have thought of these things, and have equipped their stables with Cement Floors, Mangers, Steel Stalls, Stanchions, and Carriers for Feed and Litter. Stables so fitted are lasting, well ventilated and sanitary. Light and air with their germ-destroying powers fill every part of the stable. Under such conditions cows are comfortable and clean, which consequently means more and better milk, and this, in turn, means bigger profits.

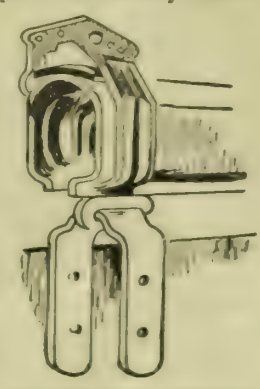
STANCHIONS. Louden Stanchions are perfect stanchions—perfect in construction—simple to lock and unlock—allow perfect freedom and comfort, yet provide a perfectly secure tie. They are made of smooth, light, strong, high carbon steel tubing, with malleable iron fittings. Construction and material are such that there are no crevices to harbor germs or dirt.

HOW DO YOU FEED YOUR cattle? Do you use the old-time shallow trough, where cows scatter their food in the feed-way, and steal each other's fodder—preventing the keeping of accurate records of feed costs and results?



Galvanized Steel Mangers are the modern way. They are convenient, and prevent feed-waste. They keep the stable tidy, too. The bottom is of cement, and the steel part is raised and lowered to allow the trough to be thoroughly cleaned. The trough can also be used for watering purposes.

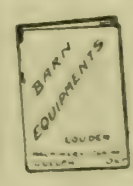
EVERY FARMER HAS experienced annoyance and loss of time and temper over faulty barn-door hangers and tracks. The Louden Hangers are made in five different styles, to suit various conditions. We recommend Louden's Bird-Proof Hanger as illustrated.



It is a hanger that gives perfect service all the year round. It always runs easily and cannot get out of order.

It cannot be clogged in any way—either by nesting birds or trash in summer, or by snow, ice or sleet in winter.

A USEFUL BOOK TO HAVE. Every farmer can find something useful in our book "Perfect Barn Equipments." It illustrates and describes many money-making, labor-saving devices, about which a farmer ought to know.

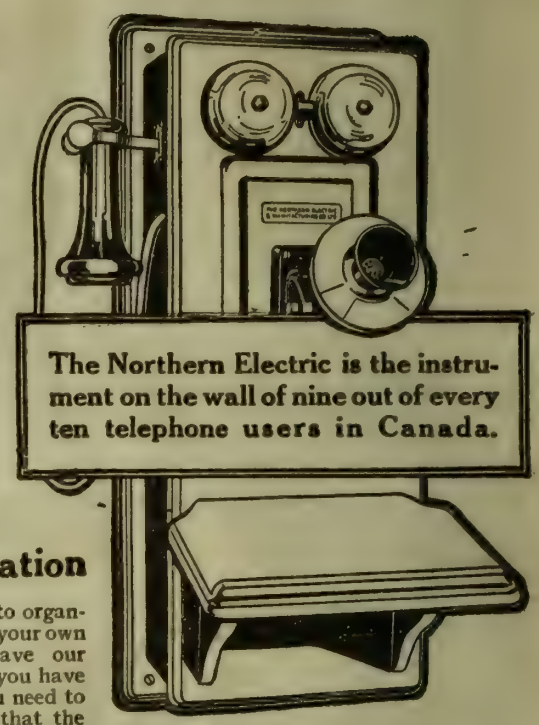


THE SERVICES OF OUR EXPERIENCED BARN ARCHITECT ARE AT YOUR COMMAND, FREE, FOR THE ASKING. TELL US WHAT YOU WANT.

THE LOUDEN MACHINERY CO. - DEPT. 18 - GUELPH, Ont.

LET US SHOW YOU HOW EASILY YOU AND YOUR NEIGHBORS CAN HAVE A TELEPHONE SYSTEM OF YOUR OWN

YOU—you and your neighbors—would have a telephone system for your own community, if you only realized how easily you yourselves could construct it and get it going. If you knew, in detail, how you and the people around you could form, own and control a local, self-maintaining company, for your own use and convenience, you would have such a system. There would be a telephone system in your community to-day if you knew how easily you and your neighbors could build every foot of the line and install every instrument yourselves—and especially if you realized that you do not need very much capital to do it either. Now, there is no reason why you should not know all these facts; for we stand ready to give you, for the mere asking, every bit of this information, provided only that you are sufficiently interested in the subject to write and ask us for it.



The Northern Electric is the instrument on the wall of nine out of every ten telephone users in Canada.

We Will Explain All About Rural Company Organization

YOU do not need experience to organize a telephone company in your own community, when you have our book. It tells you exactly what you have to do and how to do it. All you need to do is to follow the instructions that the book gives and then get out and interest your neighbors. Whether you want to organize a mutual or a stock company, the book will tell you how.

We Send This Book FREE But Only On Request

"HOW to Build Rural Telephone Lines," is an illustrated, cloth bound book of one hundred pages, full of a carefully indexed mass of information on rural telephones. This book tells everything ; with it before you, you can organize your own company and construct your own line. It tells you absolutely everything you need to know, step by step, as you go along. There is no other book in existence that deals so thoroughly with every vital, essential fact. Remember, this book has cost a lot of money and careful study to prepare. We really ought to charge for it. However, we send it free on request—but ONLY on request. To get it you have to send us the coupon and thus signify that you are really interested. The book is too valuable to distribute haphazard.

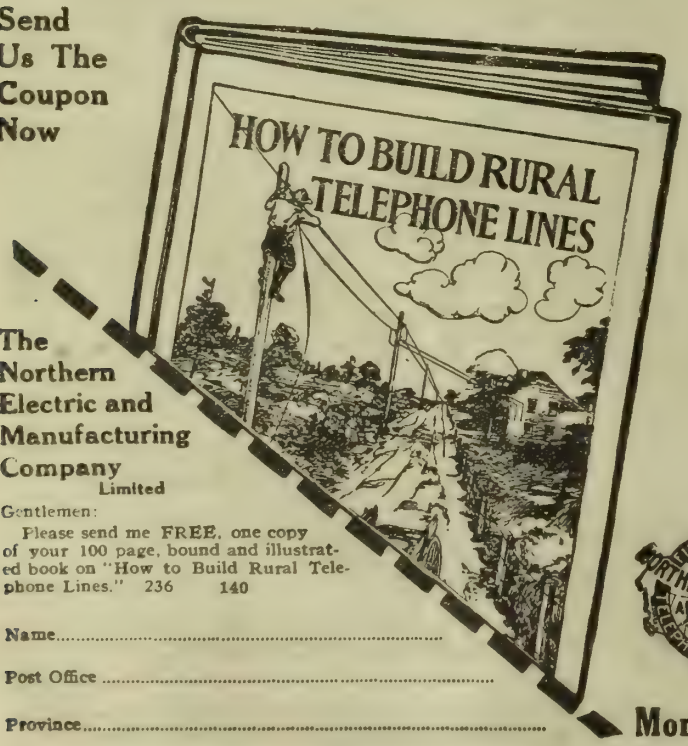
You And Just Your Own Friends Can Build Every Foot Of Line

BUILDING your own line keeps down construction costs. With the help we give you, you do not need to employ expert linemen. The book explains the last word in line construction and contains, in this one chapter alone, thirty-seven diagrams and illustrations, showing how to make every kind of connection necessary, how to route the line, how to put the fittings on the poles, how to guy the poles, how to place the insulators and string the wires—in fact, how to handle every detail as well as an expert lineman can. On request, we will also tell you of your provincial regulations, what your government requires and what it will do to help you.

Let Us Explain To You How To Interest Your Neighbors

THE first step in getting started, is to enthuse your neighbors and get them all in with you. When you have read "How to Build Rural Telephone Lines," you will have a mass of information at your finger ends that will enable you to place positive, definite facts before your friends, to enthuse them with the idea of a self-maintaining, community-owned system and to make everybody around you anxious to help. All it needs to get a telephone system started, is for some one progressive man to start the ball rolling. With the information that we will place at your command, you can get everything organized in short order.

Send Us The Coupon Now



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Please send me FREE, one copy of your 100 page, bound and illustrated book on "How to Build Rural Telephone Lines." 236 140

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The Cost To Operate Your Own Line is Low

YOU can readily understand that when you and your friends have the entire management in your own hands, you can regulate the cost of running the line. In the book we explain just exactly what is necessary and you can take your pencil and figure out how little it will cost you to have a telephone on the wall in your own house.

There Will Be A Telephone System In Your Locality — Get Posted

SOONER or later someone is going to start a telephone system in your community, just as systems are being started every day in farming centres throughout the Dominion. When this subject comes up, you will want the full particulars before you. Now is the time for you to post yourself. The book tells you everything and, if you are interested, we will be glad to send it to you free. Do you care to sign the coupon and send it to us now?

THE Northern Electric AND MANUFACTURING CO. LIMITED

Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

236

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M A

PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

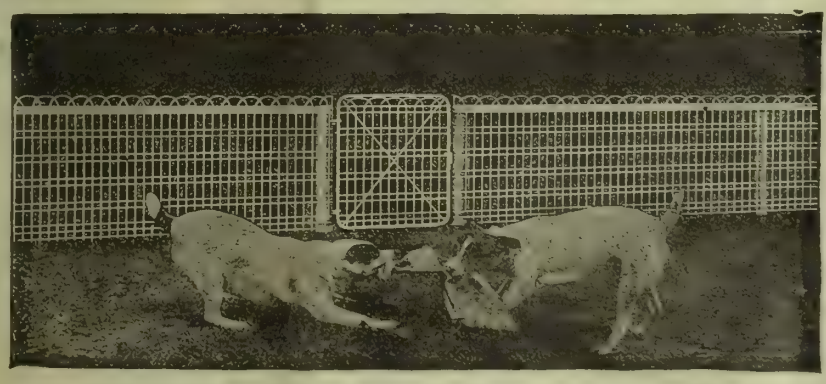
Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 17. SUSSEX, N. B., SEPTEMBER 24, 1912 No. 24

PAGE 'ACME' LAWN FENCE

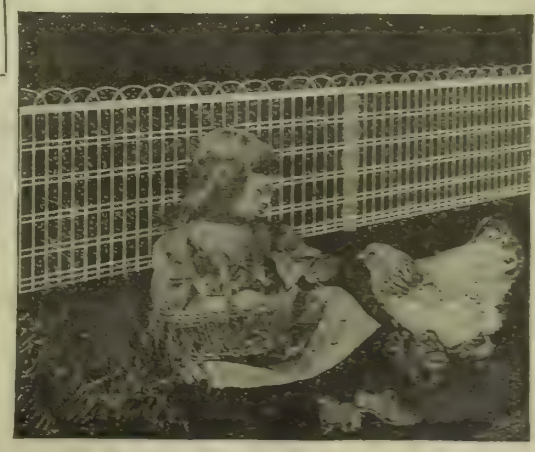
This famous 'Page' Fence comes in rolls up to 200 ft. in length. These are painted either white or green, and you may have "Page Acme" Fence in any height from 2 ft. to 6 ft. tall.

Be sure and get the genuine "Page Acme" Fence, for there are imitations on the market that resemble this fence closely. By getting the genuine "Page Acme" Fence you obtain high-carbon steel wire uprights, which are as stiff as thick iron rods.



This "Page Acme" Fence makes a beautiful fence for lawns, cemeteries, semi-public institutions, parks, etc. It is remarkably low in cost. When you consider the long life it has from being painted at the very beginning of its service, before you even set it up, you will see how economical it is to use this "Acme" Fence.

We have sold hundreds of miles, especially of the 42-inch width, and you will find this "Page Acme" Fence doing service all over the country. Write us today for the Page Catalogue of "Acme" Fences. If you need fence of any kind, remember the Page Catalogue shows it to you at Factory Price—scores of fences of the best quality.



Send Today for the Page Catalogue

This catalogue shows all kinds of Lawn and Farm Fences, fence material, iron fence—everything you possibly can need in this line at moderate prices. Write us today for the Page Catalogue.

THE PAGE WIRE FENCE CO., Limited

WALKERVILLE, Ont.

TORONTO: King Street & Atlantic Avenue. MONTREAL: 505-517 Notre Dame Street, West.
ST. JOHN: 37 Dock Street. WINNIPEG: R. Langtry, 137 Bannatyne St. East.

What About the Boy Who is to Become a Farmer?

Give Him An Agricultural Education.---It is the Best Heritage . . You Can Leave Him. . .

The Boy, preparing for Medicine, Law, Theology, Literature, Business, etc., must, if he would succeed, have an Education. The Prospective Twentieth Century Farmer should have Equal Advantages.

Agricultural College, Truro, N. S.

Tuition FREE to All Students from the Maritime Provinces

Next Session of Full Course begins NOVEMBER 5th, 1912

Next Short Course for Farmers and Farmers' Sons begins JANUARY 7th, 1913

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies begins JANUARY 7th, 1913

A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

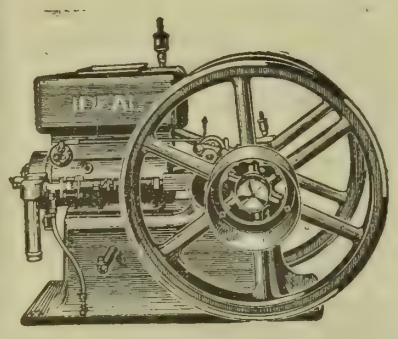
Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a school education and now wish to improve their knowledge in all lines.

Students completing the two years course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges. For full particulars apply to—

M. CUMMING, B. A., B. S. A., Principal Agricultural College, Truro, N. S.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
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Concrete Mixers and Water Boxes

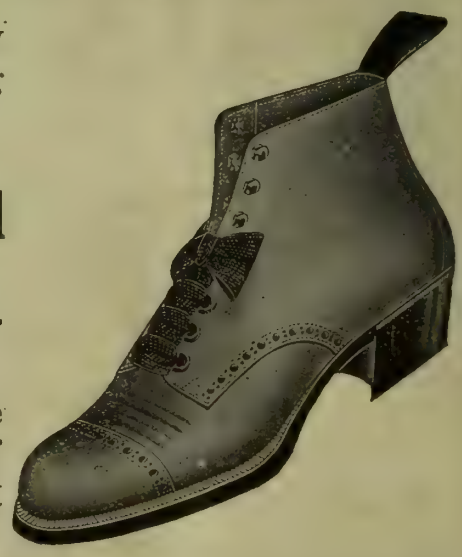
Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

OUR VALUES

are summed up briefly under the following captions:



Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

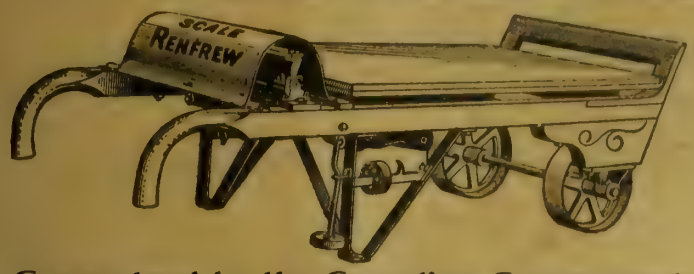
We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

HALIFAX, N. S.

THE FARM SCALE THAT SAVES MONEY FOR FARMERS

THE "RENFREW" HANDY TWO WHEEL TRUCK SCALE



Guaranteed by the Canadian Government

The Renfrew saves every cent of profit for the farmer on everything he sells by weight—because of its absolute accuracy.

It saves for him time and labor,—simply wheel the Renfrew to what you want to weigh.

It saves for him because it is built to last,—and weighs everything from one pound to 2000 pounds.

Does your scale do these things? If not, it is time to buy a Renfrew—the farm scale built to suit your requirements.

MAIL COUPON NOW FOR FREE BOOKLET

Mail Coupon For This Free Booklet—"The Profit In The Last Ounce." It tells interestingly about the business side of farming—and how money is saved with the Renfrew Handy Two-Wheel Truck Scale.

MAIL NOW

COUPON

Please send me Free of charge, booklet "The Profit in The Last Ounce."

The Renfrew Scale Co.,

RENFREW Ontario

AGENTS:—Saskatoon, Western Distributing Co.; Calgary, Reynolds & Jackson; Edmonton, Race, Hunt & Giddy; Manitoba; Clare & Brockest, Winnipeg.

Name.....

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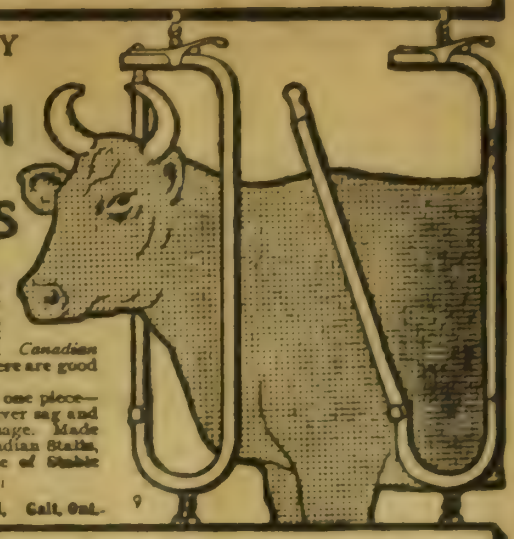
The RENFREW SCALE CO., Renfrew, Ont.

FACTS—NOT THEORY —ABOUT

O.K. CANADIAN U-BAR STEEL STANCHIONS

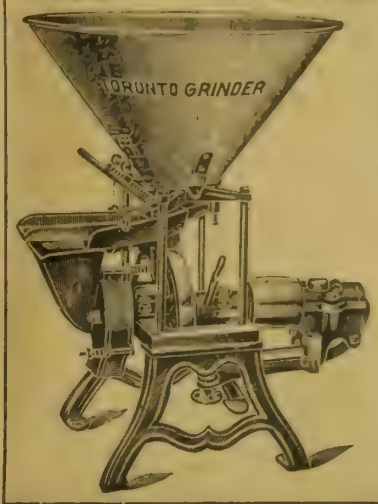


When big stables like the Central Experimental Farm at Ottawa—the new barn at Silver Spring Dairy Farm, Ottawa—the Brindale Farm at Toronto—are equipped with *O.K. Canadian U-Bar* Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue.

Canadian Potato Machinery Co., Limited, Galt, Ont.

The "Toronto" Floor Grinder



SAVES LABOR GRINDS BETTER COSTS NO MORE

Some of its Special Features are:

Main frame built very low, solid and compact. Will stand heavy vibration better than other grinders.

Flow of grain manipulated by one hand, other grinders require two hands. Adjusting lever for plates easy to reach.

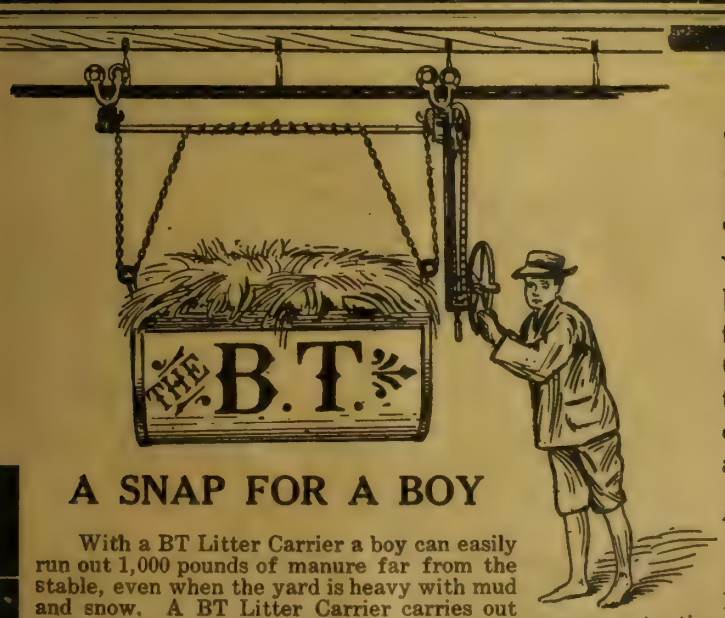
HOPPER: Large capacity, 3⅜ bushels. 50% more than other grinders.

No other grinder has so many improvements or is so efficient as the Toronto Grinder. You pay no more for a Toronto Grinder than you pay for an ordinary grinder.

You will probably need a new grinder this fall, so send us your name and address and we will mail you full particulars at once.

THE ONTARIO WIND ENGINE & PUMP CO.

Winnipeg TORONTO Calgary



STABLE WORK MADE EASY WITH A

BT Litter Carrier

You can lower the BT Litter Carrier right down to the gutter behind the stalls, and easily pitch FOUR wheelbarrow loads into the big wide-mouthed bucket. In a minute you can run the Carrier out a good distance from the barn and dump the load on the pile or into the wagon---no paths to shovel through the yard, or planks to lay---and the beauty of it is a boy can do the work as easily as a man.

A SNAP FOR A BOY

With a BT Litter Carrier a boy can easily run out 1,000 pounds of manure far from the stable, even when the yard is heavy with mud and snow. A BT Litter Carrier carries out four wheelbarrow loads at a time, so that a boy can do the stable work in half the time that a man would take with a wheelbarrow.

Write us today for Catalogue on BT Litter Carriers, and let us give you our prices. You will then see that a BT Litter Carrier will pay for itself in a single winter in the amount of time and hard work it will save you.

A BT Litter Carrier does Your Stable Work in a Hustle

It takes out HALF A TON of manure at a time. One big load cleans your stable. A muddy yard makes no difference, for the BT Litter Carrier runs on an overhead track, and can easily be run out with its biggest load. If you like, you can dump each load right into the wagon or manure spreader, and take the manure straight to the field. This saves you rehandling the manure and avoids the heavy work of cleaning up the stable yard.

It Makes a Clean Job

The BT Litter Carrier has a water tight tub. It does not drip along the passage-way and in the yard. It has elevated ends to prevent the manure from falling out when the bucket is full. The liquid and solid manure is all kept in the bucket until you reach the pile away out from the barn. It is easy to keep the manure a good distance from the barn, and the yard about the stable is always clean.

Feed all your cows in a single trip

The BT Feed Carrier holds 10 Bushels. In a single trip you can feed 25 cows. BT Feed Carriers, Feed Trucks, Milk Can Conveyors are indespensable to Dairymen and Farmers. They cut in two the labor, time and cost of feeding the cows and caring for the milk.

Fill out the coupon and get our prices

Let Us Send You Our Catalogue

Write for our Catalogue to-day. No matter how many cows you have, nor how long it takes you to clean your stable by the pitchfork-and-wheelbarrow method, if you put in a BT Litter Carrier you will save half the time and trouble. You can use the BT Litter Carrier to clean your cow stable, your horse stable, or your hog pen, and in every case save yourself disagreeable, tedious work.

Write us and get our prices. You will be surprised to find how cheaply you can put in a BT Litter Carrier outfit. Clip out the coupon and send it before you forget.

BEATTY BROS. 198 Hill Street, FERGUS. - - Ontario

We also make Steel Stalls and Stanchions, Horse Stable Fittings. Water bowls. Mention if you want Catalogues.

COUPON MAIL US THIS FREE COUPON

Beatty Bros., 198 Hill St., Fergus, Ont.

Gentlemen:—Kindly send me at once your Litter Carrier Catalogue.

I have ..... cows and ..... horses. I expect to put in a Litter Carrier about ..... and will need about ..... feet of track.

Interested in Steel Stalls?.....

Interested in Horse Stable Fittings?.....

NAME .....

Post Office .....

Province .....

DE LAVAL
CREAM SEPARATORS

Cheapest As Well As Best

Every sensible person wants the **best** of everything, but in many things the best is beyond their means and they must necessarily be content with something else.

In the case of the Cream Separator, however, the **best** is fortunately the cheapest as well, and it is of the greatest importance that every buyer of a separator should know this.

Moreover, the **best** is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste **twice a day every day in the year** for many years.

It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they **save their cost every year over any other separator,** while they last an average twenty years as oompared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually **save and pay for itself.**

These are all important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer.

If you don't know the nearest DE LAVAL agent please simply address the nearest of our main offices as below.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton • New Brunswick

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 17. SUSSEX, NEW BRUNSWICK, SEPTEMBER 24, 1912. Number 24.

The Nova Scotia Provincial Exhibition

Quality Exhibits

THE Nova Scotia Annual Provincial Exhibition was held at Halifax, on September 11th to 19th inclusive. The weather throughout the show period was quite favorable and the attendance was fairly well up to the expectation of the management.

THE MANAGEMENT AND JUDGERS

M. McF. Hall, the genial secretary-manager of the fair, and his capable staff or Superintendents in the various departments, made matters run as smoothly as possible. The work of judging the respective classes was rushed from the very start and as there were breed judges for each and every one of the heavier classes in the live stock department, the awards were placed with a despatch that was very satisfactory to the respective exhibitors. The prize tickets were all in place on Saturday evening so that visitors could plainly see "who was who" and round out their education by studying "why?" the various animals and exhibits were placed thus and so.

IN THE MAIN BUILDING

On the ground floor of the main building, various manufactring concerns made interesting displays in attractively decorated booths while the annex was occupied principally by automobiles and carriages of various descriptions and several displays of Cream Separators. The walls of the second floor department were occupied by the handiwork of the Manual Training and Kindergarten schools throughout the province.

THE MINES BUILDING

was occupied by various products exemplifying the mineral wealth of the province. Coal from the various colleries, iron and steel and their by—products in various stages of manufacture, were the most prominent displays in this department.

THE FISHERIES BUILDING

A visit to the fisheries building would hardly convince the uninitiated that the sea was one of Nova Scotia's greatest revenue producers. Were it not for an educational exhibit put up by the department of Marine and Fisheries the Fisheries building would have been closed to the public as there were not enough local exhibits to warrant any mention or notice.

THE LADIES DEPARTMENT

was well filled with women's work in the housekeeping, decorative, industrial and other handicrafts' sections. The Women's Council had a booth in the main building where talks were given each afternoon and evening by prominent experts on various lines of work that women may carry on the farm in connection with their domestic duties, that will reward them handsomely and furnish a goodly share of so called pin money.

MACHINERY HALL

contained exhibits of gasoline engines, wook working machinery, threshing machines and other implements of general interest to farmers and fishermen.

One of the interesting features was a sleigh, patented by Mr. John C. Cash, Irish Cove, N. S. It is built for coal or manure hauling. The box is placed on an elevated pivot so that it may be swung around and dumped in any desired direction without backing the team. It is an admirable rig for hauling manure out on the snow. There were no process exhibits.

THE HORTICULTURAL BUILDING

was well filled with fruits and flowers. There was a grand display of apples, plums, pears, and grapes and despite the earliness of the season the colouring and quality was excellent. In the county collections section the number of entries by the respective counties were :—

Annapolis, 2; Antigonish, 3; Cumberland, 2; Digby, 2; Hants, 3; Halifax, 6; Kings, 3; Lunenburg, 3; Pictou, 1 and Yarmouth, 2. The battle royal for the sweepstakes prize was waged between the first prize collections from Kings, Hants and Annapolis. The Kings county collection contained a total of 50 varieties made up as follows: Apples, 23; pears, 9; plums, 10; peaches, 1; grapes, 1; crabs, 1; berries, 4 and quince, 1. The Hants collection contained: Apples, 29; pears, 5; plums, 6; peaches, 1; grapes, 1; crabs, 1; berries, 5; quince, 1, a total of 45 varieties. The Annapolis county collection contained 49 varieties as follows: Apples, 20; pears, 8; peaches, 2; plums, 8; grapes, 1 and berries, 10. The sweepstakes prize was captured by the Kings county collection, shown by Seaview Farm, Starr's Point. B. F. Chesley, Bridgetown, had the best collection of plums. Seaview Farm, showed the best collection of peaches. preserves, jellies and vinegars and best collection, 5 commercial varieties of apples.

Mrs. Sarah E. Starr, Wolfville, made the best display of grapes. The best and most valuable collections of 20 varieties apples and the best collection, 10 commereial or export varieties was shown by Mrs. Wm. Sangster, of Falmouth, Hants County, therewith winning the Furness Withy Co. Silver tea service. It was won in 1910 by L. C. Healy and in 1911 by H. E. Bent. The rule governing its donation requires that the trophy be won three times before it becomes the property of the exhibitor. Mr. R. W. Starr, the veteran judge, of Wolfville placed the awards. The best collection of new varieties was shown by H. A. d'Almain, Wolfville.

AGRICULTURAL HALL

The display in the Agricultural Hall was very creditable, in fact better than one would look for this season, at so early a date. S. J. Moore, Maritime Representative of the Seed Division placed the awards in the Field Grains and Seeds section and G. B. McGill, of Middleton, judged the Field Roots and Garden Vegetables. The centre of the hall was occupied by a tastily arranged display by the Nappan Experimental Farm. containing fine specimens of the products of field, garden, orchard and apiary. The best collections of field roots were shown by B. F. Chesley and Hugh A. Dickson had the best collections of garden vegetables.

Apiary Products—The display of Apiary products was almost down to the vanishing point, there being only one exhibit of beeswax, liquid extracted honey and comb honey and two exhibits of extracted liquid clover honey.

Dairy Products—The butter and cheese exhibits were judged by Harvey Mitchell, of the Ottawa department, and W. A. McKay, of the Nova Scotia department of agriculture. There was no farm dairy cheese. Prince Edward Island cheese predominated. Geo. Vinten, of Lower South River and H. H. Gillis, Blue Sea Corner, upheld Nova Scotia's reputation for cheese making with 12 large cheese. The scores in the butter class ranged from 92 1-4 to 96 3-4 for the entries within the monies' pale. The remainder of the butter exhibits were not very high in point of quality.

THE AMUSEMENTS

The amusements in front of the grand stand consisted of horse racing, foot racing and various feats cleverly performed on the trapese and tight ropes. One of the most thrilling events was performed by a lady who motor cycled inside a huge globe at a speed of fifty miles per hour. The bird man met with an accident at the time of his trial flight. The machine was badly smashed and the aviator was severly bruised and skaken up. The racing was good and some rather thrilling events marked several of the heats. One horse was accidentally killed and another, after throwing her driver, went the two laps of the course without a driver, saved her distance and jogged home to the stables.

THE LIVE STOCK DEPARTMENTS

were pretty well filled and constituted the most attractive and interesting sections of the fair.

Horses

There were not so many entries in the horse classes as we have seen at Halifax in other years, but the quality of the stock showed a decided improvement. S. Fuller, Ottawa, judged the light horses and Jas. Henderson, of Belton, Ontario, placed the awards in the heavy horse classes. Mr. Henderson's placing at Halifax, upheld Mr. R. S. Starr's placings at St. John, in nearly every case and was quite satisfactory to the interested exhibitors.

THE THOROUGHBRED CLASS was very poorly represented, the only entries being a brood mare and foal of 1912, shown by Miss Alice O'Brien.

STANDARD BREDS.—Five speedy, aged stallions were jogged around the track to receive their just awards. Dr. N. Ronan, of Antigonish, captured the red ribbon and was followed by G. A. Mader's horse with the blue and by Blake Bros., of Shubenacadie in third position.

There were only two two-year-old stallions in the ring, shown by Angus McGilvary, of New Glasgow and L. B. Dodge, of Spa Springs, who were respectively placed in first and second positions.

E. L. Mosher, of Aylesford, had no competition against his two-year-old stallion.

The brood mare section was filled by five trappy steppers and their youngsters. Jas. S. Chisholm, of Brierley's Brook, and Angus McGilvary, New Glasgow, held the first and second prize winners, followed in third place by a mare and foal shown by T. D. Blaikie, of Great Village.

The Halifax Stables and Marion Blaikie, Great Village, had matters their own way in the four-year-old filly section. Halifax Stables had the only three-year-old filly while Angus McGilvary had the only two-year-old.

Chisholm, Blaikie and McGilvary came in for first, second and third monies on foal of 1912, and G. A. Maders horse was first with three of his get.

THE ROADSTERS.— Roadsters were out in good numbers; seven, brood mares with loals; six, three-year-olds; five, two-year-olds; six, one year-olds; seven, foals of 1912; seven, single horses in harness, over 15 hands, and one mare and three of her progeny comprised the class. The horses shown were the get of some of the most noted Standard Bred stallions in the Province. A full list of the prize winners will be found on page 828 of this issue.

CARRIAGE HORSES were few in numbers, there being only a single entry in each section of the class.

PONIES were well represented, but a few of the animals shown were not very typical of any particular breed.

GENERAL PURPOSE HORSES were few in numbers. There were three entries in the three-year-old class and four entries in the matched team section. There was only a single entry in the other sections of the class.

HEAVY DRAUGHT HORSES.—The heapy draught class was one of the classes that made the horse show at Halifax. Sharpe & McNeil, Wm. O'Brien, Jas. Leslie, Jas. McKenzie, G. W. Dawse, C. F. Grant, Wm. O'Brien & Sons and M. Dwyer were the principal exhibitors and had their horses out in fine shape. Clydesdale blood predominated and the various horses shown represented a class the raising of which, farmers would find a profitable industry.

HACKNEYS—With the exception of the second prize stallion, Sedgeforth Enterprise, shown by McFarlane Bros., a three-year-old stallion and a two-year-old stallion, respectively shown by Jas. D. Cox and Raodolph Cox, R. A. Snowball had everything his own way in the Hackney sections. Snowball's Model Performer was first in the aged stallion class and carried off the silver medal offered by the Canadian Hackney Horse Society for best stallion, any age. A Snowball mare carried off a similar honor in the female section.

Sedgeforth Enterprise was sold at the close of the fair, to Mr. Fuller, the judge.

PERCHERONS.—The entries in the Percheron class were not numerous. Two entries in the aged stallion section and a single entry in the remaining sections were all that the Percheron class could muster. There were some good individuals included in the number. Chas. Symes' captured the male championship with his three-year-old Lord Roberts and the female honors went to an Albert Flemming mare.

CLYDESDALES were really the classiest and best class at the fair. R. A. Snowball, Wm. O'Brien & Sons W. W. Black, Prescott Blanchard, G. C. Cossar and McFarlane Bros. were on hand to represent the most popular farm horses in Nova Scotia.

Seven aged stallions came into the ring, and after careful inspection, McFarlane Bros.' Baron Sduire and Vanderbilt were placed in first and third positions with R. A. Snowball's Baron Belgradden sandwiched in a second place. R. A. Snowball's three year-old stallion Chatham Fame captured the red ribbon from McFarlane Bros.' horse. G. C. Cossar and Wm. O'Brien & Sons had the only two-year old stallions. They were a good pair. Cossar's Dunbar Crag led the way.

Prescott Blanchard had the only yearling stallion.

Wm. O'Brien & Sons, had two brood mares with foals. W. W. Black's Miss McKay was sandwiched in between two Snowball mares in the aged mare class, four up.

In the two-year-old filly class Wm. O'Brien & Sons' filly was sandwiched in between two Snowball fillies.

R. A. Snowball had the only yearling filly, while Wm. O'Brien & Sons had the only foals of 1912.

The male championship and the Silver Cup, donated by the Dominion Clydesdale Association, for the best stallion, any age, was captured by McFarlane Bros.' Baron Squire. Snowball's May Lothian, first prize aged mare, was also the female champion.

The Queen Hotel Cup, for the best 5 horses, any breed, owned by the exhibitor, which was won in 1910 and 1911 by R. S. Starr, Port Williams, left the fruitful valley and for the next year will be found occupying a prominent place in the home of R. A. Snowball, Chatham, whose Clydesdale five were the best at the show.

Beef Cattle

Not for years has there been such a grand display of beef cattle as was at Halifax this year. Chas. F. Bailey Assistant Deputy Commissioner of Agriculture for Ontario placed the awards.

SHORTHORNS.—C. A. Archibald, R. A. Snowball, Dr. I. M. Lovitt and A. N. Griffin were on hand with their best shorthorns and made up by far the most interesting competition in the beef classes. Their stock was well fitted and some very typical arrivals were included in the class. C. A. Archibald's aged bull Prince Ideal, captured the male championship and A. N. Griffin's Senior Calf, Emily of Willow Glen, was good enough to tote off the female championship. A couple of the calves were not as well developed, for their age, as they might be. It makes a big difference in the further usefulness of an animal as to how it gets its first start in life and undoubtedly the lessons learned in keen competition at the shows will be the means of bringing the owner of those calves to a proper realization of the needs of a young calf, if he would have it develop into a thrifty, creditable show animal.

HEREFORDS.—W. W. Black and Wm. O'Brien & Sons were the chief contestants in the Hereford class. Thos. Aylward, Falmouth, had the only junior yearling bull. The white faces were out in fine fittle. W. W. Black captured all the first prizes and diplomas in the class. Wm. O'Brien & Sons had the second prize aged bull, and senior and junior yearling heifers. The whole class would have stood any amount of competition. The condition in which they were shown should be a lesson for others who show live stock classes for which there is not much competition.

DEVONS.—W. A. Pinkney had no competition against his Devons. He had an entry in nearly every section of the class and was awarded a first prize in every class. The class as a whole would stand better fitting for the show. The herd contains good foundation stock and with a little better fitting they would have made a much better showing.

GRADE BEEF CATTLE made a good showing. W. W. Black, C. S. Congdon, Wm. O'Brien & Sons and Thos. Aylward had their fingers in the money pie as will be seen by the published list of prize winners.

FAT CATTLE were shown by W. W. Black, C. S. Congdon, Wm. O' Brien & Sons and C. A. Archibald.

WORKING OXEN AND STEERS were exhibited by C. S. Congdon, Wm. O' Brien & Sons and Victor and Thos. Aylward. The class contained some good, useful pairs.

Dairy Cattle

The dairy cattle classes at Halifax contained the choicest pure bred herds found in Nova Scotia, New Brunswick and Prince Edward Island. Grades were also out in large numbers.. It was indeed a pleasure for the visitors to wander through the stables or stand beside the judging rings and watch the sleek, milky, profit producing animals as they were resting comfortably or lined up on the green, to be passed on by their respective judges.

The exhibitors in the dairy classes went home from Halifax perfectly satisfied with their placings. They had no reason for complaint as each and every breed was judged by a competent breed judge.

The chief squeal at St. John came from the Ayrshire men but at Halifax, Judge A. Kains, of Byron, Ontario, a prominent Ayrshire breeder, placed the awards in his class in a manner which left little or no room for adverse criticism.

J. Rufus Starr, Port Williams, N. S., placed the awards in the Jersey classes. Mr. Starr judged at Halifax on previous occasions when there was lively competition and so satisfactorily placed the awards that his services were again welcomed this year by the Jersey men.

R. Robertson, Superintendent of the Nappan Experimental Farm, placed the awards in the Guernsey class. Our Guernsey breeders place every confidence in Mr. Robertson's placings and we have heard many of them remark that they would rather show under Mr. Robertson than under any other Canadian judge.

The popular judge, R. S. Stevenson, Ancaster, Ontario, who judged the Holsteins, requires no introduction to a Maritime Show ring. He has judged at all of them and the parting word always is "Come again."

The Ayrshires made a great showing at Halifax. With the addition of a few animals shown by John McDonald & Sons, Shubenacadie, N. S. and the elimination of the Creighton herd, the competing herds were the same as at St. John. The St. John prize list, however, had two sections for aged cows and two-year-olds, in milk and dry, and the three-year-old section was divided into three classes viz. in milk, dry and Canadian breed, while at Halifax the in milk and dry cows competed in the same class. This is a fact that must be recognized when comparing the St. John and Halifax prize winners in this class.

Five aged bulls faced the judge and there was not a weak one in the quintette.

McIntyre's Bros.' Grange Kelly again proved the victorious one and toted off the red ribbon, followed in second and third places by M. H. Parlee's and Prescott Blanchard's herd headers. Grange Kelly also carried off the male championship diploma and was the sire of the prize winning quartette, get of one sire, seven fours in the ring.

Allison McDonald had no competition against his two-year-old bull.

Six, senior yearling bulls tripped into the ring and McIntyre Bros., M. H. Parlee and Easton Bros. held the successful ones. McIntyre Bros. held the only pair of junior, yearling bulls.

Prescott Blanchard, with a very typical, thrifty, senior bull calf, captured the red ribbon. Parlee led in the junior bull calf class. Thirteen tried and true aged cows kept the judge busy for a time and the line up they made was a most pleasing spectacle. C. A. Archibald's trim fresh cow was sandwiched in between two of McIntyre Bros.' good ones. It was regrettable that there were only three prizes offered in this section as a ciuple of other trios might have been taken out of the ring and still leave a creditable showing.

Blanchard led in the three-year-old class and thus was placed in the position he claims he should have had at St. John. Easton Bros. led in the two-year-old heifer class and McIntyre Bros. seized all the reds in the yearling and calf heifer sections.

McIntyre Bros.' Morton Mains Lady Nelly, (Imp.), the first prize aged cow, proudly led the way in the female championship while the two animals, the progeny of one cow, red ribbon went to a pair of their Culcaigrie' White Lady's. It will be remembered that Culcaigrie White Lady was the champion female at the shows for the last couple of years but her enviable career was cut short by death on the first of last May. Prescott Blanchard had the next best pair in the latter class, seven pairs up. McIntyre Bros. also captured the most coveted plums in both aged herd and breeders' young herd, Parlee following in second and third place in the former and Blanchard occupied a similar position in the latter class. Easton Bros. showed the third prize aged herd.

JERSEYS.

H. S. Pipes & Son had all the Jerseys at the fair with the single exception of the trim two-year-old bull shown by Blake Bros. The whole bunch was a credit to the owners and could stand strong competition.

Imported Fereor captured the male championship and was first with three of his get. True Blue was the winner of the female honors. Babbit was at the head of the list with two of her urogeny.

GUERNSEYS.

made a better sgowing this year than ever before at Halifax.

H. W. Corning, Roper Bros., A. H. Snide, Hugh A. Dickson, T. D. Blaikie, Jas. McKenzie and D. G. McKay & Son were on hand with their best. Some of these exhibitors are new to the show ring but they are all enthusiastic over the merits of the Guernsey cow. Corning's aged bull, Island Prince of Hillside, captured the male championship and was at the top of the list with three of his get.

Roper Bros.' Dolly of Willow won the female championship and was also first with two of her offspring.

Corning captured the red ribbon in the aged herd class and the red and

blue on young herds. Roper Bros. had the blue ribbon winners in aged herds and D. G. McKay & Son came in for third money in the same class. Dickson led the way in the three-year-old cow and senior yearling bull classes. See published list of awards for the reaminder of the winnings in this class.

HOLSTEINS.

There were three herds of the ever popular black and whites. Practically the same line up as at St. John. J. D. Irving, Lea & Clark and Harding Bros. being out with thre particularly strong herds. There were no Nova Scotia Breeders showing this year. Samuel Dickie & Sons and Logan Bros. the veteran Nova Scotian Holstein men did not show. The Cobequid herd is being pushed for production and the Homestead herd has been selling off some of its good ones to fill the gaps in some of the best herds throughout Canada. We are informed, however, that the Homestad herd still numbers in the vicinity of sixty and that it will be out next year as strong as ever.

J. D. Irving's Sea View herd captured the lion's share at Halifax and thus repeated their St. John show record. Both male and female championships went to the Sea View herd on Lord Sea View Rooker, a two-year-old bull, and Rose of Bonheur Beauty, an aged cow.

Lea & Clark had Ida Rooker's II. Vale to top the section for bull and three of his get, while their Jacoba Johanna was first with two of her offspring. Harding Bros.' Wish Ton Wish herd in the senior calf classes.

The three herds were out in exceptionally good fit and each and every arrival in the ring reflected no discredit on their owners.

GRADES.

Holstein grades and Ayrshire grades competed in the same classes while Jersey grades and Guernsey grades locked honors in their class. The grades were all shown by Nova Scotian farmers and happy the farmer is whose stables are filled with such animals as were exhibited in these classes at Halifax. They all had the appearance of belonging to the "keep the farmer" class.

Sheep

The sheep classes were the same as at St. John. C. F. Bailey placed the awards. The respective breeders had their flocks out in fine shape and the visitors to the fair had ample opportunity to study breed type.

Swine

The main contest in swine took place in the Yorkshire and grades classes. The Yorkshires were represented by C. J. Keiler's and J. W. Calbeck's herds and both breeders were out to win....H. W. Corning had no competition against his White Chesters, Poland Chinas and Duroc Jerseys were in the same hands as at St. John. Grades, fat pigs and bacon hogs made a very creditable showing.

Poultry

There was a large showing of poultry, which was effectively judged by D. J. Lambert of the Kingston, R. I. Experimental Station. With the exception of the question of rainment, which was somewhat the worse for wear, and of color, the poultry classes were in good form. The utility breeds were well represented and there was a fair showing of the fancy and ornamental classes.

Turkeys were below the average in point of numbers. Tolouse Geese and Pekin Ducks made a good showing.

THE CLOSING DAYS.

The aviator succeeded in getting a new machine in time for the last days of the fair and his aerial stunts and his conquest of the air pleased the spectators.

The Charlotte County Exhibition.

The fourth annual fair of the Charlotte County Agricultural Society, held in St. Stephen, Sept. 10th-13th, was a decided success in every way. In looking over many of the exhibits it was hard for one to realize that this was only a county exhibition.

The weather was fair throughout and from 9 A. M. to 10 P. M. crowds of enthusiastic people thronged the buildings and grounds.

The gates were first opened Tuesday, Sept. 10th, and the judging of the various exhibits commenced.

THE OFFICIAL OPENING.

The official opening was held Tuesday afternoon.

F. M. Murchie, President of the Association, presided and thanked all for the work they had so cheerfully performed and the exhibitors for their splendid contributions to the most successful exhibition of the association.

Mayor Dinsmore cordially welcomed all to the town and to the exhibition, trusting that all would carry away an impression so favorable that they would again return.

S. L. Peters, of the Dominion Department of Agriculture, followed in an enthusiastic speech expressed his pleasure at again being present at the Charlotte County exhibition. He appreciated the exhibits presented for inspection and was favorably impressed with this county as compared with other sections of the Province.

Hon. Geo. J. Carke spoke of the benefits to be derived from such exhibitions and, at the request of the society, formally declared the exhibition open, inviting all to enjoy its many features.

His Honor, Lieutenant Governor Wood, was present Wednesday afternoon and made an interesting and inspiring address.

The children of the public schools, who were generously provided with tickets by Gilbert W. Ganong, chairman of the board of school trustees, marched to the grounds and heard the governor's address.

THE EXHIBITS.

The exhibit of live stock was fairly complete and representative in every department. The horses of various classes were shown in good condition and the owners of many of them had good reason to be proud. The cattle, sheep and swine, while they were not so numerous and, in some cases, rather lacking in condition, showed that the farmers were taking considerable interest in the improvement of their stock and there is every liklihood that future exhibits of live stock will be much better than they have been in the past.

The poultry house was filled to over-flowing with poultry of a good type in excellent condition. Mr. Seth Jones did not hesitate to say that, in quality, the poultry at this exhibition was superior to that at St. John.

The display of vegetables was large and of excellent quality, surprising all, for it was feared that the unfavorable season would have its effects upon these crops. The potatoes particularly, in quantity and quality, excel all previous exhibitions in this section.

The fruits shown were very numerous and made a very attractive display in which size, uniformity and good colouring were very noticeable. Such a display has never been shown in Charlotte County before and this is the result of rapid strides which have been made in horticultural lines.

The displays of flowering plants, fancy work and home cooking were attractive, interesting and worthy of high commendation.

The exhibit of dairy products was large and attractively displayed in a refrigerator show case with glass sides. Some of the butter was of good quality while some was lacking in one or more of the points of excellence to be found in first class butter. Butter-makers will derive much benefit from exhibiting their butter at such exhibitions by learning, from such an experience, wherein they have made their failures in the past.

The section allotted to the manual training department, of the public schools, showing boys at work and some of the finished products was of great interest to many.

The first floor of the main building was taken up by exhibits in booths of the local manufacturers and merchants. These exhibits were attractively arranged. Also on this floor was an exhibit from the Dairy Division, Ottawa, consisting of milk samples showing results of contamination, cow-testing outfits for the keeping of records of individual cows, and model of tanks for cooling milk and cream.

ATTRACTIONS ON THE GROUNDS.

The "Midway" was a lively one with all kinds of amusement features from the ever popular merry-go-round to the chance of making a fortune for a nickel.

The Curson Sisters in their aerial stunts, Count Lagusta, the wire and juggling comedian and Professor Tourcher, sensationalist, cyclist, farnished free amusement to the crowds in attendance.

The agricultural history of Charlotte County is of recent origin. Previous to a few short years ago the principle industries of this county were lumbering and fishing, agriculture taking a very minor part. While the fisheries are still carried on along the coast, the lumber has to a large extent been cut. With the disappearance of the forests many men had to turn to another source for their living and those who have turned to agriculture have found the real valuable resource of the county. The result is that in recent years Charlotte County has been making rapid strides in agricultural lines. They have made a good start and the outlook for agriculture in the future of this County is bright indeed. One has but to talk with a few of the farmers to feel the spirit of optimism and enthusism that prevails. It is due, to a large extent, to this spirit that such rapid strides have been made and it is to this spirit that we look for future development.

The success of the exhibition is due, in a large measure, to the work of Walter S. Stevens, Sec'y of the Association, and his assistants. They have, by strenuous work, made the exhibition of 1912 a decided success and to them much credit is due.

New Appointment to the Staff of the Nova Scotia Agricultural College.

Mr. Robert Matheson, Ph. D., Cornell, at present Assistant Professor of Biology at Cornell University, Ithaca, has been appointed Provincial Entomologist for the Province of Nova Scotia and Professor of Zoology at the Nova Scotia Agricultural College. Mr. Matheson is a native of Pictou County, Nova Scotia, and graduated from the School of Agriculture under the management of Prof. H. W. Smith. After taking his Masters degree at Cornell, Mr. Matheson for two years occupied the position of State Entomologist for North Dakota. Returning to Cornell, he took his Doctors degree with high honors and was immediately appointed to the staff of that institution. Dr. Matheson is recommended by the Cornell University authorities as being one of the most promising student graduates from that Institution for some years and his work, since graduation, has been of such a high character that he was held in very high esteem by his colleagues. Had it not been for the fact that he appreciated the opportunity of being able to serve his native province, it would have been difficult to secure his services for the position which he has now accepted.

Dr. Matheson will teach the subjects of Zoology, including Entomology, at the Agricultural College, but the greater part of his work will have to do with the investigation of Entomogical problems in the Province of Nova Scotia and the administration of various measures for the prevention and extermination and control of insect pests.

With the large additional space which the new buildings, which are now in the course of construction at the Agricultural College, will afford and the strong additions to the staff which have been made during the past summer, the Nova Scotia Agricultural College is now in a better position than ever to carry on its work for the advancement of agriculture in the east.

The faculty are looking forward to next session, which begins on November 5th, as the most successful session yet held in the history of the institution.—M. Cumming.

Canadian Crops.

A bulletin issued on September 14th by the Census and Statistics Office of the Department of Trade and Commerce reports the condition of crops and live stock at the end of August and gives preliminary estimates of the yield of spring wheat, rye, oats, barley and flaxseed as compiled from the reports of correspondents upon the appearance of these crops.

The cold, wet weather which prevailed throughout Canada during August delayed ripening and the harvest is everywhere later than usual; but no serious frosts have as yet been reported. All crops show an improvement since the end of July, excepting peas, beans and corn. The average condition of spring wheat is 84.57 p. c. of the standard or full crop, which is represented by 100; rye is 84.14, barley 87.29, oats 88.15, mixed grains 86.57 and flax 87.84. These figures are higher than those of a month ago by about 1 p. c. for wheat rye and flax, 4 or 5 p. c. for barley, mixed grains and buckwheat and 7 p. c. for oats. On the whole they compare not unfavorably with the figures at the corresponding date of last year, oats, barley, rye, buckwheat and mixed grains being in fact higher, while spring wheat is about two points lower. Peas are 74 against 76 last month and 72 last year; beans are 76.71 against 79.27 last month and 80.92 last year. Corn for husking is 69.66 and for fodder 76, compared with 70.37 and 73.19 last month and with 81.46 and 86.55 for last year. Root crops and pasture show an excellent condition, the figures ranging from 86.64 for sugar beets to 92.10 for potatoes and 91.79 for pasture.

From the reports furnished by correspondents it is calculated that of the areas sown in Canada 3 p. c. spring wheat, 2.3 p. c. oats, 2.1 p. c. barley and 3.8 p. c. flax will from various causes, such as hail, flood, pests, etc., be entirely unproductive, and the following preliminary estimates of yield are therefore based upon the areas to be harvested. Of spring wheat the average yield per acre for Canada is provisionally placed at 21.08 bushels which upon a harvested area of 8,971,400 acres makes the total yield of spring wheat to be 189,266,000 bushels. This quantity added to the estimate of 16,773,300 bushels of fall wheat as published last month gives the wheat total as 206,029,300 bushels compared with the final estimate for 1911 of 215,851,000 bushels. The yield per acre in 1911 was 22.19 bushels for fall and 20.63 bushels for spring wheat.

Halifax Exhibition Prize Winners.

Horses

THOROUGHBREDS.

A brood mare and foal by her side were the only entries in the Thoroughbred class, prizes on which were awarded to Alice O'Brien.

STANDARD BREDS.

Stallion, 4 years old.—1, Dr. N. F. Ronan; 2, G. A. Mader; 3, Blake Bros.

Stallion, 3 years old.—1, Angus McGillivary; 2, L. B. Dodge.

Stallion, 2 years old.—1, E. L. Mosher.

Brood mare with foal by her side.—1, Jas. S. Chisholm; 2, Aogus McGilvary; 3, T. D. Blaikie.

Filly, 4 years old.—1, Halifax Stables; 2, Marion Blaikie.

Filly, 3 years old.—1, Halifax Stables.

Filly, 2 years old.—1, Angus McGilvary.

Foal of 1912.—1, Jas. A. Chisholm; 2, T. D. Blaikie; 3, Angus McGilvary.

Stallion and 3 of his get.—diploma, G. A. Mader.

ROADSTER HORSES.

Brood mare with foal by her side.—1, G. A. Mader; 2, J. F. Grant; 3, S. H. James.

Filly or gelding, 3 years old.—1, Ottis Gardiner; 2, E. L. Foster; 3, Marion Blaikie.

Filly or gelding, 2 years old.—1, E. L. Foster; 2, John McLellan; 3, Robt. Settle Jr.

Filly or gelding, 1 year old.—1, G. A. Mader; 2, R. A. Backman; 3, Jas. Adams.

Foal of 1912.—1, G. A. Mader; 2, John McDonald; 3, Robt. Settle Jr.

Single horses in harness.—1, Fred Parsons; 2, L. B. Dodge; 3, Mrs. C. H. Wisener.

CARRIAGE HORSES.

Filly or gelding, 3 years old....1, J. A. Plumney.

Filly or gelding, 2 years old.—1, Mrs. C. H. Wisener.

Filly, 1 year old.—1, J. F. Grant; 2, Fred H. Deal.

PONIES.

Stallion, over 12 and under 14 hands.—1, 3, John Feetham; 2, Christopher Purcill.

Mare or gelding, over 13 hands.—1, Louis Garier. ...

Mare or gelding, over 12 hands.—1, Leo Dunn; 2, C. Purcill.

GENERAL PURPOSE HORSES.

Mare or gelding, 4 years old.—1, W. R. Perkins.

Mare or gelding, 3 years old.—1, M. Dwyer; 2, Wm. O'Brien & Sons; 3, John McDonald.

Filly or gelding, 2 years old.—1, John McDonald.

Filly or gelding, 1 year old.—1, Geo W. Dawse.

Foal of 1912.—1, Fred H. Deal.

Matched team.—1, Fred H. Deal; 2, W. W. Black; 3, John R. McKenzie.

HEAVY DRAUGHT HORSES.

Mare or gelding, 4 years old.—1 and 2, Sharpe & McNeil; 3, Wm. O'Brien & Sons.

Mare or gelding, 3 years old.—1 and 2, Sharpe & McNeil; 3, Jas. Leslie.

Mare or gelding, 2 years old.—1, Wm. O'Brien & Sons; 2, Jas. McKenzie; 3, Sharpe & McNeil.

Filly or gelding, 1 year old.—1, Sharpe & McNeil; 2, G. W. Dawse.

Brood mare with foal by her side.—1, M. Dwyer; 2, Wm. O'Brien & Sons; 3, J. F. Grant.

Foal of 1912.—1, J. F. Grant; 2, Wm. O'Brien & Sons; 3, M. Dwyer.

Matched team.—1, Wm. O'Brien & Sons.

Mare and 3 of her progeny.—1, Sharpe & McNeil.

HACKNEY HORSES.

Stallion, 4 years old.—1, R. A. Snowball; 2, McFarlane Bros.

Stallion, 3 years old.—1, Jas. D. Cox.

Stallion, 2 years old.—1, Randolph Cox.

Brood mare with foal.—1, R. A. Snowball.

Filly, 3 years old.—1, R. A. Snowball.

Filly, 2 years old.—1, R. A. Snowball.

Foal of 1912.—1, R. A. Snowball.

Stallion, any age, ribbon and silver medal.—1, R. A. Snowball.

Mare, any age, ribbon and silver medal.—1, R. A. Snowball.

Stallion and 3 of his get.—1, R. A. Snowball.

CLYDESDALE HORSES

Stallion, 4 years old and upwards.—1 and 3, McFarlane Bros; 2, R. A. Snowball.

Stallion, 3 years old.—1, R. A. Snowball; 2, McFarlane Bros.

Stallion, 2 years old.—1, G. C. Cossar; 2, Wm. O'Brien & Son.

Stallion, 1 year old.—1, Prescott Blanchard.

Brood mare with foal by her side.—1 and 2, Wm. O'Brien & Sons.

Filly, 4 years old.—1 and 3, R. A. Snowball; 2, W. W. Black.

Filly, 2 years old.—1 and 3, R. A. Snowball; 2, Wm. O'Brien & Sons.

Filly, 1 year old.—1, R. A. Snowball.

Foal of 1912.—1, Wm. O'Brien & Sons.

Stallion, any age, diploma and Clydesdale Association silver cup.—McFarlane Bros.

Mare, any age.—diploma, R. A. Snowball.

Stallion and 3 of his get.—diploma, R. A. Snowball.

The Queen Hotel Silver Cup for best 5 horses, any breed, owned by exhibitor, was won by R. A. Snowball's Clydesdales.

PERCHERONS.

Stallion, any age.—1, Frank Ellis; 2, J. M. Wentzell.

Stallion, 3 years old.—1, Chas. Symes.

Stallion, 2 years old.—1, Albert Flemming.

Brood mare with foal by her side.—1, Albert Flemming.

Filly, 4 years old.—1, Chas Symes.

Filly, 3 years old.—1, Albert Flemming.

Filly, 1 year old.—1, Albert Flemming; 2, Chas Symes.

Foal of 1912.—1, Albert Flemming.

Stallion, any age.—diploma, Chas. Symes.

Mare, any age.—1, Albert Flemming.

Beef Cattle

SHORTHORNS.

Bull, 3 years old and upwards—1, C. A. Archibald; 2, R. A. Snowball.

Bull, senior yearling—1, R. A. Snowball; 2, I. M. Lovitt.

Bull, junior yearling— 1, R. A. Snowball.

Bull, senior calf—1, A. N. Griffin; 2, C. A. Archibald; 3, I N. Lovitt.

Bull, junior calf—1, I. M. Lovitt.

Cow, 3 years old and upwards— 1 and 3, C. A. Archibald; 2, I. M. Lovitt.

Cow, 3 years old—1 and 3, C. A. Archibald; 2, R. A. Snowball.

Heifer, 2 years old—1, 2 and 3, R. A. Snowball.

Heifer, senior yearling—1 and 3, I. M. Lovitt; 2, R. A. Snowball.

Heifer, junior yearling—1 and 2, R. A. Snowball; 3, I. M. Lovitt.

Heifer, senior calf—1, A. N. Griffin; 2, R. A. Snowball; 3, C. A. Archibald.

Heifer, junior calf—1 and 2, C. A. Archibald; 3, I. M. Lovitt.

Champion Bull—Diploma— C. A. Archibald.

Champion Female—Diploma— A. N. Griffin.

Best 3 animals, get of one bull—1, A. N. Griffin; 2, C. A. Archibald.

Best 2 animals, progeny of one cow—1, R. A. Snowball; 2, C. A. Archibald.

Best Breeder's Herd—1, R. A. Snowball; 2, I. M. Lovitt.

Best Graded Herd—1, C. A. Archibald; 2, R. A. Snowball.

HEREFORDS.

Bull, 3 years old and upwards— 1, W. W. Black; 2, Wm. O'Brien & Sons.

Bull, junior yearling—1, Thos. Aylward.

Bull, senior calf—1, W. W. Black.

Bull, junior calf—1, W. W. Black.

Cow, 4 years old and upwards—1, W. W. Black.

Cow, 3 years old—1, W. W. Black.

Heifer, 2 years old—1, W. W. Black.

Heifer, senior yearling—1, W. W. Black; 2, Wm. O'Brien & Sons.

Heifer, junior yearling—1, W. W. Black; 2, Wm. O'Brien & Sons.

Heifer, senior calf—1, W. W. Black.

Heifer, junior calf—1, W. W. Black.

Champion Bull—Diploma—W. W. Black.

Chamption Female—Diploma— W. W. Black.

Bull and 3 of his get—Diploma— W. W. Black.

Female and 2 of her offspring— W. W. Black.

Breeder's Aged Herd—1, W. W. Black.

Breeder's Young Herd—1, W. W. Black.

DEVONS.

All the first prizes in this class went to Wm. A. Pinkey, without competition.

GRADE BEEF CATTLE.

Cow, 4 years old and upwards— 1 and 2, W. W. Black; 2 and 4, Wm. O'Brien & Sons; 5, C. S. Congdon.

Cow, 3 years old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, C. S. Congdon.

Heifer, 2 years old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, C. S. Congdon.

Heifer, 1 year old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, Thos. Aylward.

Calf, under 1 year—1, W. W. Black; 2 and 3, Wm. O'Brien & Sons.

Steer, 3 years old—1, C. S. Congdon; 2 and 3, Wm. O'Brien & Sons.

Steer, 2 years old—1, C. S. Congdon; 2 and 3, Wm. O'Brien & Sons.

Steer, 2 years old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, E. S. Congdon.

Steer, 1 year old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, Thos. Aylward.

Calf, under 1 year—1, Wm. O'Brien & Sons; 2, W. W. Black; 3, Thos. Aylward.

Herd, consisting of 4 females, over 1 year old—1, W. W. Black; 2, Wm. O'Brien & Sons; 3, C. S. Congdon.

Cow and 3 of her progeny— Diploma—W. W. Black.

FAT CATTLE.

Ox or Steer, 3 years old—1, W. W. Black; 2, C. S. Congdon.

Steer, 2 years old—1, W. W. Black.

Steer, 1 year old—1, W. W. Black.

Cow or heifer, 3 years old—1 and 2, W. W. Black; 3, C. A. Archibald.

Heifer, 2 years old—1 and 2, W. W. Black; 3, C. A. Archibald.

Heifer, 1 year old—1 and 2, W. W. Black.

Heifer calf—1, W. W, Black; 2, C. A. Archibald.

Pair Fat Cattle, over 3 years old—1, Wm. O'Brien; 2, C. S. Congdon.

Pair Fat Cattle, under 3 years—1, W. W. Black; 2, Wm. O'Brien & Sons.

WORKING OXEN AND STEERS

Pair, 4 years old and over—1, C. S. Congdon; 2, Wm. O'Brien & Sons; 3, Thos. Aylward.

Pair, 3 years old—1, C. S. Congdon; 2, Victor W. Aylward.

Pair, 2, years old—1, C. S. Congdon; 2, Thos. Aylward.

Dairy Cattle

AYRSHIRES.

Bull, 3 years old and upwards —1, McIntyre Bros.; 2, M. H. Parlee; 3, Prescott Blanchard.

Bull, 2 years old—1, Allison McDonald.

Bull, senior yearling—1, McIntyre Bros.; 2, M. H. Parlee; 3, Easton Bros.

Bull, junior yearling—1, McIntyre Bros.

Bull, senior calf—1, Prescott Blanchard; 2, McIntyre Bros.; 3, Retson Bros.

Bull, junior calf—1, M. H. Parlee; 2, McIntyre Bros.; 3, Easton Bros.

Cow, 4 years old and upwards— 1 and 3, McIntyre Bros.; 2, C. A. Archibald.

Cow, 3 years old—1, Prescott Blanchard; 2, McIntyre Bros.; 3, Retson Bros.

Heifer, 2 years old—1, Easton Bros. 2, McIntyre Bros.; 3, Retson Bros.

Heifer, senior yearling—1, McIntyre Bros.; 2, Easton Bros.; 3, Prescott Blanchard.

Heifer, junior yearling—1, McIntyre Bros.; 2, Prescott Blanchard; 3, Retson Bros.

Heifer, senior calf—1, McIntyre Bros.; 2, Prescott Blanchard; 3, Retson Bros.

Heifer, junior calf—1, McIntyre Bros.; 2, Easton Bros.; 3, M. H. Parlee.

Champion Bull—Diploma—McInyre Bros.

Champion Female—Diploma— McIntyre Bros.

Four animals, get of 1 sire—1 and 2, McIntyre Bros.

Two animals, progeny of 1 cow—1, McIntyre Bros.; 2, Prescott Blanchard.

Breeder's Aged Herd—1, McIntyre Bros; 2, M. H. Parlee; 3, Prescott Blanchard.

Breeder's Young Herd—1, McIntyre Bros.; 2, Prescott Blanchard; 3, Easton Bros.

JERSEYS.

With the exception of second prize on bull, 2 years old, which went to Blake Bros.; all the first prizes in the Jersey class went to H. S. Pipes & Sons.

GUERESEYS.

Bull; 3 years old and upwards— 1, H. W. Corning; 2, Jas. McKenzie.

Bull, 2 years old—1, H. W. Corning; 2, A. H. Snide; 3, Roper Bros.

Bull, senior yearling—1, Hugh A. Dickson; 2, Roper Bros.; 3. D. G. McKay & Sons.

Bull, junior yearling—1, T. D. Blaikie; 2, John McDonald; 3, Roper Bros.

Bull, senior calf—1, H. W. Corning; 2, John McDonald; 3, Roper Bros.

Bull, junior calf—1, H. W. Corning; 2 and 3, D. G. McKay & Sons.

Cow, 4 years old and upwards— 1, Roper Bros.; 2, H. W. Corning; 3, H. A. Dickson.

Cow, 3 years old—1, H. A. Dickson; 2, John McDonald; 3, H. W. Corning.

Heifer, 2 years old—1, Roper Bros.; 2, D. G. McKay & Son; 3, H. A. Dickson.

Heifer, senior yearling—1, Roper Bros.; 2, 3, and 4, H. W. Corning.

Heifer, junior yearling—1 and 2, Roper Bros.; 3, H. W. Corning.

Heifer, senior calf—1, Roper Bros.; 2 and 3, H. A. Dickson.

Heifer, junior calf—1, H. W. Corning; 2 and 3, Roper Bros.

Champion Bull—Diploma— H. W. Corning.

Champion Female—Diploma— Roper Bros.

Bull, and 3 of his get—Diploma—H. W. Corning.

Female, and 2 of her offspring— Diploma—Roper Bros.

Breeders' Aged Herd—1, H. W. Corning; 2, Roper Bros.; 3, D. G. McKay & Son.

Breeders' Young Herd—1 and 3, H. W. Corning; 2, Hopper Bros.

(Continued on page 849)

Canning Vegetables in the Home.

One of the many problems that confront the housewife is the supply of vegetables for her table during the winter months. "What can I have for dinner today" is a question often heard. Since the advent of the modern greenhouse and the forcing the vegetables under glass fresh vegetables can usually be found at any time in the markets of the large cities. But the cost of forcing vegetables or growing them out of season is and will continue to be very great. This makes the price so high as almost to prohibit their use by people of moderate means, except as a luxury. A healthy diet, however, must include vegetables, and therefore the housewife turns to canning goods as the only alternative. These are sometimes poor substitutes for the fresh article, especially the cheaper commercial grades, which necessarily lack the delicate flavor of the fresh vegetable. There is practically no danger however, from contamination from tin or other metals, providing the containers are made of proper materials and handled carefully. In some cases the proper care is not taken in packing vegetables for market. The decayed and refuse portions are not so carefully removed as they should be and the requisite degree of cleanliness is not observed in their packing. Happily, however, such carelessness is not general.

Every housewife may run a miniature canning factory in her own kitchen, and on the farm this is especially economical and desirable, the economy being less pronounced in the case of city dwellers, who must buy their fruits and vegetables. Enough vegetables annually go to waste from the average farm garden to supply the table during the entire winter. But, usually the farmer's wife cans her tomatoes, preserves her fruits, and leaves her most wholesome and nutritious vegetables to decay in the field, under the impression that it is impossible to keep them. This is a great mistake. It is just as easy to keep corn or string beans as it is to keep tomatoes, if you know how.

May Lothian

Sweepstakes Clydesdale Mare at the 1912 St. John Exhibition.
Owned and exhibited by R. A. Snowball, Chatham, N. B.

THE SCIENCE OF STERILIZATION

The great secret of canning or preserving lies in complete sterilization. The air we breathe, the water we drink, all fruits and vegetables, are teeming with minute forms of life which we call bacteria, or molds of germs. These germs are practically the sole cause of decomposition or rotting. The exclusion of air from canned articles, which was formerly supposed to be so important, is unnecessary provided the air is sterile or free from germs. The exclusion of air is necessary only because in excluding it we exclude the germ. In other words, air which has been sterilized or freed from germs by heat or mechanical means can be passed continuously over canned articles without affecting them in the least. If a glass bottle is filled with some vegetable which ordinarily spoils very readily—for instance, string beans—and, instead of a cork, it is stoppered with a thick plug of raw cotton and heated until all the germ life is destroyed, the beans will keep indefinitely. The air can readily pass in and out of the bottle through the plug of cotton, while the germs from the outside air cannot pass through, but are caught and held in its meshes. This shows that germs and their spores or seeds are the only causes of spoilage that we have to deal with in canning.

Germs which cause decay may be divided into three classes—yeasts, molds, and bacteria. All three of these are themselves plants of a very low order, and all attack plants of a higher order in somewhat the same way. Every housewife is familiar with the yeast plant and its habits. It thrives in substances containing sugar, which it decomposes or breaks up into carbonic acid and alcohol. This fact is made use of in bread-making, as well as in the manufacture of distilled spirits. Yeasts are easily killed, so they can be left out of consideration in canning vegetables. Molds, like yeasts, thrive in mixtures containing sugar, as well as in acid vegetables, such as the tomato, where yeasts or bacteria readily grow. Although more resistant to heat than yeasts, they are usually killed in the temperature of boiling water. As a general rule, molds are likely to attack jellies and preserves and are not concerned with the spoiling of canned vegetables. The spoiling of vegetables is due promarily to bacteria.

Bacteria are also much more resistant to heat than yeasts. They thrive in products like milk and in meats and vegetables rich in protein, such as peas, beans, etc. All known species of molds require air in which to work. This is not true of bacteria, certain species of which will live and cause vegetables to decompose even when no air is present. When these particular species are present the exclusion of air is no safeguard against decay, unless the vegetable is first thoroughly sterilized. Bacteria are so small that they can only be seen with a microscope, and they reproduce themselves with amazing rapidity. One bacterium under favorable conditions will produce about twenty millions in the course of twenty four hours.

The reproduction of bacteria is brought about by one or two processes. The germ either divides itself into two parts, making two bacteria where one existed before, or else reproduces itself by means of spores. These spores may be compared with seeds of an ordinary plant, and they present the chief difficulty in canning vegetables. While the parent bacteria may be readily killed at the temperature of boiling water, the seeds retain their vitality a long time even at that temperature, and the newly formed bacteria will begin their destructive work. Therefore it is necessary, in order to completely sterilize a vegetable, to heat it to the boiling point of water and keep it at that temperature for about one hour, upon two or three successive days, or else keep it at a temperature of boiling water for a longer period of time—about five hours. The process of boiling upon successive days is the one that is always employed in scientific work and is much to be preferred. The boiling on the first day kills all the molds and practically all the bacteria, but does not kill the spores or seeds.

As soon as the jar cools, these seeds germinate and a fresh crop of bacteris begin work upon the vegetables. The boiling upon the second day kills this crop of bacteria before they have time to develop spores. The boiling upon the third day is not always necessary, but is advisable in order to be sure that the sterilization is complete. Among scientists this is called fractional sterilization, and this principle constitutes the whole secret of canning. If the housewife will only bear in mind, she will be able with a little ingenuity to can any meat, fruit or vegetable.

EXCLUSION OF AIR.

Even after sterilization is complete the work is not yet done. The spores of bacteria are so light that they float about in the air and settle upon almost everything. The air is alive with them. A bubble of air no larger than a pea may contain hundreds of them. Therefore it is necessary after sterilizing a jar of vegetables to exclude carefully all outside air. If one bacterium or one of its spores should get in and find a resting place, in the course of a few days the contents of the jar would spoil. This is why the exclusion of air is an important factor, not because the air itself does any damage, but because of the everpresent bacteria.

All of this may seem new-fashioned and unnecessary to some housekeepers. The writer has often heard it said: "My grandmother never did this, and she was the most successful woman at canning that I ever knew." Possibly so, but it must be remembered that grandmother made her preserves—delicious they were, too—and canned her tomatoes, but did not attempt to keep the most nutritious and most delicately flavored vegetables such as lima beans, string beans, okra, asparagus, or even corn.

SO-CALLED "PRESERVING POWDERS."

There are a great many brands of so-called "preserving powders" on the market. These are sold not only under advertised trade names but by druggists and peddlars everywhere. In the directions for use the housewife is told to fill the jar with the fruit or vegetable to be canned, to cover with water, and to add a teaspoonful of the powder. It is true that these powders may prevent the decay of the fruit or vegetable, but they also encourage uncleanly, careless work, and in the hands of inexperienced persons may be dangerous. While with small doses the influence may not be apparent in an adult in normal health, with a child or an invalid the effect may be of a serious nature. The proper way to sterilize is by means of heat, and as this can be done very easily and cheaply, the use of chemical preservatives in canning is not to be recommended.

KINDS OF JARS.

The first requisite for successful canning is a good jar. Glass is the most satisfactory. Tin is more or less soluble in the juices of fruit and vegetables. Even the most improved styles of tin cans which are lacquered on the inside to prevent the juice from coming in contact with the tin are open to this objection: While the amount of tin dissolved under these conditions is very small, enough does come through the lacquer and into the contents of the can to be detected in an ordinary analysis. While the small amount of tin may not be injurious, it gives an undesirable color to many canned articles. Tins cannot readily be used a second time, while glass with proper care will last indefinitely.

There are a great many kinds of glass jars on the market, many of them possessing certain distinct points of advantage. The screw-top, or Mason, is the one in most common use. Although cheap in price, these jars are the most expensive in the long run. The tops last only a few years and, being cheaply made, the breakage is usually greater than that of a better grade of jar. The tops also furnish an excellent hiding place for germs, which makes sterilization very difficult. An improved type of screw-top jar is fitted with a glass top held in place by a metal cover, which screws down over the neck of the jar. If the canning or sterilization is conducted properly, practically all of the air will be driven out of the jar by the steam. Upon cooling, this is condenced, a vacuum is formed on the inside, which clamps down the glass top against the rubber ring and seals the jar automatically. The metal cover can then be removed, as the pressure of the outside air will hold the glass top securely in place.

Another type of jar in common use require no rubber rings, but are fitted with a metal top, lacquered on both sides and having a groove around the lower edge. This groove contains a rubber which is melted during canning by the heat of the jar and forms a seal that takes the place of the rubber ring. These metal tops must be renewed each year, as it is necessary to puncture them in order to open the jar.

The most satisfactory jar that the writer has had any experience with has a rubber ring and glass top which is held in place by a single wire spring and is the kind used in the

(Continued on page 847.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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SEPTEMBER 24, 1912

DATES OF ISSUE.

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November.....5-19

THE GRADE COW.

There has been a great deal of controversy on the part of a few with regard to the grade dairy cow. The majority realize that the grade is the logical stepping stone that leads to success with pure breds but there are some who believe that she should have no place in the consideration of those who are interested in pure bred stock.

The former president of one breed association has gone so far as to state emphatically in two annual addresses that no registered bull should be used on a grade herd. This has created considerable discussion, a majority of those interested taking exception to his statement.

A glance at the work that has been done in any of the dairy cow contests should be sufficient proof of the value of grade stock. In Iowa one grade Guernsey and one grade Jersey made phenomenal records while a Holstein grade made a very good showing indeed, winning for her owner a registered Holstein bull calf. In Wisconsin the same thing is true and if one follows other contests to the close he will find that the grade cows are doing a great deal for their owners everywhere.

The average production of the cows of this country is less than 200 pounds of butter-fat per year. In fact, in many of the states it is less than 150 pounds, all of which proves that the cows that are being kept on the American farms are not stock that have been bred and developed as milk and butter-fat producers.

It has not been so very many years since the market for these commodities was limited and the market for meat practically unlimited. Naturally the farmers were interested in selling that for which there was the greatest demand and they have been slow to recognize the better market for dairy products and the greater economy and success in producing dairy products. The change is being made but it will of necessity be gradual.

On the majority of the farms the herds are made up mostly of a class of stock not adapted to dairying. This accounts for the small annual yield. If the use of registered bulls on such cows were to be prohibited the progress of dairying would be hindered and the farmers would be left either with the stock that they now have or they would be forced to buy pure bred stock exclusively. The latter would be impossible in the majority of cases.

The grade cow is the young dairy farmer's aid that helps him to better things. She is worthy of all honor and she should be well cared for. She is sure to be the means that will make it possible for a large majority of the farmers to break away from the unprofitable cow and establish herds that are sure to bring better returns. The grade cow is demonstrating her ability every day and she is worthy of the esteem of every right thinking man.

THE IGNORANT DAIRY FARMER.

We mean the farmer who is ignorant of the production of his cows. Do you know that there is a great host of such farmers? Every one of our agents who take the cow censuses will tell you that the farmers they visited were in ignorance of the yield per cow of their herds until the agent worked it out from the creamery books. Then, in many cases, they were greatly astonished at the low figures. They supposed really that the earnings were more.

How can farmers rest content in such ignorance? It is the cause of all their lack of good profit.

One old farmer said to one of our cow census agents the other day:

"Do you know that that report you made me of my herd first made me mad but when I went to the creamery books I found you were right, I felt pretty foolish over such a condition of things. You won't catch me in that way again. I am going to have a good dairy herd."

This man's ignorance of what his own cows were doing shocked him into life and action, you see.

COMFORT CONDUCIVE TO THRIFT

Much of a stockman's material success depends upon the completeness with which he surrounds his animals with healthful comforts. By this means he turns nature's assets into cash capital. A farm animal can endure great privation, living on scanty feed, drinking polluted water and braving the bluster of winter's storms or the severity of summer's sun, but it does not thrive on such a regimen. Mere existence of cattle, sheep, hogs, or horses seldom results in profit. There are few circumstances now, even in winter, when it pays to permit young stock to drift along without gaining. At this time of year, when the summer's production of green feed is reaching its most valuable stage, with plant cells stored full of nutritious materials, stock must be surrounded with comforts permitting the best use of feed for growth or fattening.

Cattle cannot suffer thirst without depressing their vital functions; sheep cannot pine for shade without checking their gains; hogs cannot travel far in the heat for feed and water and still lay on fat rapidly, and horses cannot stamp and switch at flies incessantly and still preserve that equanimity of spirit and steady work which delight the driver. It is not the fight against hardship but the enjoyment of comfort which conduces to the profitable use of feed. The energy which is dissipated in overcoming obstacles to existence is forever lost, but it requires feed to supply it just the same.

If a man wants to think out a difficult problem he seeks the cool shade in summer or the cozy fireside in winter and selects an easy chair. There his mind is free to work without distraction. If he desires restful sleep he likewise seeks freedom from all unpleasant sensations. He cannot sustain the nervous strain and the expenditure of energy necessary to bear discomfort and at the same time do justice to his duties. It is even so with stock.

A breeder who studies the secrets of his charges knows how highly they prize comfort. When they are happy and contented they grow and gain. And their needs are not difficult to understand. A successful breeder writes from his half century of experience that animals can talk and be easily understood by anybody who loves them and is observing. He has found that happiness counts with cattle as with men.

THE SPIRIT OF IMPROVEMENT.

Go into any manufacturing establishment in this country and ask the president of it what is his attitude toward improvement or betterment of the methods used and he will tell you, after a searching look of surprise that you should ask him such a question, that his institution pays money liberally for experiments that are searching in that direction. The fact is manufacturers and managers of all kinds of business recognize at once the necessity of maintaign a hospitable spirit and attitude toward all effort to improve their methods and thus increase their efficiency and income.

Now go upon many of the farms, too many, and ask of the proprietor that question or propose to demonstrate to him the necessity on his part of improving his methods and what will his attitude be? Will he assure you that he sets aside a certain sum from his revenue, to experiment with and demonstrate better methods? Will he welcome any of your proposed better methops? Hardly.

Now in reality every farm is a factory, where the desired product is worked out from raw material. Half the time the methods are crude and unfit. The material —like feed for the cow—is wasted. The machines—the cows—waste a good part of the raw material given them, for the reason that they are not built right for their purpose. They do not do efficient dairy work and cannot.

If a like wastefulness prevailed among the manufacturers, that prevails among the farmers, bankruptcy would come in short order. What is lacking with the farmer? Is it not the same spirit, the same ambition for better methods? Would a farmer go along, year after year, milking poor cows—wasteful machines—if he had that spirit? Thousands of farmers have taken on that spirit, as their farms, their buildings and their herds will show. But many more thousands are, as yet, scarcely touched with its quickening influence. They groan under their unprofitable burden; their discontent is seized upon by demagogic politicians to seek after political remedies, which means always—put "me", the politician in office.

But the great sovereign remedy, the spirit of improvement, better knowledge, better methods, they reject. There is no other way known under heaven for the betterment of the condition of the farmer. No other spirit can lead him out of his difficulties. If this spirit abides not with him, he waits in vain.

Some Turnips.

Editor Maritime Farmer:

In the spring of 1911 cutworms destroyed about three-quarters of our planting of Wax Beans and to fill the vacancies in transplanted Swede Turnips ("Steele Briggs' Perfection") about 12 to 15 inches apart. The enclosed photo shows a fair sample of the crop. The average weight of those shown, which completely filled the barrel, was 20 lbs., the largest weighing 24 lbs.

The ground where these were grown is a sandy loam, although we did not

Turnips—Eight to the Barrel.

considee it then in verg good condition. It had been in pasture for a number of years, was plowed in the spring of 1910 and summer fallowed. In spring, 1911, it was again plowed and planted to beans as already mentioned, using barn manure in the drills. The transplanting was done quite early and the cultivator was run through occasionally until about the middle of July, when the green beans were picked and no further cultivation done. Considering the dry season, we were rather agreeably surprised at the growth of the turnips. —F. W. Shortt, Orchard Hill Farm, Kings Co., N. B.

The Nova Scotia Agricultural College Reaches its First Epoch.

Seven years have elapsed since the Nova Scotia Agricultural College formally opened, and a second seven years has begun. A week of years has seen great progress, and impelled by this, the College authorities are now preparing for another week of still more prosperous years. Seven years ago, the attendance at the regular and short course of the college totalled 85. This year 450 have answered to the call, and building which were formerly thought ample, were this year crowded to the limit. So the authorities have answered to the call of the country, and as a result, the sound of carpenters and masons is to be heard on the college grounds at Truro.

The following additional buildings are now under way: An ell is being added to the main building that will double its capacity. The main feature of this ell will be an assembly hall 88x60 feet, affording one-half more seating capacity than the former hall which had become too small to seat even a short course class, let alone the visitors who from time to time attended the sessions. Over this hall will be erected two class rooms, larger than any in the college at the present time. The basement will afford accommodation for the rapidly growing pure seed department under the control of the experimentalist at the college. Provinces are also being made in this basement for ample cloak rooms and shower baths for the students.

Horticulture, too, will receive its proper attention in the contemplated additions, for work has already begun on a new horticultural building with greenhouses attached, which will be an ornament to the college premises and will afford a much better opportunity to give this department the prominence which it deserves in the Province of Nova Scotia. In connection with the horticultural building, provision will be made for an entomological department with a glass house attached, where insects can be bred and studied at all times of the year. In this connection, the college authorities are just now negotiating for a Professor of Zoology who shall also be a Provincial Entomologist, and who will in addition to lecturing at the college, take charge of the work connected with the control of insect pests in the province.

Nor is the stock end, for which the college has been so famous, being neglected, for there is now well under construction a horse barn built on the modern principles in which will be houses the magnificent stallions and brood mares, as well as the farm horses which visitors to the college farm have so often admired.

To keep pace with all this, the colleg authorities have had to purchase extra land, and during the past year, the farm has been increased to the extent of forty acres.

It is most encouraging to observe these evidences of progress in this eastern institution, and we look for the next seven years to show even greater results than the seven years that have just passed by.

Records of a Dairy Herd for Five Years.

The Storrs Agricultural Experiment Station of Connecticut has recently sent out a bulletin entitled "Records of a Dairy Herd for Five Years." It is written by Prof. J. M. Trueman, the dairy husbandman of the station. For real rock bottom facts it should be an eye-opener to many farmers throughout the country.

The station herd, consisting of about 30 cows of milking age, has been carefully managed for the past five years, with the object in view of finding out exactly how much it costs to produce milk and butter, and how much profit or loss there was in the dairy business. The herd is composed of about one-third Jerseys, one-fifth Holsteins, one-fifth Guernseys and a few Ayrshires, all purebred. Half a dozen grade Holsteins make up the total number. These cows have been fed a standard ration of 25 pounds of silage, 12 pounds mixed hay and two pounds each of bran, cornmeal, gluten and cotton-seed meal. It is just about what many of the more up-to-date dairymen are feeding. The average cost of the grain fed to each cow for the five years was $74.06. This was charging the commercial grains at $30 per ton, hay at $16, and silage at $4 a ton. The pasture was charged at the rate of $10 a cow for each year outside of the grain and roughage fed. This makes a total of $84.06 a cow for feed. Although many farmers do not realize the full amount of their feed bill, the cost of maintenance outside of feeding is the really surprising point in this bulletin. The progress of arriving at a fair and accurate figure for this maintenance seems to be worthy of thought for every dairyman. The bedding cost was $5 per year. The keep of a bull for the herd amounted to $3. The actual labor cost was $33 a year. Interest in money invested on cow and barn was $6.75; taxes, $1.25, insurance, 40 cents. Decoration on each cow per year actually amounted to $13. Incidentals, such as ice, medicine, etc., were another $2. These several items make the total come up to $65.

That the cost for keeping a cow one year outside of food consumed will be as high as this figure will be denied by many farmers. A close reading of this bulletin, however, will do anybody some good. Nothing was done in the management of the herd that is not absolutely necessary on every farm producing milk in a sanitary condition. Every single item of expense is charged, however, and right there is how the amount totals up so high. Nobody knows how many farmers work year after year feeding unprofitable cows and making a living simply because they put no value on their own or their families' time. Another point of interest is that Prof. Trueman denies the truth of the oft-repeated statement that a cow's manure pays for the labor required to keep her. These cows produced manure of which the average yearly value was only $13.50.

Now with these figures before us of average food cost $84 and maintenance other than feeding $65, let us see what these cows did. They gave an average yearly production of 6378.7 pounds of milk testing 4.4 per cent. butter fat, or they would have produced an average of 324 pounds of butter a year if the milk had all been used for making butter. These figures show that with this herd of cows much above the average farm here and allowing $15 to each cow a year for her manure and a calf, there was an average loss of over $10 a year on each cow kept when the milk was sold at the door wholesale for four cents a quart. With butter at 30 cents a pound, if all milk had been used for this purpose, the loss would have been heavier. If the milk was sold at five cents a quart there was the small average yearly gain of about $20 on each cow.

In this herd, the same as in all herds, it was found there was a wide difference in individuals. The greatest annual net profit above all mentioned expenses were made by a Holstein heifer. If this cow's milk had been sold at five cents a quart during the last three years of the test she would have averaged $78.93 profit for her owner a year. If her milk had been made into butter, however, and this sold at 30 cents a pound, she would have proved a failure as a profit maker. One Jersey made a net profit from this butter source of $55.60 one year. Several cows showed an average loss from the butter standpoint of $20 to $30 a year. One cow showed a profit from milk at four cents a quart one year of $22. Two years later she showed a loss of over $60 from the same source. Several cows showed losses as high as $40 or $50 when their milk sold at five cents a quart. Such cows were of course not kept in the heard another year. At the completion of the five years there were only six of the original herd in the test. This shows the weeding that was done to get rid of the unprofitable ones as well as the natural decrease of the herd. These six cows show an average yearly profit from their milk at five cents per quart of $80 for each year of the test.

To my mind such a record as this should induce every farmer keeping cows to find out for himself what each animal is doing. Should an able-bodied man be willing to keep and care for a cow a whole year for $13 worth of manure? I am afraid too many are doing it. To the dairyman who already runs his business so he knows these things such a record should urge him to strive harder to improve his herd through breeding. The average of the offspring can be no higher than the average of the parents. This is a maxim. Only by breeding the very best cows to a bull of the finest breeding obtainable will the average production of the farm herds be raised sufficiently to make dairying a really profitable business.

Live Stock Diseases in Canada.

Glanders is now well under control in every province of the Dominion with the exception of Saskatchewan where a determined effort is being made to cope with this exceedingly troublesome disease. A large force of inspectors was detailed for constant duty in this province, with the result that 722 horses were found to be diseased, and were slaughtered, as compared with 525 in the previous year. The enormous importations of American horses and the rapid growth of settlement over a large area are the two most difficult factors in the eradication of the disease. In the other provinces the number of horses slaughtered, 123, was practically the same as the preceding year.

Dourine or Maladie du Coit has shown a gratifying decrease, the number of horses quarantined in Alberta, the province which first occupied the attention of the department in this connection, being reduced from 600 to 100, and the animals slaughtered from 40 to12. Outbreaks have unfortunately been detected in Saskatchewan, resulting in the slaughter of five animals, and every effort is being made to eradicate the disease which, from its insidious nature, is most difficult of detection. Dr. Watson, one of the Pathologists of this branch, who has devoted a great deal of his time to the study of this disease at the Lethbridge Quarantine Station, has quite recently returned from a visit to the continent, where he familiarized himself with the most modern and improved technique for the diagnosis of this treacherous disease. With the knowledge thus gained, and the advantage derived through this opportunity of comparing his diagnostic methods with those of continental authorities, it will now be possible to arrange to put into practical effect the latest determinative methods for the detection of dourine in infected animals which show no manifestations of disease.

Mange of horses and cattle still demands attention in the range country, where the facilities for transmission of the disease are so apparent among animals running at large. Satisfactory progress is being made and I have every hope of being able to reduce the infected area, which are under quarantine restrictions, in the not far distant future.

Sheep scab shows a gratifying decrease, the only outbreaks during the year being in the Province of Quebec, where 41 animals were found to be affected. The animals comprising these outbreaks grazed together on the same pasture during the summer months, which limited very materially the infected area. The various premises where they were housed during the winter season have been repeatedly visited, inspected and thoroughly disinfected. The most stringent precautions were taken to ensure the prompt eradication of this disease, as well as to prevent the possibility of spreading infection. Sheep imported are closely watched, and every precaution taken to guard against the introduction of the disease from outside our boundaries.

Hog cholera has, I regret to say, made its appearance to a considerable extent in all the provinces west of Quebec, the infection having been introduced in every case by the feeding of hogs on uncooked garbage and hotel swill. 4,247 hogs were slaughtered, as compared with 1,346 during the previous year, most of these being in Ontario and Manitoba. In view of the source of infection of these outbreaks it was found advisable to amend the Hog Cholera Regulations, with a view to restricting the feeding of raw garbage. Compensation may now be forfeited in outbreaks traced to this cause, in cases where the owner persists in feeding this undesirable material after having been duly warned. All possible steps are now being taken to advise hog owners to thoroughly cook garbage before feeding, which I hope will have the desired effect of

(Continued on page 854)

HORTICULTURE.

Fall vs Spring Spraying.

Our eastern fruit growers sometimes ask why fall spraying of apple orchards, which is being largely practiced, I believe in British Columbia and the western states and to a small extent in some of the eastern states has neither been recommended nor practised in Ontario. It is because we have found in Ontario that our present method of spraying, if thoroughly done, gives us almost perfect control both of insect pests and of diseases. Therefore it is not necessary for fruitgrowers to make an extra application in the autumn after the leaves are all or nearly all off. To do so would mean a good deal of inconvenience, and would greatly increase the cost and labor of spraying, thereby lowering the profits of apple growing and discouraging the growers. Our aim is to secure the best results in the easiest, most practical and economical way.

If the fall application could take the place of our first spring application just before the buds burst, any person who found it more convenient to spray in the fall than in the spring might do so. But we cannot see how it is possible to do this, because the application is not made until the leaves have nearly all fallen, and by this time it is usually so cold that all growth, both of the trees and of the diseases that attack them has ceased; nature is, so to speak, dormant, or nearly so, and remains this way until the warm days of spring renew activity.

Fall spraying cannot destroy all the spores of disease, for many of them are enclosed in little protected pustules on the bark or leaves or fruit, and these often do not open until spring; moreover, in the spring the wind will bring spores for long distances, and these will lodge on the trees. By this time all the fall spray will have been washed off the trees, hence the early spring application will be just as necessary as ever to keep off our Ontario diseases. This is especially true of Black Rot Canker, which spreads in spring to a very large extent. To ward it off it is very important that before growth begins in the spring the bark of the trunk and main branches be thoroughly covered with lime-sulphur so that any wounds or winter injured areas may not afford lodging places where this fungus can germinate and establish itself.

So far as Apple Scab is concerned, neither the fall nor the early spring application seem necessary for control, though they might help slightly. The important sprays for it are (first) the one just before the blossoms open, and (second) just after the blossoms have fallen, and in very moist districts or in wet or foggy weather a third one about two or three weeks later.

INSECT CONTROL.

From the standpoint of the control of insects it is probable that fall spraying would give fairly good results though I do not see how it would be quite so effective as the early spring spray belore the buds burst. The main insects controlled by this spray are of course Oyster-Shell and San Jose scales and Blister Mite. A number of other insects are partially controlled by it but not entirely. In my experience it is a very desirable matter in the control of scale insects that the spray should remain on the tree as long as possible in the spring so that it will be there when the young insects appear. In this way, it seems to destroy a large number of these delicate little creatures. This could not take place if the application had been made in autumn as it would be washed off. Some claim that fall spraying is more effective than spring spraying against scale insects, but they have not been able so far as I know to demonstrate this, and the very opposite seems to be the case. We should remember, too, that winter itsell destroys over fifty per-cent. of most of our hibernating insect enemies, so that they are weakened greatly by the time the spring application is made.

WESTERN CONDITIONS.

Why then is fall spraying practised and advocated so strongly in the Pacific States and in British Columbia? It is, so far as I can discover, chiefly to keep under control a very troublesome fungus disease known as Apple Anthracnose which causes numerous destructive cankers on the smaller branches and twigs. The spores of this disease spread in the autumn and germinate during or shortly after the fall rains. Therefore to prevent their germination the plant pathologists recommend that the trees be sprayed about the time these rains are due, which seems to be early in October, and again as soon as the leaves fall or the crop is off. We have no Apple Anthranose disease in Ontario. It is believed that the earlier of these applications helps to prevent fresh attacks of apple scab in autumn, but it is not claimed by such a reliable authority as Prof. Cordley, of Oregon, that this alone will control apple scab for the rest of the season. He practises the same spring and summer sprayings as we do.

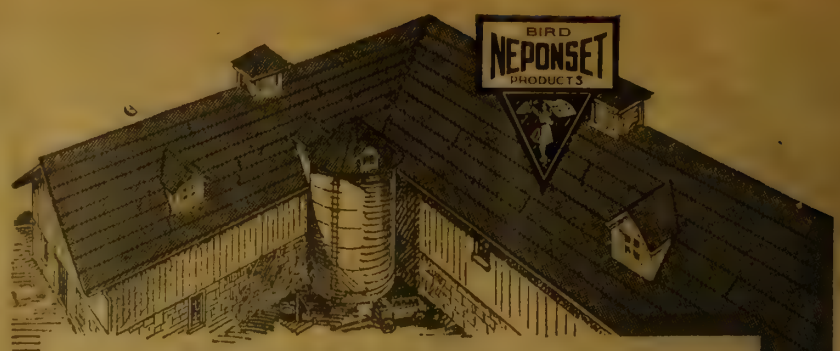
Thus, the main reason for fall spraying in the west, does not exist in Ontario. We should, moreover, remember that the climate of the Pacific coast is murh different from ours, and what may be necessary there may not be either necessary or desirable here. No harm, of course, could come from fall spraying in Ontario and anyone desiring to test it is running no risk. It certainly destroys many of the insects that a spring application would kill, and where an orchard is badly infested with Blister Mite or San Jose Scale or Oyster-shell Scale, it could be practised with much benefit until these were brought under control, but its proper place, in my opinion, is to supplement in this way and not to displace the early spring application. The proper mixture to use is lime-sulphur of the ordinary spring strength, without any arsenate of lead.

We should not forget that any system of spraying can be made more effective by proper pruning of trees and by careful cultivation of the orchard in the early part of the season, followed by a cover crop to prepare the wood for winter. These things help to make the trees themselves healthy, and allow free circulation of air and plenty of sunlight, all of which are important in the control of insects and diseases. The destruction of fallen fruit by hauling it to the evaporator or in any other way, is one of the best things that can be practised if we want clean apples.—L. Caesar, O. A. C., Guelph, Ont.

Thick Necks in Onions.

If the onions are making a large growth, but with large thick necks, large tops and poor bulbs, some of the most likely causes may be, too much water, improper soil conditions for onions, and poor seed.

In humid regions, if onions are grown on low wet land, having plenty of fertility, and the season happens to be rather wet, there is considerable likelihood that many of the onions will have large tops and thick necks. It seems that the use of so much water in irrigation could reasonably be expected to give the same result.



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Another trouble that may occur in some of the Western soils is that of the soil becoming hard after irrigation and preventing the proper development of the bulbs, and having other unfavorable effects which might increase a tendency toward thick necks. Soils which become hard after watering are best irrigated from deep furrows which are not allowed to become full, so that the water will rise to the surface by capillarity. To accomplish this would, of course, add much to the labor of irrigation. Such soil should be cultivated as soon after irrigation as the conditions will permit in order to keep the surface loose. It might be better not to attempt to grow onions on such soils. The trouble with soils of this character is insufficient vegetable matter in their composition. If alfalfa and other leguminous crops are grown on them their condition will be very much improved. They will become looser, much easier to handle, will not be so likely to suffer bad effects from irrigation, and will be in more favorable condition for the growth of subsequent crops.

Another factor that may cause onions to produce thick necks is that of allowing them to become very dry, perhaps for a considerable time, then giving an unusually heavy irrigation, which keeps the ground soaked up for some time. The plants after having been seriously checked in their development, which in itself has a tendency to prevent them from taking their proper course in development, shoot up at an unusually rapid rate when the water does come. Then in case an excessive quantity of water has been supplied, and the soil happens to be of a heavy nature so that the oversuppl y
that the over supply is retained for some time, the rapid growth of the onion which first took place may continue too long and thick necks be the result.

A partial explanation of the inability of onions to resist dry spells as compared with other crops is the fact that they are much shallower rooted than most other crops.

The matter of seed is also of considerable importance. Poor, cheap seed is much more likely to produce many thick necks than a good grade of seed' Some seed growers plant, for the production of seed, all bulbs, regardless of whether they have any bad tendencies or not. If many of the bulbs have a tendency to produce thick necks than an even larger proportion of the seed will have that tendency. Such seed will, of course, be poor seed. It can be sold at a low price because the expense of growing it has been low as compared with the cost of producing good seed. It costs money to sort out and discard onions which have bad tendencies when planting them for the production of seed, not only for the labor of sorting, but for the loss of the onions which are discarded. Such seed will obviously cost more to produce than poor seed.

Care of Plants.

Water is the conveyer of food to the plant. If this moisture is permitted to escape from the surfare by evaporation, it leaves the plant food at the surface. This food cannot nourish plants, because it is out of the range of their feeding roots. If the course of the moisture is through the plants, there is created a moisture current towards the roots, and the plant food is carried where it can be used to advantage. It will therefore appeal to any thinking person that measures should be adopted to prevent this moisture from being lost by evaporation.

The most practical and effective method is to establish and maintain a surface mulch of fine soil. By frequent use of implements of tillage which loosen the soil to a depth of two or three inches. So long as this mulch remains dry and loose, it serves its purpose well; but after each shower a crust will form, destroying the mulch, making a direct capillary connection between the lower moist earth and the atmosphere, which in a measure serves a purpose similar to a leak in a pail. The thing to be done, then, is to stop the evaporation leak by again breaking up the crust and creating the surface mulch by cultivation.

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The Toad as a Bug Destroyer.

Science offers a new solution for the bug problem. It is to employ in its professional capacity, so to speak, the toad—the ordinary hop-toad of the field and garden—as an insect destroyer.

In this business the humble toad is unequalled by any other living animal. He is the greatest bug exterminator in the world. It is entirely practicable to utilize his service on an extensive scale, employing him systematically as an ally to keep in check the insects which levy an annual tax of more than $8.000.000 upon our agricultural resources.

There is no reason why the farmers of the country should not hatch and rear their own supply of toads for local services. With a pond of even a small pool insured against drying up during late spring the creatures will breed of their own accord in any desired numbers up to the limit of the food supply available in the shape of insects. But one thing absolutely essential is that they shall be protected against their natural enemies, and by no means the least destructive of their enemies are small boys, who through mere thoughtlessness kill toads whenever they get a chance. It is estimated that an average toad is worth to the farmer $5. a year for the cut-worms alone which it destroys. But this is only one item. The amount a toad will eat is astonishing. A large specimen has been known to devour a hundred rose beetles at one single meal. One toad needed seventy-seven myriapods—the common household centipede—to satisfy his appetite another fifty-five army worms and yet another sixty-five gypsy moth caterpillars. Still another toad was seen to eat thirty-five large, full grown celery worms in three hours, while another accepted eighty-six flies fed to him in less than ten minutes.

It is a common thing when the occupants of an ant's nest are swarming and the insects are emerging in large numbers to see an enterprising toad sit at the entrance of the burrow and snap up every ant that comes out. The slaughter he accomplishes under such circumstances is frightful. But of course most ants are not reckoned as insects injurious to man; and the toad unquestionably destroys some species which are beneficial to the farmer. Upon the whole he is immensely useful, devouring countless numbers of the very worst bug foes of the crops.

Cultivate the Late Cabbage.

The late cabbage crop cannot well be cultivated too much. Cultivation and liberal supplies of available plant food are the main essentials to success after plants are set.

When time and work permits I cultivate my cabbage field every other day. I do not practice surface scratching as done by some growers, but get into the field with a double or a single shovel and dig down into the earth, turn it over, throwing it up against the stems, fairly shoveling the plants out of their place in the row.

When plants are set so they may be cultivated the cross way all the better. There is no excuse for weeds in the cabbage patch. Go over and cut out with hoe or cultivator when the plants are small.

I continue the cultivation until plants are well headed. If the horse or cultivator breaks off a few or even a good many of the outer leaves the damage is much less than the good done the crop by cultivation.

If too rapid growth is indicated by the heads starting to burst the trouble may be remedied by breaking the stalk over to one side and running a small moldboard plow along one side of the row, cutting off and exposing half of the root system, which will check the heads from bursting, while not injuring the vitality of the plant. —J. A. Bewson.

Fruit Growers' Reminders.

Canadian fruit growers are reminded in Bulletin No. 11, entitled "The Inspection and Sale Act, Part 9, and Amendment of 1907-8 and General Notes," that the Inspection and Sale Act prescribes the following:

1. That every closed package (box or barrel) must be plainly and indelibly marked with

(a) the name and address of the packer,

(b) the name of the variety, and

(c) the grade.

2. That the word "Fancy" or the numerals, No. 1, No. 2, or No. 3, must be used to designate the different grades.

3. That (a) Fancy grade must be perfect fruit.

(b) No. 1 grade must be 90 per cent. free from all defects.

(c) No. 2 must be 80 per cent. free from defects causing material waste, and containing no culls.

4. That the faced or shown surface to be the same grade of fruit as the rest of the package.

5. That the minimum size of the apple barrel is: 26½ inches between the heads, inside measure, a head diameter of 17 inches, and middle diameter of 18½ inches.

6. That the apple box must be 10 inches in depth, 11 inches in width and 20 inches in length, inside measurement.

NOTE.—The Act provides a severe penalty for the alteration, effacement or obliteration of marks on any package which has undergone inspection.

Meals!

LOTS of home baked bread, cake and pastry are always welcome. But baking is not *always* an easy job. Perhaps we can help you. Here is a truth backed by honest *proof*.

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Try Regal once. If it is not just as good as we have promised, your dealer will return your money. We then have to pay him back. So unless you like Regal we lose completely. Isn't it fair to expect that Regal will mean easier, nicer meals?

THE LAWRENCE FLOUR MILLS CO. Limited
W. Williamson

Fruit Drying House Profitable.

The construction of a permanent drying house is simple, or the principle such as I visited recently may be applied to a part of a building already on the farm. Briefly, the house was 15 feet square and much taller than square, that the heat might be longer in passing out. For perhaps 4 feet from the floor the space was unoccupied, thus permitting area for action, like keeping up fire, bringing in and distributing fruit on the screens, etc.

From this distance to the top it was a network of skeleton shelves for holding screens made of galvanized net tacked to slats. For coarse fruits like apples, screens made of slats only will do if spaces are left between them. The plan is to keep a high temperature that is dry in the house, and establish with it a draft, that all moisture may be elevated with the rising heat and passed out of the slatwork cupola at the top. More or less fire will have to be kept going, depending upon the weather. If cool, or warm and moist, enough heat must be maintained to rapidly dry the fruit. The top ventilator must be under control, that it may be opened more or less as needed. At the bottom, windows or shutters are regulated to correspond, that air may enter in greater or less volume.

The house I inspected belonged to a canning factory and was built for the purpose. Here all imperfect fruit was dried as well as the apple parings and cores. I was told that these were exported to countries where apples are rare and that from them was made apple butter and other commodities; that they brought a price per ton that well repaid the expense of drying and shipping. This constitutes a hint that should set the big apple farmer thinking. The tree trimmings and waste wood on every place will dry hundreds of bushels of second and third grade apples and peaches which may be prepared for the drier merely by quartering or by slicing or crushing, and spreading. Artificial drying is superior to natural, because of its speed and cleanliness, since it excludes flies and other insects.—Hollister Sage.

Careful Handling of Fruit.

Careful handling of the fruit that goes into storage is perhaps the most important part in establishing the keeping quality, if it is planned to hold it in cold storage. Fruit that is in any way injured in picking, packing or handling will have poor keeping qualities. In handling fruit we must avoid every possible chance of breaking the skin. As soon as the skin is broken, the fruit is at once infected with germs that spring into activity and begin to develop decay. So long as the skin is not injured there is little danger of decay.

The emptying of the fruit from utensils used in picking into the baskets, boxes or barrels should be carefully done. All baskets used for picking should be lined with cloth or burlap. Some apple growers use bags for picking, but they are not to be recommended, as the constant moving about of the fruit in the bag punctures the fruit with the stems and this is equally true with baskets unless care is taken in handling and emptying.

This is the season for saving fruits for winter use. Every home should have an abundant supply of canned, preserved and dry fruits. Then there are the preserves, the jellies, the jam, the pickles and the various other delicious articles into which fruits may be converted.

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DAIRYING.

Variation in the Composition of Cows Milk With Advance of Lactation.

In the last few years a large amount of experimental work has been carried out to ascertain the influence of various factors upon the amount and quality of milk yielded by cows, and incidentally it has been clearly demonstrated that there is great variation in the composition of milk produced under ordinary conditions. Very little reliable information is, however, available as to the general trend of the changes in the composition of cow's milk throughout the whole course of lactation. A summary is therefore given of the information obtained on this point during three years from fortnightly tests of the milk of each cow in the herd at the experimental farm at Garforth. The records for the three years include seventy completed periods of lactation, of which fifty-seven have been utilized.

Variation in Yield of Milk.—Taking the averages of all the cows, the calvings of which were spread over the whole year, the records show a slight rise during the first few weeks followed by a steady and fairly regular fall. The average reached its maximum about the end of the first month, but in some cases the yield tended to rise for much longer than this, in one case for fully twelve weeks. The time of year at which the cows calved was found to have a considerable influence on the rate of decline in the milk yield. In the case of cows calving in the period from December to February, the yield fell steadily, but not rapidly until April, then remained fairly constant throughout May and June, after which it fell steadily again. The latter part of June or the beginning of July was the critical period also in the case of cows calving in the period from March to June. In the case of July calvers the yield fell steadily right through the lactation until in the May of the following year they were on pasture once more. Cows calving in the months August to November showed a fairly rapid drop to about an average yield, which was then surprisingly well maintained until in the following July the deficiencies of pasture began to produce their effects.

Taking the averages of the whole period the calvings that fell in the months December to February proved the most profitable in milk yield, and April calvings the least profitable. Of the thirteen lactations commencing in April not one lasted more that thirty-six weeks.

Variation in Percentage of Fat.—In most cases the percentage of fat fell somewhat rapidly during the first month or six weeks, then remained fairly constant up to the fourth or fifth month, after which a steady ride set in, which in some cases was greatly accentuated during the last week or two of lactation. In only one case did the percentage of fat fall steadily throughout the latter stages of lactation. The average percentage of fat was lowest in the fourth month after calving.

An analysis of the records showed considerable variation according to the time of year at which the cows calved. Winter calvers reached the lowest point in the fifth month; in the case of March calvers it was reached in the third month, and in the case of April calvers in the second month. In all these cases the worst time corresponded roughly with Summer calves (May to September) the first half of the pasturage season. differed from the others in that there was not so pronounced a change in the percentage of fat at any period, the range in the monthly averages being only from 3.82 to 4.25 per cent. As far as general conclusions can be drawn from the number of lactations investigated, it appears that the percentage of fat will generally be lowest in the first part ol the pasturage season, except in the case of cows which are far advanced in lactation when turned out in spring.

Variation in Percentage of Solids-not-Fat.—With regard to solids-not-fat, the records of individual cows show considerable differences, which is not surprising in view of the variety of substances included in the term. During the earlier stages of lactation the variations in solids-not .fat were similar during the first two months and then remaining fairly steady for three or four months. After this, however, the tendency was for the solids-not-fat to fall, though there was perhaps a slight rise during the last two months.

The fall in the percentage of the solids-not-fat during the second half of the period of lactation was due to the steady decrease in the amount of sugar after the first month or so; the variation in the proportion of albuminoids is precisely similar to that in the amount of fat, while the ash remains remarkably constant throughout the whole period.—From the Journal of the Board of Agriculture, June, 1912.

Will Cows That Freshen in the Fall Yield More Milk Than Those Freshening in the Spring?

This question, the writer or any other person cannot answer, and have the answer correct in different localities, and under different conditions. In South Dakota, and probably in other central west states, the writer feels safe in making the statement that a cow freshening in the fall will give more milv than the same or a similar cow will give when freshening in the spring.

This statement may be somewhat of a surprise to some of the readers as some consider the northwest unfavorable for dairy farming due to the long and rather hard winters.

A stage in dairy farming has been reached, when winter climatic conditions can better be controlled than can summer conditions. It is easier and cheaper to protect a dairy cow from excessive cold than it is to protect her from excessive heat.

Hot weather is undesirable for cows, but worst of all is that such weather is accompanied with cow pests of various kinds, such as flies in the daytime, and mosquitoes at night. In the writer's experience, there is nothing so effective in drying a cow as hot weather plus flies and mosquitoes.

True it is, that we now have fly repelling preparations that can be sprayed on the cows, and in that way alleviate the cows from flies during milking time and in part during the day. The writer has yet to find a substance which will keep the flies away over about an hour after it has been put on. These fly repellers are quite effective and practical to use on the cows in the barn just previous to milking; but they are less effective and practical for keeping the flies off during the whole day in the pasture. As to mosquito repellers, the writer has found nothing that can be used at a reasonable cost.

In addition, many pastures are short of good feed during a large part of the summer. This of course can be overcome by supplementing with silage or some soiling crop. Under average dairy farm conditions, fall, than when freshening in the this latter is not practiced.

The dairy farmers of the northwest are extremely busy with their crops during the summer months.. There is a strong temptation to neglect their cows during this part of the year. Every dairyman knows what this means when milking time comes. It means less milk.

The writer is fully aware that a cow freshening in the spring will yield a maximum amount of milk during the spring months when pastures are green, weather favorable and no mosquitoes and flies to trouble the cows. These conditions are however of short duration. When the un' favorable summer conditions come on, the cow drops off in her milk flow. When a cow once has dropped in milk it is difficult to get her back to her normal flow.

The final result is that the annual milk flow from a spring cow is less than when she freshens in the fall.

The dairy farmers of the northwest are rapidly getting wise to the use of silage as a cow feed. Thousands of silos are sold and built in South Dakota this year. With good silage as a succulent winter feed, a well ventilated, lighted, and comfortable barn and plenty of good care, the cow freshening in the fall will give a good uniform flow of milk under winter conditions. When the cow is turned in pasture, she will increase her milk flow. When the unfavorable summer conditions come on, she will go dry almost at once. This is desirable, as a cow should have about two months rest during the year. The time to give the dairy cow her vacation is when the farmer is busy harvesting his crop, and when the flies, mosquitoes, hot weather, and dry pasture will not let the cow do her best as a milk producer.

According to records on hand, the writer feels safe in saying that a cow in South Dakota and other states having similar conditions will yield at least 20 per cent. more milk during the year, when freshening in the spring. —C. Larsen, Professor Dairy Husbandry., South Dakota State College in Hoards Dairyman.

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Integrity in Farm Milk.

The sensational dailies delight to print stories about the illness or death of babies in the slums, laying the blame entirely to "impure milk." Now, why is it that milk-fed infants on the farm thrive, while babies in the city, fed on the same milk, pine away? To ask this question is to demonstrate the answer. The trouble was not in the milk as it left the farm. If the milk receives proper care in transit, if it is handled in a sanitary manner from the time it reaches the city until it is put into the household of the consumer, and if there it is properly taken care of, seldom will milk be responsible for any form of illness in either young or old. If city and state boards of health would direct their attention to the care of the milk from the time it leaves the farm until it is actually consumed, they would have much to learn.

Some years ago it was fashionable among a certain class of doctors and other sensation mongers to attribute the spread of tuberculosis to milk. This theory has been knocked into a cocked hat by showing that during the past half century, although the per capita consumption of milk in certain cities had more than doubled, deaths from consumption had fallen one-half.

There is hardly a producer of milk for market but what wishes to make a good, pure article; he wants to liver it to the railroad or peddler. But it is wicked to hold the producer responsible for any deterioration that occurs in the milk after it leaves the farm. The farmer is perfectly willing to go to any expense to make sanitary milk, even to the extent of tiled stables, provided he can get a price care for it in the right way, and de-

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GOVERNMENT EXPERT

Chooses

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Preston, Ontario, May 28, 1912.—Some years ago we selected the Sharples Tubular. After a few years' use we found it necessary to get another separator for another farm and selected a No. 6. After several years' service of these two machines, we would not think of introducing anything else on our third farm, recently purchased. ANSON GROH.

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for the milk that will return 5 per cent on the added investment. It is high time that certain city officials and sanitarians quit libeling the farmer, unless they want to be haled into court and made to prove their statements.

Impure Salt in Butter.

The flavor of butter is often spoiled by the use of impure salt. This is especially true in ranch butter. After analyzing the flavor of many samples of ranch butter the writer has found bad flavors where undoubtedly the cause was due to impurities in the salt. Too often a very common grade of salt is used in salting butter on the ranch. In the creamery a good grade of dairy salt is more commonly used. These impurities may consist of organic filth or may be mineral in nature.

Magnesium chloride is the most common of an organic nature in salt which is liable to affect the quality of the butter, as compared with pure salt, sodium chloride, it does not dissolve as readily and has a bitter flavor. These two properties are both detrimental in the butter. The bitterness destroys the good flavor of the butter, and salt which does not go into solution requires that either the butter be overworked or that the salt be left in a gritty condition in the butter.

Other impurities in the salt such as specks of dirt not only injure the appearance of the butter but often imparts undesirable flavor and bacteria to the butter. The appearance of the butter goes a long way toward helping or destroying the sale of the butter. Then the dirt is liable also to have a bad effect upon the flavor of the butter. Flavor is the one quality which butter fat has over other fats and is that quality which causes it to sell at so high a figure above other common fats. If this good quality is destroyed the value of the butter is materially lessened.

Butter fat is too high priced and good dairy salt is too cheap to make it advisable to spoil the flavor of the butter by the use of an inferior grade of salt. Not only will the quality of butter be improved by the use of salt but there will also be less trouble in getting the salt dissolved and evenly distributed in the butter. The use of good dairy salt is one way in which much of our ranch butter could be greatly improved. If local dealers do not handle good pure dairy salt the same may be purchased from any of the leading dairy supply houses.

One Reason Why Holsteins are Popular

Editor The Maritime Farmer;—

Probably the most prosperous farmer in the rich county of Brant, Ont. is Mr. S. G. Kitchen. The ownership and direction of a half-dozen farms does not afford scope for his keen business instincts, and he is heavily interested in manufacturing and other organizations more or less connected with agriculture.

For years Mr. Kitchen owned a large cheese and butter factory and was a very close observer of the amounts of milk and fat supplied by his patrons in porportion to the number of cows kept. It did not take long to convince him that owners of Holsteins and Holstein grades were the men who were making the most out of their cows.

About seven years ago Mr. Kitchen purchased some 25 pure bred Holstein-Friesian heifers as the foundation of a working dairy herd. No effort has been made to sell stock, all the females being retained in the herd.

After trying nearly all the popular breeds, Mr. Kitchen is thoroughly satisfied of the superiority of the Holsteins as machines for profitably converting the rough fodders and other feedstuffs commonly found on Canadian farms into first class milk.

It has been his experience that, with the Black-and-Whites, ten out of twelve heifers will turn out to be excellent cows. With the other breeds the proportion is just about reversed, perhaps two out of twelve will turn out well. Other dairy farmers have had the same experience, and this very fact goes a long way toward explaining the extraordinary advance in popularity of the Holstein-Friesian breed during the last ten years.

Mr. Kitchen has investigated the milking Shorthorns in their English homes, and has tried dairying with Shorthorns in Canada. It is his opinion that it would be a great mistake to endeavor to again popularize this breed in the great districts now almost entirely given over to the special-purpose dairy cow.—G. W. Clemons.

Keeping a Cow From Sucking Herself.

A very satisfactory device to keep a cow from sucking herself is made as follows: Make two collars of hoop or strap iron, one to fit just back of the jaw, the other just in front of the shoulder, joining them with two or three small rods (¾ in. preferred) on each side, leaving it open in the bottom and fastening in place by bolts. It is effective and does not bother the cow except when fighting flies. It should not be made too long or too tight.—W. H. Thompson.

Special Purpose Cows.

Writing some time ago in the Breeders' Gazette, anent the subject dealing with special purpose cows, Walter A. Cook says:

"We want cows that are useful in life and we want cows that are useful when dead, but if we try to keep cows that are useful both in life and death, we are very liable to be led astray as far as finances go. That a cow must come to her "inevitable end" is true, but at that "time" she is not always in the best condition to use for beef. If we wait for her to reach that point we will most surely find that she is good for nothing but to fertilize the land."

Signs of a Good Gow.

A writer in a farm exchange cites what he is pleased to call the extra signs of a good cow. What do you think they are? He says they are; 1. An owner with a kind and sympathetic heart for a cow, a born love for the animals. 2. Comfort spelled in capitals at every turn. 3. A silo. 4. Plenty of good feed. 5. Giving the cow the right kind of a father. 6. Testing her and keeping a record.

All these signs, he says, belong to a good cow and a good cow thrives on them amazingly, so that if they are freely granted her she would be ashamed to be anything else than a good cow.

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THERE are two features that make a separator a good investment: close skimming and durability. Easy cleaning and easy turning are important, but not as important as the power to get all the butter fat and keep on doing it for many years.

I H C Cream Separators will make good under the most severe skimming test. If you will compare their construction with that of any other separator you will see why. Extra strong shafts and spindles, spiral cut gears, phosphor bronze bushings, thorough protection against dirt or grit getting into the working parts, and perfect oiling facilities, are the features that make these separators good for long service.

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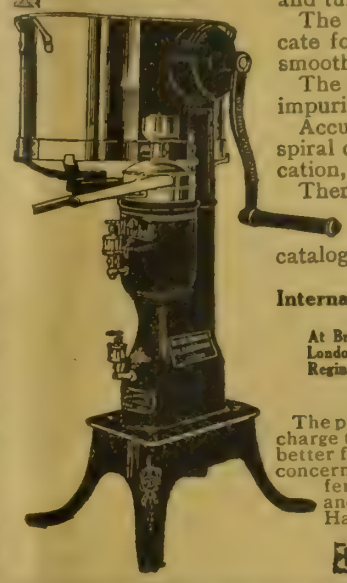
are close skimmers and built to last, and at the same time are easy to clean and turn. The reasons are these:



The interior of the bowl is entirely free from intricate forms of construction. Every part has a plain, smooth surface, to which dirt and milk do not adhere.

The dirt arrester chamber removes the undissolved impurities from the milk before separation begins.

Accurate designing and fitting of all moving parts, spiral cut gears, convenient crank, and thorough lubrication, make these separators easy to turn.

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LIVE STOCK.

Removing Foreign Bodies From the Eyes.

Some weeks ago "Cornishman" wrote concerning a statement he had seen in Farm And Home relative to the cruelty associated with blowing a sharp powder into a bullock's eye to cut the film which grows over it when the caving or husk of oats gets into the eye. Something was said in the paragraph about putting some liquid in the eye, but the recipe was not given. He adds: "As I got a lot of cattle affected in this way, I should be delighted to hear of a more humane treatment."

We have not been able to find the note referred to, but have concluded, as the question is one of considerable importance, that it may be useful to say something about the best means of removing foreign bodies from the eyes. Cattle, of all animals of the farm, are the most liable to this trouble, and their liability is increased when they are brought into the yards, and they are fed with oat-straw, or the "cavings" and refuse of the thrashing machine is thrown to them to pick over and trample into muck.

The wind is apt to blow the husks about, and when a piece enters the eye, the tears and the "haw" are not equal to removing it as they remove particles of dust and dirt, because, being thin and flat, the husk adheres closely to the membrane covering the eyeball, and the "haw" in passing over it fails to pick it up. If allowed to remain there for any length of time, the "chaff" or "caving" sets up irritation and inflammation of the conjunctiva, and, unless at once attended to, this may be succeeded by opacity and ulceration of the cornea, and sometimes total blindness.

SYMPTOMS.

The first symptom observable is that of profuse weeping—tears running down the cheek, wetting and discoloring it, while there is an intolerance of light, which causes the animal partially or completely to close the lids. On examining the eye, there will be found an opacity of the cornea at the spot where the chaff has laid for any length of time. The "film" referred to by "Cornishman." This spot may vary from white to a bright yellow or deep red, and in cases of any standing the whole of the conjunctiva will be inflamed, and the "caving" encysted, or, as the cowman expresses it, "a skin grows over it." The eyeball is covered with a membrane which is a continuation of that lining the lids, and it is this membrane, called the conjunctiva, which first becomes inflamed.

The bovine, in common with other quadrupeds, has an appendage to the eye, which is popularly known as the "haw," and about the functions of the "haw" there unfortunately exists a good deal of misapprehension. Ignorance has even invented a disease of this indispensable appendage, and the "haw", when inflamed, has been brutally cut out. This cartilaginous and membranous structure—a part is embranous and the remainder of adenser material like cartilage—is known to anatomists as the cartilago nictitans, or membrana nictitans, and its office is to protect the eyeball by being suddenly projected as a guard, and to remove flies, insects, and other foreign bodies by being passed over the eye, acting as a sweeper, and carrying the offending particles towards the lachrymal duct.

TREATMENT.

But when we want to remove a "chaff" or similar body from a cow's eye we find this nictitating membrane rather in the way, for, on attempting an examination, the eyeball is retracted by a powerful muscle, which draws it back over the cushion of fat behind it, and the "haw" is protruded in such a manner as to hide the object of the search. Occasionally it may be detected by separating the lids with the finger and thumb, or partially everting the lids, but the rapid retracting of the eye and the protruding of the "haw" generally defeats the effort, and complicates the examination of those who do not possess both skill and patience, unless a solution of cocaine hydrochlorate is used to produce local anaesthesia. The cost of this remarkable drug restricts its extensive use, and it is not found in the farm medicine chest, but with it local anaesthesia can be produced in five minutes, and when insensibility is secured it lasts long enough to permit of even formidable operations on the eye without pain.

The method ordinarily adopted by the stockman are commonly wanting in success. He gets an assistant, who holds the bullock by the nose and horn, turning the injured eye uppermost and towards the light. When he comes to look for the chaff there is nothing of the kind to be seen—only a white globe covered with highly injected blood-vessels. If the visual portion of the eye is not so retracted and the chaff can be detected, the horse-hair or silk handkerchief he uses is not very efficient for removing a body that sticks so closely to the conjunctiva as an oat "caving" that has been in the eye for two or three days. A much better plan than this is for the assistant to hold the animal's head steadily in the natural position, not turning it toward the light, but rathes away from its direct rays.

The operator should then stoop down so as to get on to a level with the eye, and patiently watch his opportunity. Presently the retractor muscle will cease to act, and the membrana nictitans be withdrawn, and then, if the chaff is fairly central—as it generally is—he can, by a quick movement, touch it lightly with a forefinger previously dipped in Venetian turpentine. This being more adhesive than the membrane of the eye, the chaff wil, stick to the point of the finger. If it is found necessary to evert the lids, it can be better done in the position described, and removal can then be effected in the same way. Only a very small quantity of Venetian turpentine is necessary, and a pennyworth, if kept closely covered and in a cool place, will last for years. It is sufficient just to touch its surface with the tip of the finger, and a small pot of it should form part of the fodderman's equipment where straw or "cavings" are being fed or put into yard. A small quantity of cocaine solution greatly simplifies examination and removal, as the operation is then quite painless—an advantage where the case is of some standing. After the "chaff" has been removed much relief may be afforded, and the inflammation abated, by excluding the light, fomenting the damaged eye with a warm decoction of poppy-heads, and applying a little lead of zinc lotion.—Pateley Bridge in Farm And Home.

Fresh meat is always in demand for the farm home. Every farmer should raise a few pigs, a few calves and a few lambs to supply his table occasionally with fresh meat. Usually the surplus in warm weather, when it is a difficult matter to keep it, may be disposed of at a fair profit to your neighbors who are also desirous of having fresh meat occasionally. If a pasture be available, the cost of raising three animals will be small.

Disenfecting a Barn.

J. McD., Pictou, N. S.—I wish to disinfect my barns, which I have recently bought, so as to render them safe from any previous disease which may have existed in them. Will you advise me what to do and how to do it. I want to make it absolutely safe if possible.

Before disinfecting, the walls, ceilings, floors, and mangers, in fact, everything in the stable, should be thoroughly cleaned. There are a number of effective ways of disinfecting a barn. One method is as follows:

After thoroughly cleaning the barn, sprinkle all parts of it with a solution of some coal tar product which may be obtained from a local drug store. After this is done, thoroughly whitewash the ceiling, walls, mangers and floors. In preparing quick lime, add a pint and a half of water to each quart of lime, or by weight, 60 parts of water to 100 parts of lime. The result is hydrate of lime, a dry powder. One quart of this is mixed with four quarts of water. This mixture must be used immediately to have any germicidal power. It may, however, be held two or three days if kept tightly corked, but air-slaked lime, in a mixture of water and quick lime, that has been exposed to the air for several days, has no value as a germicide. This is due to the fact that the material becomes changed into the carbonate form of lime. It has been found very effective to add some of the coal tar products, such as zenoleum, to the lime mixture.

The best way to apply the lime is with a spray nozzle which is quicker and more economical than trying to put it on the walls, ceiling and floor of the barn with a brush. If the lime is applied with a spray nozzle it must be strained through a small wire sieve, for lumps will clog the nozzle unless it is strained.

Selecting the Dairy Sire.

A farm was visited a few days ago where half a dozen high-grade Holstein cows were being milked. They were fairly good cows, lacking in a few essential points. The past year's sale record showed an average of 6,000 pounds of milk per cow notwithstanding the fact that some were used on the farm. They were such cows as would respond to a grading-up process. Calves from them sired by a high-class bull would undoubtedly make dairy cattle of the profitable sort.

The bull in use on the farm was a sorry disappointment, a pure-bred Holstein and purchased for $25. He was undersized and lacking in type and all other essentials of a good dairy sire. The owner cannot with reason expect improvement through such a bull. No one seeing the bull would care to buy calves from that farm. The fact in itself that the bull is a pure-bred made him undesirable in at least one sense. He is more likely to transmit the undesirable characteristics that he posses than if he were a grade. Of course there is a possibility that some of the strong blood in his ancestry will reappear. However, chances of that are so small that they weigh very little in the balance against the almost certain transmission of qualities undesirable.

The owner may argue economy, saying that with a few cows he cannot afford to pay more than $25 for a bull. In his own small herd he expects to keep a bull long enough to secure about twenty calves. Now a first-class bull calf could have been purchased for $75. The additional cost would have been $2.50 upon each of the progeny. Certainly the value in the dairy or for sale would have been many times that difference. Then there is the ever-present opportunity to breed cows for nearby farmers who have only a few cows. No one would take a cow to the $25 bull except as a last resort.

It was quite different from another place visited not long ago. The owner of that farm possessed one pure-bred Guernsey heifer and three or four grades. Partly to gratify a personal desire for good ttock and partly to supply a good bull for the locality, he had purchased a $300 pure-bred Guernsey bull. His book showed that in one season he had bred more than fifty cows for his neighbors. At $3 per cow it would require only about three seasons for the bull to pay for himself and his keep. Indications were that a much larger number of cows would be taken to him during the next year.

A plan that is enabling small farmers to secure the use of a high-class bull is for several to co-operate in the purchase of a bull. The cost is reduced proportionately and the labor required in leading the cows away from the farm for service is more than offset by the decreased cost of keeping the bull. This plan is being followed very successfully in many places and is meeting with marked favor by those engaged in it and by every one who has had the opportunity to observe it closely.

Then the plan of leasing bulls for a season or part of a season is offering opportunity for many men to secure a high-class bull for service where it would be possible through no other means.

Improvement of common herds must come largely through the use of better bulls. Cows are to a large extent a fixed quantity and quality. with the use of a bull of superior merit improvement may be expected, especially if he is an individual that has been tried and proved satisfactory. With a bull of average merit no improvement can reasonably be expected while with an inferior one degeneration only will be the result.—H. E. NcCartney in the Breeders' Gazette.

Young pigs need skimmed milk, with other feeds, to stimulate rapid gains. The dairyman is favorably situated for raising hogs.

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When you buy a Sask-Alta Steel Range you make a permanent investment. The

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is guaranteed by makers and dealers alike to be a strong, durable range and a perfect cooker and baker.

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McClary's

THE ORIGINAL AND ONLY GENUINE

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Minard's Liniment Co., Limited

BOAT AND FARM ENGINES

Pumping Water, Sawing Wood, Etc., also a special combination engine that can be used in a boat as well as on land.

4-6 h.p. Combination, $145 Complete,
12 Sizes. Free Catalogue.

GUARANTEE MOTOR CO. Bay St., North Hamilton Ont.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Ewes at Breeding Time.

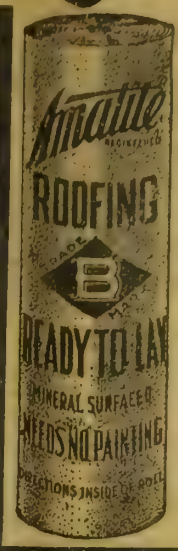
There are no flocks of ewes in which there are not some which need culling; old ewes in particular should be drafted without compunction, although there may be some favorites among them, while among the younger sheep those which are ill-formed, coarse, badly woolled, or wanting in vitality should make way for better sheep. Nor is it always advantageous to retain two-tooth ewes for breeding unless the best are exceptionally strong and in every way suitable for the work. By the time a flock has been so well overhauled that every undesirable ewe has been removed, it will be found essential to add to its number in order to make up for its reduction in size. There are always some flocks where good selections can be made, or, failing this, it is always possible to obtain the required ewes by purchase in the usual way, either direct from a first-class breeder, or through the medium of a dealer upon whom reliance can be placed. It is important to remember that the ram is of equal importance in the production of good stock to the whole of the ewes with which he mates. It is, therefore, essential to select the best that can be obtained with the means at command. A ram should be masculine but not coarse, of good frame but neither fat nor heavy in bone; he should carry a good fleece which has not been trimmed to fill the eye and to give him form which he does not possess; he should have good loins and legs, breadth of chest, a straight back, and carry all the points of the breed to which he belongs. Although there is no necessity to pay a fancy price, a farmer who requires good lambs should realize that he cannot obtain first-class rams for a few dollars a head.

Although it is sometimes regarded as imperative to feed breeding ewes high when they are put with the rams it is quite sufficient if by previous feeding their condition is good. It is, however, equally important to remember that breeding ewes—and the remark applies to sheep of all kinds—should be kept at this season from water meadows and swampy or wet land, both of which may be affected with flunke or the destructive Strongylus which we habe known to affect a whole flock, many o which have died. Wet land is one of the dangers of a sheep farm, and although some owners make a practice of feeding off the water meadows in the spring, there is little doubt that the wisest plan is to keep the sheep away altogether from every field in which there is a suspicion of exceptional wetness. For the same reason, undrained land is best avoided, unless it is composed of soil which needs no draining, such as gravel.

Rape is an excellent food upon which to fold the ewes at the time of mating. Where ewes are in poor condition, it is better to deter turning in the rams for a week or two until they have had time to recover.—Jas. Long.

If defeated in a show ring remain a gentleman. There is a future at which time one can get revenge in a good honest competitive way. Fairs were established with a view toward educating and it is by having numerous products and picking out the good from the bad that interested people can learn. Someone must have relatively better hogs than others so that it is no disgrace to be defeated. Human beings sometimes make mistakes and when they act as judges this may happen, but it will not happen continuously. If you know your methods of breeding hogs are correct follow them; if not, maybe the judge's opinion may be of assistance to you. Exhibitors as well as visitors may learn.

Amatite
ROOFING



Why Practical Men Demand Amatite

ROOFING that needs paint every two years can't hold the market against Amatite—which *needs no paint whatever.*

Practical men know the great advantage of a roof that *needs no painting.* They know what a nuisance the painting is. They know how much it costs. They know how liable they are to neglect to paint their roofs at the proper time.

Painted roofings are waterproof only where the paint is. Amatite is waterproof all the way through.

Amatite is sold in the usual convenient rolls of 110 square feet with a smooth lap where the mineral surface is omitted, so as to secure a tight joint. Nails and cement are packed in the center of each roll.

Free sample and booklet on request to nearest office.

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HALIFAX, N. S.

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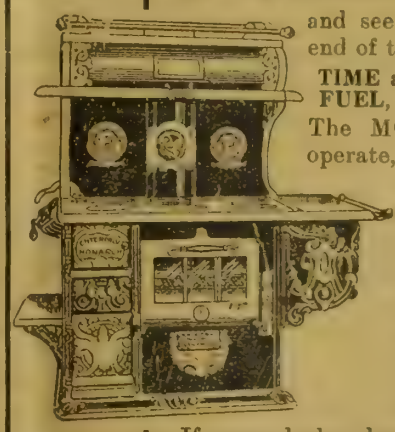
AN ENTERPRISE MONARCH STEEL RANGE



and see how far ahead you will be at the end of the year in

TIME and therefore TEMPER } SAVED
FUEL, which means MONEY }

The MONARCH is simplicity itself to operate, for it has no complex dampers or troublesome drafts.

Every device embodied in it is practical, neat and effective so that the MONARCH as sold today is the most compact steel range on market—handsome in design, a "tip-top" baker, and so economical in fuel that it will soon pay for itself.

If your dealer does not handle this range, fill out a p. c. with your name and address and request for copy of our new illustrated circular. One cent so invested brings Big Returns.

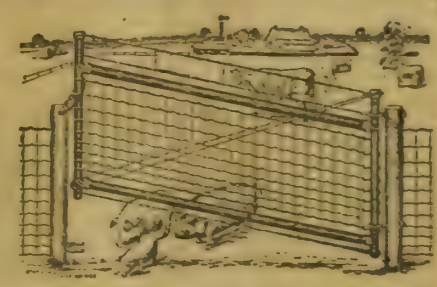
THE ENTERPRISE FOUNDRY CO., Sackville, N. B.

Have this Gate On Your Farm

A GATE EASY TO OPEN, SUMMER OR WINTER. A gate that will last a life time, that cannot bend, break, sag, blow down, burn or rot. A gate that you can try 60 days free to test it out. A gate that has been proved for years to be the best farm gate made.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any part or the entire gate giving out for such reason.

H. Ralph Steele, Manager.



Clay Steel Farm Gates

are made of High Carbon Steel tubing of large diameter,—far stronger than gas pipe, tee or angle iron—and heavy wire mesh fabric.

60 DAYS FREE TRIAL

One or a dozen Clay Gates sent for 60 days' free trial. Have one or two for this winter—when the snow gives you trouble. Send to-day for illustrated price list.

Canadian Gate Company, Ltd.
54 Morris Street Guelph, Ont.

THE HORSE.

Feeding Farm Work Horses

Some practical tests in feeding farm work horses have been completed by the Illinois experiment station and the results are published in Bulletin 150. The experiments were planned by R. C. Obrecht with ten pairs of horses ranging in weight from 1,003 to 1,560 pounds. Most of the tests were done with seven pairs of horses. The plan was to give one horse in each pair one ration and his mate another. In some cases the rations were reversed after a time so as to give a check on the individual differences of the horses. The horses were mostly grade Percheron geldings and were used steadily at ordinary farm work, each pair always being worked together.

The first test was made to compare timothy and clover hay as the exclusive roughage for horses, and it continued twelve months. The grain ration, as in most of the other tests, consisted of equal amounts of corn and oats with something less than a pound each per day of oilmeal and bran. The second test extended for five months, as in most of the others, and was made to test the value of chaffing about one half of the hay and mixing it with the grain. Another test was made to compare clover and alfalfa hay when each was fed with an equal amount of timothy. Another test compared alfalfa with timothy hay, and still another compared a ration of corn and alfalfa with one of mixed grain with timothy and alfalfa. One test compared whole and ground grains. The conclusions drawn from these extensive tests are thus summarized in the bulletin:

"Where a mixed grain ration of corn, oats, oilmeal and bran is fed, clover hay is equally as efficient if not a little superior to timothy for horses at hard work. There is no observable difference in the effect of clover and timothy upon the spirit of the horses or their ability to endure hot weather. Those receiving clover had a glossier coat of hair and their bowels were looser, but not too loose to endure hard work. When clover is used as horse feed, the quality should be good and the quantity fed limited.

"A slight saving in grain may be made by mingling it with chaffed hay, but the saving in this test did not appear to be enough to justify the expense. There may be a benefit not shown in these tests, in preserving the horse's health, by mingling the grain with chaffed hay. The results of this test are not conclusive on this point. Where the grain was ground and mingled with chaffed clover and with chaffed alfalfa, the lat ter proved to be a little more efficient in preventing loss in weight of horses at hard work. The mingling of grain with chaffed timothy hay did not prove satisfactory.

"Where alfalfa hay is fed as the roughage part of a ration for farm horses at hard work, less grain is necessary to prevent them from losing weight than where timothy hay is fed. In this test there was a saving of about 22 per cent. of grain. Though too short to be conclusive these tests indicate that mature horses at hard work can be maintained quite satisfactorily for a short time at least on corn fed in conjunction with alfalfa hay, and at a saving in cost.

"A saving of about 10 per cent. may be made by grinding the grain for farm work horses when at hard labor. It requires twice as long for horses to consume ground grain fed dry, as when the same quantity is fed thoroughly dampened.

"Farm work horses at hard labor should receive from 1.2 to 1.33 pounds of grain and from 1 to 1.25 pounds of hay per 100 pounds of live weight per day in order that their weight may be maintained. Satisfactory results have been secured by feeding the grain in three equal feeds, and giving one-half the hay at night, the other half being divided between the morning and noon feeds. The grain fed should be reduced one-half on idle days until four days have elapsed, or until they are again put to work, when it may be again increased if desirable. By following this method attacks of azoturia were prevented.

"The results of the experiment indicate that the general impression is correct that horses may very properly be given a more bulky ration when idle or doing light work than when at heavy work. It is believed that the practice of permitting work horses to gorge themselves with hay is all too common."

Unsoundness and Heredity.

Most of the states that have stallions laws classify certain unsoundnesses as heritable, and will not permit stallions possessed of such unsoundnesses to stand for service. Many writers have drawn a sharp theoretical distinction as to the heritability of such conditions, and have spoken of a predisposition to the disease as the thing inherited. A careful consideration of the physiology of many unsoundnesses shows that both of these contentions are wrong in their extreme theory, unless predisposition is a remarkably elastic word. It also shows why it will never be possible to totally remove unsoundness because it is neither in, nor outside of, the heriditary constitution of any animal.

When a man works in the hot sun, the skin of the body adapts itself to the man's needs and forms much more pigment, tanning the man, as it is called. When a horse is trained for the race track, its muscle power adapts itself in a certain way to meet racing conditions. When a hog recovers from hog cholera, there is found in its blood certain antitoxins, which the blood has formed to adapt itself to and repulse the choleric conditions. And so it is in the case of curb. When a horse with a weakly supported hock forms this unsoundness under strains beyond its strength it simply follows the laws of adaptation illustrated in the preceding examples.

This law of adaptation has been a vital one in the development of every species. Those individuals that can most readily meet adverse conditions with an effective response, are the ones that will survive and be the leaders of their race. Thus a definite method of response has come to meet certain conditions.

Let us return to the example of the curb. We say there are two kinds of curb, one associated with a normal conformation, which is not an unsoundness, and one found with insufficiently supported or sickle hocks, which is always an unsoundness. Why distinguish between the two? Both are results of the same process, both have come about under more or less severe strains that have passed the limit of strength of the hock. Both are attempts to make up for this lack of strength by increasing the bearing surface of the joint. It is true that by so doing they stiffen the action of the horse, but strange as it may seem to one who looks on unsoundness as a disease, the hock with the curb is actually stronger than it was before the curb was formed. This does not mean that the horse is necessarily stronger, but simply that the joint itself is. The horse's action and activity may be so interfered with that the added strength of the hock may not be compensated for.

What is true of curb is true of spavin, ringbone and sidebone. Eye, wind and puffed unsoundnesses scarcely fall in the same class, but the bone unsoundnesses are merely dan-

(Continued on page 854)

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

Hillsboro, N. S.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.
W. A. C. RANDALL, M. D.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable
(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASIER THORNTON & CO. LIMITED, Cookshire Que.

Six Horses Cured by VIGORA

READ THIS CERTIFICATE

MR. J. B. MORIN :—
"Replying to your letter of January 16, asking for information about the value of VIGORA to horses suffering from broken wind, I want to say that those who have used it for their horses have received great benefit. I have sold VIGORA to six people who had horses troubled with difficult breathing and every one was perfectly cured."
(Signed) JOSEPH GAGNE, St. Zacharie.

For sale by all good druggists and grocers

J. B. MORIN, Manufacturer, 318 St. Joseph St., Quebec.

Warranted to Give Satisfaction.

Gombault's

Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

POULTRY.

Functions of Comb on Poultry.

Sometime ago the Maine experiment station received a letter in whirh inquiries were made as to the proper functions of comb and wattles of fowls, their influence, if any, on the vigor and prepotency of the breeding stock, and also as to whether it was possible in any way to measure or test the physical endurance of the fowl and its capacity in respect to heart and lung action. These questions are of general interest to all poultrymen. The following discussion of them has been prepared by the biologist of the station:

The comb and wattles of poultry are what are known to the biologist as secondary sexual characters. It is quite certain that neithe r the combs nor wattles serve any useful physiological function. That is to say, a bird from which these structures have been removed is quite as healthy and lives as long and is fully as able to perform all its vital functions as a bird which possesses them. They are in some degree, however, and in a manner which is not yet fully understood, connected or correlated with the primary sexual organs. Further proof of this has recently been furnished by the work of an English biologist who shows that throughout the life of a hen every period of laying is preceded by an enlargement of the comb. This enlargement is due to an adtual growth of tissue in the comb substance. The enlargement in many cases is not marked and can only be detected by very accurate measurements.

The fact that the comb and wattles diminish in size and become pale in color during periods of physiological depression, such as molt or in various diseases, finds its physiological explanation in the considerations which have been advanced above. These organs, being in the nature of non-essential excresences or ornaments, with a very considerable blood supply when the bird is in health and vigor, it stands to reason that when that vigor is diminished for one reason or another, the supply of blood and nutriment to the tissues of these organs will be diminished in order that it may be diverted to other more vital parts. The reduction of the comb in size and color during periods of depression is physiologically comparable with the fact that a person when ill is usually pale. This means that the supply of blood to the skin is smaller than in condition of health and vigor.

A large comb does not necessarily indicate strong constitution. In the first place it must be recognized that comb size in part depends upon the breed. The most vigorous specimens of some breeds have by nature and inheritance relatively small combs as compared with other birds. While it is practically always true that a bird with a comb relatively small in proportion to the size normal for its breed is a weak and worthless bird, The converse is not always true. That is to say, some weak, poor specimens will have large combs. The size and condition of the comb should be taken as only one indication along with a whole series of others in judging the constitutional vigor ol a bird. Simply selecting large-combed birds, regardless ol everything else, would not result in a strong vigorous strain.

So far as is known no methods have ever been devised for testing the physical endurance of a fowl and its capacity in respect to heart and lung action. The most practical way to judge of these matters is by feeling the shape and size of the thorax or chest in which these vital organs are contained. This can be judged best from the shape of the back of a bird, much better than from the shape of the breast, which is ordinarily examined in this connection. The bird of high constitutional vigor will have a broad back, which as the hand passes forward over the thorax will feel relatively flat. Furthermore, the taper of the body as one passes the hand forward along the back from the hips to the shoulders will be gradual and not sudden. The more nearly the back walls and chest walls conform to the shape of a good beef type steer—that is, with broad flat back and ribs well sprung—the more certain can one be that it will have well developed heart and lungs and high constitutional vigor.

Getting Eggs Ready for Shipment.

A prominent English shipper of breeding eggs thus briefly describes her methods of getting eggs ready for shipment to her customers:

"All eggs as collected are marked and stored in special trays. On shipping days these eggs are carefully packed in bran and in special boxes; these boxes again are packed in hampers with hay, so no shaking or jar is possible, and abroken egg is unknown. Last year we shipped 2,000 in this way and not a broken egg reported. We avoid shipping during a severe frost, preferring to risk delay than to have the eggs come to hand frosted—the result, a poor hatch. From every pen six eggs must be left on the place, and these, as soon as the orders are dispatched, are paced in the incubator and tested for fertility, the eggs from each pen being specially marked. If the eggs from any pen show a falling off to a 70 per cent. fertility, that pen is checked off the export list until its fertility tests up to the right mark again. By this plan we save the waste of time in shipping many infertile eggs. Three extra eggs with every dozen are put in with every order. We fix it so that any order can be supplied from two unrelated pens, as we keep four pens of each grade. Now and then the most careful of us will find a disatisfied customer, but those who have their customers' interest at heart and work to the principle of doing the right way will find but few complaining customers."—Ida M. Shepler.

Strictly Fresh Eggs.

Why is there such a difference between the price of eggs when they leave the farmers hands and when they are bought by the consumer! Well, every farmer can get good prices if he cares to work for them. The middlemen aren't all sharks." Such is the opinion of A. G. Gilbert, poultry manager of the experimental farm, Ottawa.

There is a strong feeling that the farmers aren't getting a square deal in the marketing of their produce, and especially of their eggs. When these are selling for, perhaps 30 cents at country points, they bring 60 cts. in city reatil stores. Hence the cry that the middlemen make the profit, which the farmers do the work. The middlemen do make large profits, but they are not alone responsible for these conditions. So long as the average farmer handles and markets his eggs as he now does, just so long will he receive low prices and small profits.

The egg that can be guaranteed to be strictly fresh, of a delicious flavor, with the germ undeveloped or still better to be germless and with a pale yellow yolk will always command a high price. But this is just exactly the kind of an egg that few general farmers are producing. With just a little more care—a little more attention to details—the great majority of farmers could produce this high class quality of egg that would command a high class price and return a large profit.

The hens must be in a healthy condition. And to be healthy they must have sufficient exercise, plenty of airspace, and good cleanly food. They must be kept in clean, bright quarters, and given a grass run, if possible. Don't forget your stock will respond to good care, and proper conditions quite as well as will a a man. Don't compel poultry to live in a place you dislike to enter.

But after a healthy, well-flavored egg has been produced, the next thing is to get it to the consumer in this condition. This point cannot be too strongly emphasized. The germ was placed in the egg to eventually reproduce a chicken. The processes of nature are continually working, and the only way to prevent second-grade eggs is to market them at once. They should be sent by express, or by the most convenient method that ensures safe handling, directly to the market. As soon as his reputation is established as supplying only the best, purchasers can readily be found to take the farmer's produce at the very highest prices.

Cases have been known when chickens have been fed foul, but highly stimulating foods, to increase the egg output. Other cases are known where farmers have kept their eggs for many days, even for weeks, until they had a sufficient quantity to "pay them to go to town." Needless to say such conditions must entirely change before high prices will be realized. Those who bewail the inequality of the distribution of wealth had better make very sure that none of the fault is with themselves.—Citizen.

Buy I H C Wagons for True Economy

YOU cannot farm without a wagon any more than you can keep house without a stove. It is something you need every day. You work it harder than anything else on the farm, and when the old one wears out you have to get a new one at once.

Figure out how many bushels of corn, wheat, or oats, or how many bales of cotton it takes to keep you in wagons, and then see how much you save when you buy a wagon that lasts longer than the average.

It is an easy thing to do, even though all wagons which are painted alike look alike. The difference in wagons is underneath the paint. It is the material and workmanship, as well as the paint of I H C wagons

Petrolia **Chatham**

which make them the best wagon investment for any farmer.

We tell you plainly what material goes into every part of our wagons, and we want every purchaser to convince himself before buying, that when I H C wagons are advertised as having birch hubs, maple axles, and long leaf yellow pine box bottoms, these are the materials actually used.

Such care is taken in the construction of the I H C wagons, and in the culling of the materials which go into them, that when a wagon reaches a farmer's barn, that farmer has one of the best wearing, easiest running farm wagons that skilled labor can make or that money can buy. There is no need to speculate in buying a wagon. Wear and tear and length of service are the points to go by. I H C wagons are made for nation-wide uses, with special features adapted to local conditions. Wherever sold they are right, and ready for use in that locality. The I H C wagon agent in your town sells the wagon best suited to your neighborhood. Ask him to go over the wagons with you. Ask him for I H C wagon literature, or write the nearest branch house.

EASTERN CANADIAN BRANCHES

International Harvester Company of America

(Incorporated)

At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

STORY OF A WEED.

A little seed lay in the ground
And soon began to sprout.
"Now which of all the flowers around,"
It mused, "shall I come out?"

"The lily's face is fair and proud,
But Just a trifle cold;
The rose, I think, is rather loud,
And, then, it's fashion's old.

"The violet is very well,
But not a flower I'd choose;
Nor yet the Canterbury bell—
I never cared for blues.

"Petunias are far too bright,
And vulgar flowers, besides;
The primrose only blooms at night,
And peonies spread too wide."

And so it criticised each flower,
This supercilious seed;
Until it woke one summer hour...
...And found itself a weed.—Selected.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"I am all in a tremble," faltered my mother. "I don't know what's the matter. I shall die I am sure!"

"No, no, no," said Miss Betsy. "It's nothing but fancy. What do you call your girl?"

"I don't know that it will be a girl, yet, ma'am," said my mother innocently.

"Bless the baby!" exclaimed Miss Betsy, unconsciously quoting the second sentiment of the pincushion in the drawer upstairs, but applying it to my mother instead of me, "I don't mean that. I mean your servant."

"Peggotty," said my mother.

"Peggotty!" repeated Miss Betsy, with some indignation. "Do you mean to say, child, that any human being has gone into a Christian church, and got herself named Peggotty?"

"It's her surname," said my mother, faintly. "Mr. Copperfield called her by it, because her Christian name was the same as mine."

"Here, Peggotty!" cried Miss Betsy, opening the parlor door. "Tea Your mistress is a little unwell. Don't dawdle."

Having issued this mandate with as much potentienty as if she had been a recognized authority in the house ever since it had been a house, and having looked out to confront the amazed Peggotty coming along the passage with a candle at the sound of a strange voice, Miss Betsy shut the door again, and sat down as before; with her feet on the fender, the skirt of her dress tucked up, and her hands folded on one knee.

"You were speaking about its being a girl," said Miss Betsy. I have no doubt it will be a girl. I have a presentiment that it must be a girl. Now child, from the moment of the birth of this girl—"

"Perhaps boy," my mother took the liberty of putting in.

"I tell you that I have a presentiment that it must be a girl," returned Miss Betsy. "Don't contradict. From the moment of this girl's birth, child, I intend to be her friend. I intend to be her godmother, and I beg of you to call her Betsy Trotwood Copperfield. There must be no mistakes in life with this Betsy Trotwood. There must be no trifling with her affections, poor dear. She must be well brought up, and well guarded from reposing any foolish confidences where they are not deserved. I must make that my care."

There was a twitch of Miss Betsy's head, after each of these sentences, as if her own old wrongs were working within her, and she repressed any plainer reference to them by strong constraint. So my mother suspected, at least, as she observed her by the low glimmer of the fire: too much scared by Miss Betsy, too uneasy in herself, and too subdued and bewildered altogether, to observe anything very clearly, or to know what to say.

"And was David good to you, child?" asked Miss Betsy, when she had been silent for a little while, and these motions of her head had gradually ceased. "Were you comfortable together?"

"We were very happy," said my mother. "Mr. Copperfield was only too good to me."

"What, he spoiled you, I suppose?" returned Miss Betsy.

"For being quite alone and dependent on myself in this rough world again, yes, I fear he did indeed," sobbed my mother.

"Well! Don't cry! said Miss Betsy. "You were not equally matched, child—if any two people can be equally matched—and so I asked the question. You were an orphan wern't you?"

"Yes."

"And a governess?"

"I was a nursery governess in a family where Mr. Copperfield came to visit. Mr. Copperfield was very kind to me, and took a great deal of notice of me, and paid me a good deal of attention, and at last proposed to me. And I accepted him. And so we were married," said my mother simply.

"Ha ! Poor baby!" mused Miss Betsy, with her frown still bent upon the fire. "Do you know anything?"

"I beg your pardon, ma'am," faltered my mother.

"About keeping house, for instance," said Miss Betsy.

"Not much, I fear," returned my mother. "Not so much as I could wish. But Mr. Copperfield was teaching me—"

("Much he knew about it himself!") said Miss Betsy in a parenthesis.

—"And I hope I should have improved, being very anxious to learn, and he very patient to teach, if the great misfortune of his death"—my mother broke down again here, and could get no farther.

"Well, well!" said Miss Betsy.

—"I kept my housekeeping book regularly, and balanced it with Mr. Copperfield every night," cried my mother in another burst of distress, and breaking down again.

"Well, well!" said Miss Betsy. Don't cry any more."

—"And I am sure we never had a word of difference respecting it, except when Mr. Copperfield objected to my threes and fives being too much like each other, or to my putting curly tails to my seven and nines," resumed my mother in another burst, and breaking down again.

"You'll make yourself ill," said Miss Betsy, "and you know that will not be good either for you or my god-daughter. Come! You mustn't do it!"

This argument had some share in quieting my mother, though her increasing disposition had perhaps a larger one. There was an interval of silence, only broken by Miss Betsy's occasionally ejaculating "Ha!" as she sat with her feet upon the fender.

"David had bought an annuity for himself with his money, I know," said she, by and by. "What did he do for you?"

"Mr. Copperfield," said my mothet, answering with some difficulty, "was so considerate and good as to secure the reversion of part of it to me."

"How much)" asked Miss Betsy.

"A hundred and five pounds a year," said my mother.

"He might have done worse," said my aunt.

The word was appropriate to the moment. My mother was so much worse that Peggotty, coming in with the teaboard and candles, and seeing at a glance how ill she was,—as Miss Betsy might have done sooner if there had been light enough—,conveyed her up stairs to her own room with all speed; and immediately dispatched Ham Peggotty, her nephew, who had been for some days past secreted in the house, unknown to my mother, as a special messenger in case of emergency, to fetch the nurse and doctor.

Those allied powers were considerably astonished, when they arrived within a few minutes of each other, to find an unknown lady of protentous appearance sitting before the fire, with her bonnet tied over her left arm, stopping her ears with jeweller's cotton. Peggotty knowing nothing about her, and my mother saying nothing about her, she was quite a mystery in the parlour; and the fact of her having a magazine of jeweller's cotton in her pocket, and sticking the article in her ears in that way, did not detract from the solemnity of her presence.

The doctor having been up stairs and come down again, and having satisfied himself, I suppose, that there was a probability of this unknown lady and himself having to sit there, face to face, for some hours, laid himself out to be polite and social. He was the meekest of his sex, the mildest of little men. He sidled in and out of the room, to take up the less space. He walked as softly as the Ghost in Hamlet, and more slowly. He carried his head on one side, partly in modest depreciation of himself, partly in modest propitiation of everybody else. It is nothing to say that he hadn't a word to throw at a dog. He couldn't have thrown a word at a mad dog. He might have offered him one gently, or half a one, or a fragment of one; for he spoke as slowly as he walked;but he wouldn't have been rude to him, and he couldn't have been quick with him, for any earthly consideration.

Mr. Chillip, looking mildly at my aunt with his head on one side, and making her a little bow, said, in allusion to the jewellers' cotton as he softly touched his left ear;

"Some local irration, ma'am?"

"What!" replied my aunt, pulling the cotton out of one ear like a cork.

Mr. Chillip was so alarmed by her abruptness—as he told my mother afterwards—that it was a mercy he didn't lose his presence of mind. But he repeated sweetly:

"Some local irration, ma'am?"

"Nonsense!" replied my aunt, and corked herself again, at one blow.

Mr. Chillip could do nothing after this, but sit and look at her feebly, as she sat and looked at the fire, until he was gone upstairs again. After some quarter of an hour's absence, he returned.

"Well!" said my aunt, taking the cotton out of the ear nearest to him.

"Well, ma'am," returned Mr. Chillip, "we are—we are progressing slowly, ma'am."

"Ba—a—ah!" said my aunt, with a perfect shake on the contemptuous interjection. And corked herself as before.

Really—really—as Mr. Chillip told my mother, he was almost shocked. But he sat and looked at her, notwithstanding, for nearly two hours, as she sat looking at the fire until he was again called out. After another absence he again returned.

"Well?" said my aunt, taking out the cotton on that side again.

"Well, ma'am," returned Mr. Chil-

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lip, "we are-we are progressing slowly, ma'am."

"Ya—a—ah!" said my aunt. With such a snarl at him, that Mr. Chillip absolutely could not bear it. It was really calculated to break his spirit, he said afterwards. He preferred to go and sit upon the stairs, in the dark and a strong draught, until he was again sent for.

Ham Peggotty, who went to the national school, and was a very dragon at his catechism, and who may therefore be regarded as a credible witness, reported next day, that happening to peep in at the parlor door an hour after this, he was instantly descried by Miss Betsy, then walking to an :'ro in a state of agitation, and pounced upon him before he could make his escape. That there were now occasional sounds of feet and voices overhead which he inferred the cotton did not exclude, from the circumstances of his evidently being clutched by the lady as a victim on whom to expend her superabundant agitation when the sounds were loudest. That, marching him constantly up and down by the collar, (as if he had been taking too much laudanum), she, at those times, shook him, rumpled his hair, made light of his linen, stopped his ear as if she confounded them with her own, and otherwise touzled and maltreated him. This was in part confirmed by his aunt, who saw him at half-past twelve o'clock, soon after his release, and affirmed that he was then as red as I was.

The mild Mr. Chillip could not possibly bear malice at such a time, if at any time. He sidled into the parlor as soon as he was at liberty, and said to my aunt in his meekest manner:

"Well, ma'am, I am happy to congratulate you."

"What upon?" said my aunt, sharply.

Mr. Chillip was fluttered again, by the extreme severity of my aunt's manner; so he made her a little bow, and gave her a little smile, to mollify her.

"Mercy on the man, what's he doing?" cried my aunt, impatiently. "Can't he speak?"

"Be calm, my dear ma'am," said Mr. Chillip, in his softest accents. "There is no longer any occasion for uneasiness, ma'am, Be calm."

It has since been considered almost a miracle that my aunt didn't shake him, and shake what he had to say out of him. She only shook her own head at him, but in a way that made him quail.

"Well, ma'am," resumed Mr. Chillip, as soon as he had courage, "I am happy to congratulate you. All is now over, ma'am, and well over."

During the five minutes or so that Mr. Chillip devoted to the delivery of this oration, my aunt eyed him narrowly.

"How is she?" said my aunt, folding her arms with her bonnet still tied on one of them.

"Well, ma'am, she will soon be quite comfortable, I hope, returned Mr. Chillip. "Quite as comfortable as we can expect a young mother to be, under these melancholy domestic circumstances. There cannot be any objection to your seeing her presently, ma'am. It may do her good.

"And she. How is she?" said my aunt, sharply.

Mr. Chillip laid his head a little more on one side, and looked at my aunt like an amiable bird.

"The baby," said my aunt. "How is she?"

"Ma'am," returned Mr. Chillip, "I apprehended you had known. It's a boy."

My aunt said never a word, but took her bonnet by the strings, in the manner of a sling, aimed a blow at Mr. Chillip's head with it, put it on bent, walked out, and never came back. She vanished like a discontented fairy; or like one of those supernatural beings whom it was popularly supposed I was entitled to see; and never came back any more.

No. I lay in my basket, and my mother lay in her bed; but Betsy Trotwood Copperfield was forever in the land of dreams and shadows, the tremendous region whence I had so lately travelled; and the light upon the window of our room shone out upon the earthly bourne of all such travellers, and the mound above the ashes and the dust that once was he, without whom I had never been.

CHAPTER II.

I Observe.

The first objects that assume a distinct presence before me, as I look far back, into the blank of my infancy, are my mother with her pretty hair and youthful shape, and Peggotty, with no shape at all, and eyes so dark that they seemed to darken their whole neighborhood in her face, and cheeks and arms so hard and red that I wondered the birds didn't peck her in preference to apples.

I believe I can remember these two at a little distance apart, dwarfed to my sight by stooping down or kneeling on the floor, and I going unsteadily from the one to the other. I have an impression on my mind which I cannot distinguish from actual remembrance, of the touch of Peggotty's forefinger as she used to hold it out to me, and of its being roughened by needle work, like a pocket nutmeg-grater.

This may be fancy, but I think the memory of most of us can go farther back in numbers of very young children to be quite wonderful for its closeness and accuracy. Indeed, I think that most grown men who are remarkable in this respect, may with greater propriety be said not to have lost the faculty, than to have acquired it; the rather, as I generally observe such men to retain a certain freshness, and gentleness, and capacity of being pleased, which are also an inheritance they have preserved from their childhood,

I might have a misgiving that I am "meandering" in stopping to say this, but that it brings me to remark that I build these conclusions, in part upon my own experience of myself; and if it should appear from anything I may set down in this narrative that I was a child of close observation, or that as a man I have a strong memory of my childhood, I undoubtedly lay claim to both of these characteristics.

Looking back, as I was saying, into the blank of my infancy, the first objects I can remember as standing out by themselves from a confusion of things, are my mother and Peggotty. What else do I remember? Let me see.

There comes out of the cloud, our house—not knew to me, but quite familiar, in its earliest remembrance. On the ground-floor is Peggotty's kitchen, opening into a back yard; with a pigeon-house on a pole, in the centre, without any pigeons in it; a great dog-kennel in a corner, without

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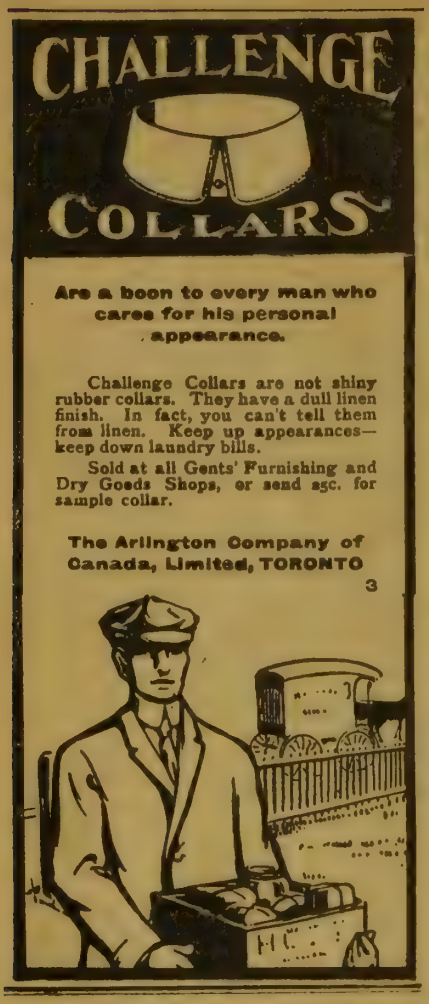
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any dog; and a quantity of fowls that look terribly tall to me, walking about, in a menacing and ferocious manner. There is one cock who gets upon a post to crow, and seems to take particular notice of me as I look at him through the kitchen window, who makes me shiver, he is so fierce. Of the geese outside the side-gate who come waddling after me with their long necks stretched out when I go that way, I dream at night; as a man environed by wild beasts might dream of lions.

Here is a long passage—what an enormous perspective I make of it!—leading from Peggotty's kitchen to the front-door. A dark store-room opens out of it, and that is a place to be run past at night; for I don't know what may be among those tubs and jars and old tea-chests, when there is nobody in there with a dimly burning light, letting a mouldy air come out at the door, in which there is the smell of soap, pickles, pepper, candles and coffee, all at one whiff. Then there are the two parlors; the parlor in which we sit of an evening, my mother and I and Peggotty—for Peggotty is quite our companion, when her work is done and we are alone—and the best parlor where we sit on a Sunday; grandly, but not so comfortably. There is something of a doleful air about that room to me, for Peggotty has told me—I don't know when, but apparently ages ago—about my father's funeral, and the company having their black coats put on. On Sunday night my mother reads to Peggotty and me in there, how Lazarus was raised up from the dead. And I am so frightened that they are afterwards obliged to take me out off to bed, and show me the quiet churchyard out of the bedroom window, with the dead all lying in their graves at rest, below the solemn moon.

There is nothing half so green that I know anywhere, as the grass of that churchyard; nothing half so shady as the trees; nothing half so quiet as its tombstones. The sheep are feeding there, when I kneel up, early in the morning, in my little bed in a closet within my mother's room, to look out at it; and I see the red light shining on the sun-dial and think within myself, "Is the sun-dial glad, I wonder, that it can tell the time again?"

Here is our new pew in the church. What a high-backed pew! With a window near it, out of which our house can be seen, and is seen many times during the morning's service, by Peggotty, who likes to make herself as sure as she can that it is not being robbed, or is not in flames. But though Peggotty's eye wanders, she is much offended if mine does, and frowns to me, as I stand upon the seat, that I am to look at the clergyman. But I can't always look at him—I know him without that white thing on, and I am afraid of his wondering why I stare so, and perhaps stopping the service to inquire—and what am I to do?It's a dreadful thing to gape, but I must do something. I look at my mother, but she pretends not to see me. I look at a boy in the isle, and he makesfaces at me. I look at the sunlight coming in at the open door through the porch, and there I see a stray sheep—I don,t mean a sinner, but mutton—half making up his mind to come into the church. I feel that if I looked at him any longer, I might be tempted to say something out loud; and what would become of me then? I look up at the monumental tablets on the wall, and try to think of Mr. Bodgers late of this parish, and what the feelings of Mrs. Bodgers must have been, when afflictions sore, long time Mr. Bodgers bore, and physicians were in vain. I wonder whether they called in Mr. Chillip, and he was in vain; and if so, how he liked to be reminded of it once a week. I look from Mr. Chillip, in his Sunday neckcloth, to the pulpit; and think what a good place it would be to play in, and what a castle it would make, with another boy coming up the stairs to attack it, and having the velvet cushion with the tassels thrown down on his head. In time my eyes gradually shut up; and, from seeming to hear the clergyman singing in a drowsy tone in the heat, I hear nothing, until I fall off the seat with a crash, and am taken out, more dead than alive, by Peggotty.

And now I see the outside of our house, with the latticed bed-room windows standing open to let in the sweet-smelling air, and the ragged old rooks' nests still, dangling in the elm trees at the bottom of the front garden. Now I am in the garden at the back, beyond the yard where the empty pigeon-house and dog-kennel are—a very preserve of butterflies, as I remember it, with a high fence, and a gate and padlock; where the fruit clusters on the trees, riper and richer than fruit has ever been since, in any other garden, and where my mother gathers some in a basket, while I stand by, bolting furtive gooseberries, and trying to look unmoved. A great wind rises, and the summer is gone in a moment. We are playing in the winter twilight, dancing about the parlor. When my mother is out of breath and rests herself in an elbow chair, I watch her fingers, and straightening her waist, and nobody knows better than I do that she likes to look so well, and is proud of being so pretty.

That is among my very earlies impressions. That, and a sense that we were both a little afraid of Peggotty, and submitted ourselves in most things to her direction, were among the first opinions—if they may be so called—that I ever derived from what I saw.

Peggotty and I were sitting one night by the parlor fire, alone. I had been reading to Peggotty about crocodiles. I must have read very perspicuously, or the poor soul must have been deeply interested, for I remember she had a cloudy impression, after I had done, that they were a sort of vegetable. I was tired of reading, and deep sleepy; but having leave, as a high treat, to sit up until my mother came home from spending the evening at a neighbor's, I would rather have died upon my post (of course) than have gone to bed. I had reached that stage of sleepiness when Peggotty seemed to grow and swell immensely large. I propped my eyelids open with my two forefingers, and looked perseveringly at her as she sat at work; at the little bit of wax candle she kept for her thread—how old it looked, being so wrinkled in all directions!—at the little house with a thatched roof, where the yard-measure lived; at her work-box with a sliding lid, with a view of St. Paul's Cathedral (with a pink dome) painted on the top; at the brass thimble on her finger; at herself, whom I thought lovely. I felt so sleepy, that I knew if I lost sight of anything, for a moment I was gone.

"Peggotty," says I, suddenly, "were you ever married?"

"Lord, Master Davy," replied Peggotty. "What's put marriage in your head?"

She answered with such a start, that it quite awoke me. And then she stopped in her work, and looked at me, with her needle drawn out to its thread's length.

"But were you ever married, Peggotty?" says I. "You are a very handsome woman, an't you?"

I thought her in a different style from my mother, certainly; but of another school of beauty, I considered her a perfect example. There was a red velvet footstool in the best parlor, on which my mother had painted a nosegay. The ground-work of that stool and Peggotty's complexion appeared to me to be one and the same thing. The stool was smooth, and Peggotty was rough, but that made no difference.

"Me handsome, Davy!" said Peggotty. "Lawk, no, my dear! But what put marriage in your head?"

"I don't know!—You mustn't marry more than one person at a time may you, Peggotty?"

"Certainly not," says Peggotty, with the promptest decision.

"But if you marry a person, and the person dies, why then you may marry another person, mayn't you, Peggotty?"

"You may," says Peggotty, "if you choose, my dear. That's a matter of opinion."

"But what is your opinion, Peggotty?" said I.

I asked her, and looked curiously at her, because she looked so curiously at me.

"My opinion is," said Peggotty, taking her eyes from me, after a little indecision and going on with her work, "that I never was married myself, Master Davy, and that I don't expect to be. That's all I know about the subject.

"You an't cross, I suppose, Peggotty, are you?" said I after sitting quiet for a minute.

I really thought she was, she had been so short with me; but I was quite mistaken: for she laid aside her work (which was a stocking of her own), and opening her arms wide, took my curly head within them, and gave it a good squeeze. I know it was a good squeeze, because, being very plump, whenever she made any little exertion after she was dressed, some of the buttons on the back of her gown flew off. And I recollect two bursting to the opposite side of the parlor, while she was hugging me.

"Now let me hear some more about the Crorkindills," said Peggotty, who was not quite right in the name yet, "for I an't heard half enough."

I couldn't understand why Peggot-

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ty looked so queer, or why she was so ready to go back to the crocodiles. However, we returned to those monsters, with fresh wakefulness on my part, and we left their eggs in the sand for the sun to hatch; and we ran away from them, and baffed them by constantly turning, which they were unable to do quickly, on account of their unwieldy make; and we went into the water after them, as natives, and put sharp pieces of timber down their throats; and in short we ran the whole crocodile gaunlet. I did at least; but I had my doubts of Peggotty, who was thoughtfully sticking her needle into various parts of her face and arms all the time.

We had exhausted the crocodiles, and began with the aligators, when the garden-bell rung. We went out to the door; and there was my mother looking unusually pretty, I thought, and with her a gentleman with beautiful black hair and whiskers, who had walked home from the church with us last Sunday.

As my mother stooped down on the threshold to take me in her arms and kiss me, the gentleman said I was a more highly privileged little fellow than a monarch—or something like that; for my later understanding comes, I am sensible, to my aid here.

"What does that mean!" I asked him, over her shoulder. ...

He patted me on the head; but somehow, I didn't like him or his deep voice, and I was jealous that his hand should touch my mother's in touching me—which it did. I put it away as well as I could.

"Oh, Davy!" remonstrated my mother.

"Dear boy!" said the gentleman. "I cannot wonder at his devotion!"

I never saw such a beautilul color on my mother's face before. She gently chid me for being rude; and, keeping me close to her shawl, turned to thank the gentleman for taking so much trouble as to bring her home. She put out her hand to him as she spoke, and, as he met it with his own, she glanced, I thought, at me.

"Let us say 'good night,' my fine boy," said the gentleman, when he bent his head—I saw him!—over my mother's little glove.

"Good night!" said I.

"Come! Let us be the best friends in the world!" said the gentleman, laughing. "Shake hands!"

My right hand was in my mother's left, so I gave him the other.

"Why, that's the wrong hand, Davy!" laughed the gentleman.

My mother drew my right hand forward, but I was resolved, for my former reason, not to give it him, and and I did not. I gave him the other, and he shook it heartily, and said I was a brave fellow, and went away.

At this minute, I see him turn round in the garden, and give us a last look with his ill-omened black eyes, before the door was shut.

Peggotty, who had not said a word or moved a finger, secured the fastenings instantly, and we all went into the parlor. My mother, contrary to her usual habit, instead of coming to the elbow-chair by the fire, remained at the other end of the room, and sat singing to herself.

"Hope you had a pleasant evening, ma'am," said Peggotty, standing as stil' as a barrel in the centre of the room, with a candlestick in her hand.

"Much obliged to you, Peggotty," returned my mother in a cheerful voice, "I have had a very pleasant evening."

"A stranger or so makes an agreeable change," suggested Peggotty.

"A very agreeable change, indeed," returned my mother.

Peggotty continued to stand motionless in the middle of the room, and my mother resuming her singing, I fell asleep, thoagh I was not so sound asleep but that I could hear voices, without hearing what they said. When I half awoke from this comfortable doze, I found Peggotty and my mother both in tears, and both talking. ...

"Not such a one as this, Mr Copperfield wouldn't have liked," said Peggotty. "That I say, and that I swear!"

"Good Heavens!" cried my mother, "you will drive me mad! Was ever any poor girl so ill-used by her servants as I am! Why do I do myself the injustice of calling myself a girl? Have I never been married, Peggotty?"

"God knows you have ma'am," returned Peggotty.

"Then how can you dare," said my mother—"you know I don't mean how can you dare, Peggotty, but how can you have the heart—to make me so uncomfortable and say such bitter things to me, when you are well aware, that I haven't, out of this place, a single friend to turn to?"

"The more the reason," returned Peggotty, "for saying that it won't do. No! That it won't do. No! No price could make it do. No!"—I thought Peggotty would have thrown the candlestick away, she was so emphatic with it.

"How can you be so aggravating," said my mother, shedding more tears than before, "as to talk in such ao unjust manner! How can you go on as if it was all settled and arranged, Peggotty, when I tell you over and over again, you cruel thing, that beyond the commonest civilities nothing has passed! You talk of admiration. What am I to do? If people are so silly as to indulge the sentiment, is it my fault? What am I to do, I ask you) Would you wish me to shave my head and black my face, or disfigure myself with a burn, or a scald, or something of that sort? I dare say you would, Peggotty. I dare say you'd quite enjoy it."

Peggotty seemed to take this aspersion very much to heart, I thought.

(Continued in next issue.)

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THERE is always a ready market at a good price for baled hay. It occupies only about one-fifth the space of loose hay. It can be handled easily. It prevents waste and it retains its full food value. Many farmers are making hay the big cash crop of their farms, not only because of the high profits it brings at the present market value, but because as a rotation crop it renews the richness of the soil. These farmers make all the profit themselves. They get a price for baled hay which far more than covers the cost of baling. They are able to ship it to the markets where the price is highest. A big majority of these farmers

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For the Sake of the Next One.

Why, auntie, I thought you had finished!"

"So I have," returned Aunt Carrie, as with a smile she went on threading her needle. "I am only trying to smooth the way for the next one."

"Who,for instance," questioned Will, curiously.

"Well, suppose that just as father is starting for business tomorrow morning he discovers that he is about to lose a button from his coat, and he can spare only about two minutes in which to have it sewed on. Don't you think that it would be quite a relief for mother to find her needle already threaded?"

Of course, for I shouldn't think one could find that little bit of an eye at all if he were in ahurry. I had a dreadful time the other day when I wanted to mend my ball. I am sure I should have been glad to be your next one then."

"Suppose again, Will, that whoever dropped that piece of wood upon the cellar stairs had stopped to pick it up, remembering that some one else would be coming that way soon. Wouldn't it have been worth while? Just think how poor Bridget has suffered from her fall.

Yes auntie and if I had wiped the water I spilled at dinner-time sister wouldn't have been obliged to change her dress when she was in a hurry to get back to school. But a fellow will have to keep pretty wide-awake to remember every time!"

And, with a thoughtful expression on his boyish face, Will passed out of the house and towards the front gate eating a banana as he went, but apparently engaged in thought. Reaching the pavement, he threw down the banana skin and proceeded on his way; but presently he turned and looked hard at the yellow object lying upon the pavement, and then, quickly retracing his steps, he picked it up and flung it into the road, where no one would be likely to slip upon it. Turing towards the house he saw his aunt watching him from the window, and with a merry laugh he lifted his hat and bowed, while she in turn nodded approvingly.

Flour and Breadmaking.

(Continued from last issue.)

SOME CHEMICAL CHANGES THAT TAKE PLACE IN THE PROCESS OF MAKING BREAD.

The object of making bread is to convert flour into a form in which it is convenient for use, palatable, nutritious, and easily digested. This is accomplished by somewhat separating the particles of flour through the agency of yeast, by moulding the dough into shapes that are convenient to handle, and by baking it when in the raised condition so that the porous structure may be maintainid, in order that when eaten the digestive juices of the body may readily penetrate the mass. Every step in the process of making bread produces changes in the composition of the faw materials, and the baker's success depends upon his ability to control these changes. Some of the more important changes are: (1) the change of insoluble carbohydrates into soluble forms; (2) the fermentation of sugars and the production of carbon dioxide and alcohol; (3) the formation of acids; (4) a change in the solubility of the proteid compounds; and (5) the volatilization or oxidation of some of the fat. These and many other changes take place, and, as some of the products are gases, a loss of materials must result.

The insoluble carbohydrates of flour are composed of starch and small quantities of other substances with which we are less familiar. The soluble forms, which do not exceed .3 to .5 per cent. of the flour, are made up of sugar and dextrin. The amount of germ left in the flour influences the percentage of these soluble substances.

When the flour is made into a dough, diastase, a ferment native to the wheat, probably changes some starch into dextrins and sugars; the acids formed during the fermentation process and the heat of the oven will also account for the formation of

some of these soluble compounds. According to Snyder, not more than 6 or 8 per cent. of the insoluble carbohydrates originally present in the flour are changed in this way, (1). But in addition to these chemical changes, the combined actions involved in the breadmaking process change the physical appearance of the starch cells. Some of them are partially disintegrated, while others are ruptured, thus rendering them more susceptible to the action of the digestive juices.

During the process of fermentation, the yeast changes some of the sugar of the dough into carbon dioxide and alcohol. The free escape of the carbon dioxide gas is prevented by the tenacity of the gluten, and thus it causes the dough to rise. The volatilization of the alcohol by the heat of the oven probably aids in the expansion of the dough; but, apparently most of the alcohol is changed to other compounds, as very little of it can be recovered from the oven and none of it is left in the bread.

Along with the alcohol fermentation, there is also some acid fermentation taking place. The extent of this action probably depends on the purity of the yeast, the temperature of the dough, and the length of time the fermentation is allowed to proceed. The result, of course, of too much acid fermentation is the production of sour bread. The acid, however, does not all remain in the free state, for some of it combines with the insoluble proteids, producing soluble forms. If this action proceeds far enough it may materially alter the size of the loaf by destroying the gluten, and it darkens the colour of the bread. It has been frequently noticed that some flours require a longer period of fermentation than others. Snyder states that probably this is due to the fact that gliadin, the gluey part of the gluten, is more readily acted upon by the acid than the glutenin, and that in these flours the prolonged fermentation causes the acid to dissolve more of the gliadin and thus bring these two constituents into the proper relationship to give the best results.

The influence of breadmaking on the fat has not been fully studied, but it appears to be changed in some way, for not more than about one-half of the fat in the flour can be extracted from the bread made from it. Evidently there has been some change affecting the composition of the fat which has changed its solubility.

The total loss of material in making bread by other than mechanical means has been stated by different investigators to vary from 1.5 to 6 per cent. The loss is made up principally of the volatile products of carbon and nitrogen. One investigator states that "in good breadmaking the losses are equivalent to about 3 pounds per barrel of flour, while with poor breadmaking the losses may exceed 12 pounds per barrel."

INFLUENCE OF TEMPERATURE.

In the yeast discussion, page 15, it was pointed out that one of the most important essentials for the rapid growth of yeast germs was a favourable temperature, and the temperature recommended was 80 degrees F. This means that to secure the best results the dough should be kept at about this temperature during the time the yeast is working. A low temperature—about 10 degrees F. —will suffice when the long fermentation process is allowed, i. e., when the dough is allowed to rise over night. The difficulty in many households is to properly control the temperature. Frequently the dough is made without any definite determination of the temperature of the materials, and it is placed to "rise" where it is hoped the conditions will be satisfactory. The commercial baker does not take any such risks. He determines the temperature of the flour and then makes the water warm enough to raise the whole dough mass to the desired point, and then seeks to control the temperature during the fermentation period. He recognizes that temperature is one of the factors he must control in order that he may get uniform results.

Some years ago butter was made without the use of a thermometer; but, butter makers in the home and factory have long since recognized that they cannot depend upon "feel" to get the correct conditions. There is the same need of the thermometer in breadmaking, and when the breadmaker brings the dough to at least approximately the right temperature to start with, and places the dough to rise where the temperature can be controlled, a great advance will be made in the making of bread in the home. The difficulty has always been that the home breadmaker has no means of controlling the temperature, and has been forced to cover the dough and allow it to stand over or beside a radiator, register or stove, and trust to luck that the temperature required would be maintained. It may become too hot or too cold, but it would not be known unless the baker has sufficient experience to tell from the appearance and feel of the dough, and "luck" is blamed for the failure.

Dough will recover from a very severe chilling if it brought back to the proper temperature and allowed to stand long enough to rise properly. Chilling does not destroy the yeast germs, but it retards their development, and time must be given them to do their work. An experienced baker has an advantage over an inexperienced one in knowing when the dough has risen sufficiently. Too high temperature may destroy the germs altogether and thus prevent the dough rising.

A simple cabinet for controlling temperature during the dough stage has been devised by the Household Economics Department of this College. The cabinet is illustrated in Fig. 8. It is 2 feet 8 inches high, by 2 feet 2 inches broad, by 2 feet deep, outside measurements. The whole is lined with asbestos, and divided into upper and lower compartments. The partition is placed high enough to allow a small coal oil lamp to be placed in the bottom compartment. The lamp is used as a source of heat, and the heat is transmitted through water contained in a shallow covered galvanized iron pan placed in the centre of the partition. The fumes from the lamp are allowed to escape through small holes in the wooden frame below the partition. The top compartment may be used with or without slatted shelves, and may be kept at any desired temperature by raising or lowering the flame of the lamp, thus influencing the temperature of the water, and consequently, that of the compartment. A very small lamp with the wick turned as low as possible is usually sufficient to maintain the temperature at from 70 to 80 degrees F. It is hardly necessary to say that the thermometer should be left in the cabinet and the temperature noted from time to time, and the flame of the lamp so regulated as to give a constant desired temperature.

The cabinet may be made any desired size, and may be so arranged that the top will answer as a kneading board, and pans and other utensils may be kept in it between baking days.

Fig. 9 shows a simple form of cabinet made out of a packing box. The inside is lined with builder's asbestos paper and arranged very much as the one shown in Fig. 8.

By the use of such a cabinet it is possible to maintain the dough throughout the fermentation period at any desired temperature, and thus render it possible to control one of the main sources of worry and uncertainty in breadmaking.

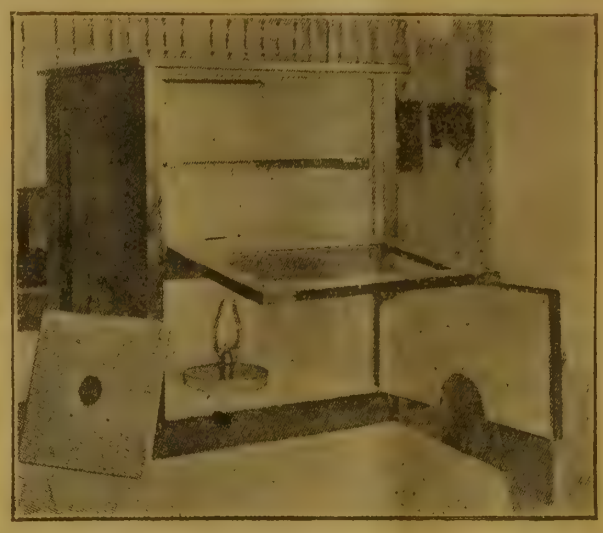

Fig. 8—Cabinet for controlling temperature in bread-making, showing shollow watertank standing at one side.

Fig. 9—Cabinet for controlling temperature in bread-making made out of packing-box.

The asbestos is used to reduce the danger of the case taking fire, if anything happened to the lamp, and also to check and draft through the cracks of the box. If the box is tight, and the danger from the lamp overlooked, there would be no necessity for lining the box.

(Continued in next issue.)

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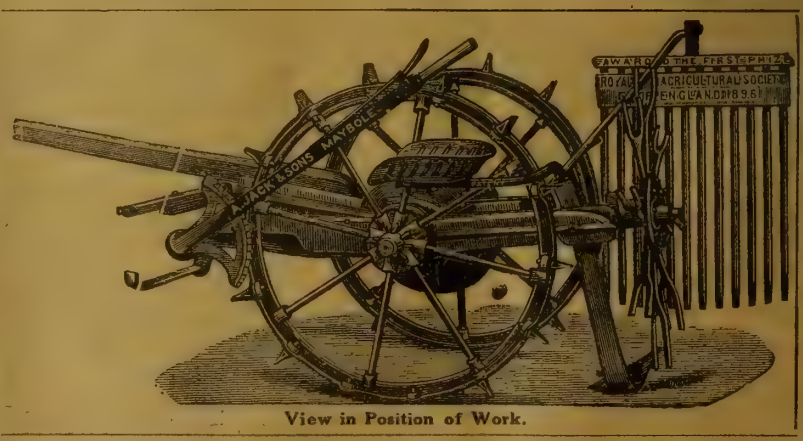

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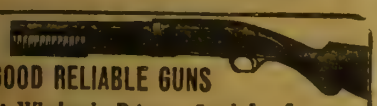

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Dates to be Remembered

St. Martins Agricultural Society, No. 54 Exhibition at St. Martins, N. B., October 16th., 1912.

Charlottetown Exhibition, Sept. 24th., 25th., 26th., 27th., 1912.

Cape Breton Island Exhibition, Sydney, N. S., Sept September 24, 25, 26, 27, 28, 1912.

Yarmouth County Exhibition, Yarmouth N. S., September 25, 26, and 27, 1912.

Nova Scotia Agricultural College Long Course begins November 5th. 1912.

Nova Scotia Agricultural College Short Courses for ladies and gentlemen begin January 7th., 1913.

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Saint John Exhibition Prize Winners.

(Continued from last issue)

Poultry

GAME BANTAMS.

Black Red cock—1, Scott & Warren; 2, F. M. Merritt.

Black Red hen—1, W. H. Jackson; 2, Scott & Warren; 3, F. M. Merritt.

Black Red cockerel and pullet—1 and 2, F. M. Merritt.

Duckwing cock—1 and 3, Scott & Warren; 2, W. H. Jackson.

Duckwing hen—1, Scott & Warren; 2, W. H. Jackson.

Duckwing cockerel—1, 2 and 3, Jas. Sterling.

Pyle cock—1, Scott & Warren; 2, W. H. Jackson.

Pyle hen—1, Scott & Warren.

Pyle cockerel—1, Jas. Sterling.

White hen—1, Scott & Warren.

ORNAMENTAL BANTAMS.

Buff Cochin cock—1 and 3, Geo. H. Seaman; 2, Mrs. John Dakin; 4, E. C. Campbell; 5, Maritime Poultry Supply Co.

Buff Cochin hen—1 and 5, Geo. H. Seaman; 2, Mrs. John Dakin; 3, E. C. Campbell; 4, Maritime Poultry Supply Co.

Black Cochin cock and hen—1 and 2, Maritime Poultry Supply Co.; 3, E. C. Campbell.

White Cochin cock—1, Maritime Poultry Supply Co.; 2, F. M. Merritt.

White Cochin hen, cockerel and pullet—1, F. M. Merritt.

Light Brahma hen, cockerel and pullet—1, F. M. Merritt.

Black R. C. cock and hen—1, Maritime Poultry Supply Co.

White R. C. cock and hen—1, Maritime Poultry Supply Co.

Golden Seabright cock and hen—1, F. M. Merritt.

Silver Seabright cock and hen—1, F. M. Merritt; 2, W. H. Jackson.

PENS OF POULTRY.

Barred Plymouth Rock fowls—1, Hartland Poultry Yards.

Barred Plymouth Rock chickens—1, I. D. Vanwart.

White Plymouth Rock fowls—1, Albert Boswall; 2, A. E. S. Hatfield; 3, Hartland Poultry Yards.

White Plymouth Rock chickens—1, Geo. Calbeck.

Buff Plymouth Rock fowls—1, A. E. S. Hatfield; 2, Hartland Poultry Yards.

White Wyandotte fowls—1, Hartland Poultry Yards.

Columbian Wyandotte fowls—1, Orchard Hill Farm; 2, Hartland Poultry Yards.

Columbian Wyandotte chickens—1, Orchard Hill Farm.

Buff Cochin Fowls—1, Hartland Poultry Yards.

Buff Cochin chickens—1, Hartland Poultry Yards.

Light Brahma fowls—1, Frank E. Josselyn; 2, Hartland Poultry Yds.

Light Brahma chickens—1, Hartland Poultry Yards.

Black Langshan fowls—1, Hartland Poultry Yards.

Rhode Island Red, S. C. fowls—1, Thos. S. Kyle; 2, Hartland Poultry Yards; 3, F. M. Merritt.

Rhode Island Red, S. C., chickens—1, Thos. S. Kyle; 2, I. D. Vanwart; 3, F. M. Merritt; 4, Hartland Poultry Yards.

Black Orpington fowls—1, Hartland Poultry Yards.

Black Orpington chickens—1, Hartland Poultry Yards.

White Orphington chickens—1, R. B. Humphrey; 2, E. C. Campbell.

Buff Orpington fowls—1, R. R. Black.

Houdans, fowls—1, Hartland Poultry Yards.

White Leghorn S. C., fowls—1, F. M. Merritt.

White Leghorns, S. C., chickens—1, F. M. Merritt.

White Leghorns R. C. fowls—1, Hartland Poultry Yards.

Brown Leghorns, S. C., fowls—1, Scott & Warren.

Brown Leghorns, S. C. chickens—1, Scott & Warren.

Brown Leghorns, R. C., fowls—1, Scott & Warren; 2, Hartland Poultry Yards.

Black Minorcas, S. C., fowls—1, A. E. S. Hatfield; 2, Hartland Poultry Yards.

Andalusian fowls—1, Hartland Yards.

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Bronze Turkey, hen—1, Hartland Poultry Yards.

Bronze Turkey cockerel—1, Albert Boswall.

Bronze Turkey pullet—1, Albert Boswall.

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A. O. V. Turkey hen—1 and 2, Albert Boswall.

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Pekin Young Drake—1, 2 and 4, Maritime Poultry Supply Co.; 3, Albert Boswall.

Pekin Aged Duck—1, Albert Boswall 2, 3, 4 and 5, Maritime Poultry Supply Co.

Pekin Young Duck—1, Albert Boswall; 2, 3 and 4, Maritime Poultry Supply Co.

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Mallard Duck—1, W. H. Jackson; 2, E. C. Campbell.

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Indian Runner Drake—1, E. C. Campbell.

Indian Runner Duck—1, E. C. Campbell.

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White Musconey Drake—1, F. M. Merritt.

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Toulouse Aged Goose—1, A. D. Boswall; 2, B. Goodspeed; 3, Hartland Poultry Yards.

Toulouse Young Goose—1, A. D. Boswall; 2, B. Goodspeed.

African Aged Gander—1, Albert Boswall.

African Aged Goose—1, Albert Boswall.

African Young Gander—1, Albert Boswall.

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Largest and best display of extracted Honey.—1, W. G. Asbell.

Largest and best display of bees in Observation Hives.—1, W. G. Asbell.

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Best one pound beeswax.—1, W. G. Asbell.

Best 10 lbs. extracted Honey.—1, W. Todd.

Best frame of honey for extracting.—1, W. G. Asbell.

Best exhibit by boy under sixteen.—1, G. Todd.

Best exhibit by lady bee keeper.—1, Mrs. Jas. McKay.

Bees in embryo.—1, G. Todd.

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Best full colony of any race of bees. 1, W. G. Asbell.

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Best box 24 lbs. extracted honey.—1, W. G. Asbell.

Best display beeswax.—1, W. G. Asbell.

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Best exhibit bees wax.—W. G. Asbell.

Best general exhibit.—1, W. G. Asbell.

Best exhibit by lady bee keeper.—1, Mrs. Jas. McKay.

SPECIALS FOR CHARLOTTE COUNTY ONLY.

Best frame black bees in observation hive.—1, G. Todd.

Best frame Italian bees in observation hive.—1, G. Todd.

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Largest and best general exhibit.—1, Mr. Todd.

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FOR FOUR MONTHS

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DOAN'S KIDNEY PILLS CURED HIM

Mr. W. H. Riley, Ruddell, Sask., writes:—"It is with the greatest of pleasure that I can recommend Doan's Kidney Pills to all suffering with rheumatism. I was so bad with this terrible disease, I was unable to get up from my bed for four months, and nothing seemed to relieve me until a friend recommended Doan's Kidney Pills. I had my doubts about them, but was so desperate I would try anything suggested to me. After taking half a box I was able to get up, and after taking two boxes could get around quite well. After taking six boxes I was completely cured, and able to work for the first time in five months, and have not had a touch of rheumatism since. Anyone who saw me then would not know me now, as I am so strong and active since taking your valuable medicine."

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Proportioning Roofs.

It is not an uncommon sight to see the appearance of a modern barn, completely ruined by an unsightly gambrel roof, which looks as if it was proportioned without a thought being given to harmonious effect.

Strange to say, this assures us that the designer was either careless or inexperienced in building this sort of roof for as soon as we depart from the proper and pleasing proportions for a gambrel roof the structure at once becomes weaker in proportion to the amount of change made so the worse appearing a roof is, the weaker it is.

This is because when this sort of roof was designed all the stresses were calculated and the roof members set at the proper angles to overcome these thrusts and weights; and the laws of gravity required that everything be in proportion and of the same weight in order that one force equalize with the other, thus rendering the whole thing stationary of itself and by the addition of certain members and ties sufficient strength was added to give the required factor of safety. Consequently any change from these principles spoil the appearance and weaken the structure and with a view to remedying these I will tell the readers of the Maritime Farmer how to properly design one of the self-supporting or gambrel roofs.

The first proceeding is to divide the total width of the building over which the roof is to be built, into five equal parts of divisions. These are now taken as spans for the roof; those at each side as the span of the lower slope of the roof and the remaining three centre divisions as the span of the top or centre part of the roof. This gives us the run, or to more clearly explain, the part of the building to be covered by each rafter. When this run has been established it is yet necessary to get another measurement before the length of the rafter can be ascertained, this is called the rise or angle the rafter makes with a horizontal line, and in all gambrel or self-supporting roofs this never changes so it is most important that these angles or rises be remembered.

That for the lower roof is an angle of 56 degrees from the horizontal, or to simplify for farmers or carpenters use, a rise of 18 in. in every foot of horizontal run.

The length is arrived at by erecting a perpendicular from the joints marked for each outside division until it intersects the rafter. This is the point where the lower roof ends and the top roof commences and rises with 34 degrees from the horizontal or 8 in. rise for every foot of horizontal run until the centre of the middle span is reached where those rafters from the other side are encountered and the ridge of the roof is established here....

These measurements when followed out will take the distance from the main plate to the curb and from the curb to the ridge exactly the same and consequently the weights are the same and the incline of the lower roof neatly overcomes any outward foot thrust of the upper rafters, while the design is the prettiest of all roofs and should never be changed. The following drawing of a barn 40 in. wide with a gambrel roof illustrates the idea, and works the same in all sizes of barns.—A. A. G.

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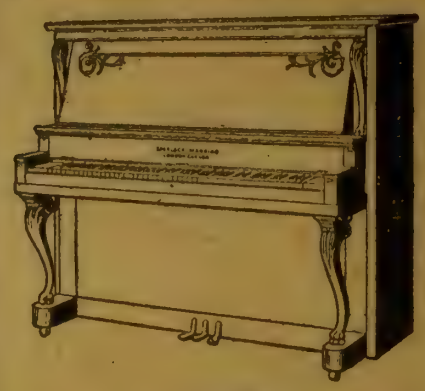

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Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

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In the first place, Maxwell's "Champion" is the only washer that can be worked with a crank handle at the side as well as with the top lever. Just suit your own convenience.

Another Maxwell feature—Lever and Balance Wheel are so accurately adjusted and work up such speed that the washer runs along even when you have stopped working the lever. There's no doubt about Maxwell's "Champion" being the easiest running washer on the market. Write for new illustrated booklet if your dealer does not handle Maxwell's "Champion" Washer.

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Canning Vegetables in the Home.

(Continued from page 829.)

following directions. There are several brands of these jars on the market, so no difficulty should be experienced in obtaining them. Vegetables often spoil after being sterilized because of defective rubbers. It is poor economy to buy cheap rubbers or to use them a second time. As a general rule black rubbers are more durable than white ones.

Buy a good grade of jar. The best quality usually retails at from a dollar to a dollar and twenty-five cents a dozen. The initial expense may be, therefore, somewhat high, but with proper care they should last many years. The annual breakage should be less than 3 per cent. on the average. In selecting a jar always give preference to those having wide mouths. In canning whole fruit or vegetables and in cleaning the jars the wide mouth will be found to be decidedly preferable.

CONTAINERS FOR STERILIZING.

The writer uses a tin clothes boiler with a false bottom made of wire netting cut to fit it. The netting is made of medium-sized galvanized wire (No. 16) with one-half inch mesh. A false bottom is absolutely necessary, as the jars will break if set flat upon the bottom of the boiler. Narrow strips of wood, straw, or almost anything of this nature may be used for the purpose, but the wire gauze is clean and convenient.

There are several varieties of patent steamers or steam cookers in common use. These have either one or two doors and hold a dozen or more quart jars. They are ideal for canning, but they are somewhat expensive and can be easily dispensed with. A common ham boiler or clothes boiler with a tight-fitting cover will answer every purpose.

SELECTION AND PREPARATION OF VEGETABLES.

The first step in successful canning is the selection and preparation of the vegetables. Neves attempt to can any vegetable that has matured and commenced to harden or one that has begun to decay. As a general rule, young vegetables are superior in flavor and texture to the more mature ones. This is especially true of string

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Forestall forgetfulness; taste this genuine tea-treat now. Your dealer offers it to you with this fair agreement:

Either you must like the flavor so well that you want to keep on drinking this tea by preference, or else you will please return the broken package and get your money back.

This is straight, unmistakable. A confident printed guarantee is on each 35c., 40c. and 50c. package. 40c. KING COLE is special value.

35, 40, and 50c. per lb.

7% GUARANTEED 7%

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Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year**, on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

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WHEN you go to buy cement be sure that this label is on every bag and barrel. Then you know you are getting the cement that the farmers of Canada have found to be the best.

WHEN THE LIVER IS INACTIVE

CONSTIPATION SOON FOLLOWS

The duty of the liver is to prepare and secrete bile, and serve as a filter to the blood, cleansing it of all impurities and poisons.

Healthy bile in sufficient quantity is Nature's provision to secure regular action of the bowels, and therefore when the liver is inactive, failing to secrete bile in sufficient quantity, constipation soon follows.

Mr. Henry Pearce, Owen Sound, Ont., writes:—"Having been troubled for years with constipation, and trying many so-called remedies, which did me no good whatever, I was persuaded to try Milburn's Laxa-Liver Pills. I have found them most beneficial; they are, indeed, a splendid pill, and I can heartily recommend them to all suffering from constipation."

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Experienced farmers want the Bissell, but no roller is genuine unless it bears the BISSELL name. Remember that.
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T.E. Bissell Co.
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Look For The Name
The "Bissell"

beans, okra and asparagus. Vegetables are better if gathered in the early morning while the dew is still on them. If it is possible to can them immediately, do not allow them to wither, but put them in cold water or in a cold, damp place to keep them crisp until you are ready for them. Do your canning in a well-swept and well-dusted room. This will tend to reduce the number of spores floating about and lessen the chances of inoculation.

Following are given directions for canning some of the more common vegetables, but the housewife can add to these at will. The principle of sterilization is the same for all meats, fruits and vegetables.

CORN.

Contrary to the general opinion, corn is one of the easiest vegetables to can. The United States Department of Agriculture has shown that the amount of sugar in the sweet varieties diminishes very rapidly after the ear is pulled from the stalk; therefore in order to retain the original sweetness and flavor it is necessary to can corn very soon after it is pulled—within an hour if possible. Select the ears with full grains before they have begun to harden, as this is the period of greatest sugar content. Husk them and brush the silks off with a stiff brush. Shear off the grains with a sharp knife and pack the jar full. Add salt to taste, usually about a teaspoonful to a quart is sufficient, and fill up the jar to the top with coldwater. Put the rubber ring around the neck of the jars, as the steam will top on loasely. Be careful not to press down the spring at the side of the jar.

...Place the false bottom in the boiler and put in as many jars as the boiler will conveniently hold. Don't try to crowd them in. Leave space between them. Pour in about three inches of cold water, or just enough to form steam and to prevent the boiler from going dry during the boiling. It is not necessary to have the water up to the neck of the jars, as the steam will do the cooking. Put the cover on the boiler and set it on the stove. Bring the water to a boil and keep it boiling for one hour. At the end of that time remove the cover of the boiler and allow the steam to escape. Press down the spring at the side of the jar. This clamps on the top and will prevent any outside air from entering. The jars can now be removed and cooled or allowed to stand in the boiler until the next day.

On the second day raise the spring at the side of the jar. This will relieve any pressure from the steam that might accumulate inside the jar during the second cooking. Place the jars again in the boiler and boil for an hour. Clamp on the top as on the preceding day and allow them to cool. Repeat this operation on the third day. In removing the jars from the boiler be careful not to expose them to a draft of cold air while they are hot, as a sudden change of temperature is likely to crack them.

After the sterilization is complete the jars may be set aside for a day or two and then tested. This is done by releasing the spring at the side and picking up the jar by the top. If there has been the least bit of decomposition or if sterilization has not been complete the top will come off. This is because the pressure on top has been relieved by the gas formed by the bacteria. In this case it is always best to empty out the corn and fill up the jar with a fresh supply. If canning fruits or some expensive vegetable, however, examine the contents of the jar and, if the decomposition has not gone far enough to injure the flavor, place it once more in the boiler and sterilize over again. If the top does not come off, you may be suse that the vegetable is keeping.—U. S. Farmers' Bulletin.

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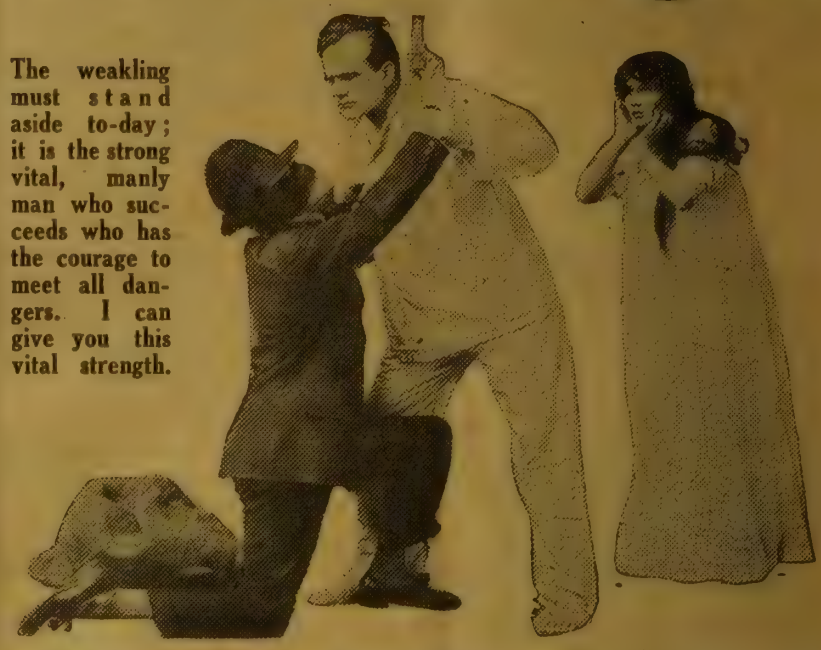

Vitality is the thing which makes success; it gives men that compelling power which sends them forth eager and equipped to meet and overcome all obstacles; it is the thing which gives our young men courage to face death; it is the thing which inspires and holds a woman's love and faith. No matter what your age, I can give you this same vitality. I can restore the vigor you lost, no matter what early or later indiscretion may have sapped your streagth. I can make you "young" and keep you "young." From an intimate and studious observation of possibly 100,000 weakened men I say to you that vitality or the lack of it means all the difference between a manly man and a half man. The man who bubbles with vital power will exert a pleasing influence upon all with whom he comes in contact; women are naturally attracted to him, as are men. Lack of vitality is a negative condition, and it even repels. You wear my Health Belt and suspensory attachment all night; it sends a great, glowing, health-giving current of electro-vimut into your nerves, blood and organs; it takes all the "kink" out of your back and all the coward out of your makeup; it puts you right up in the "feeling fine" class and keeps you there. No stimulation, no false results; just a sure return to manhood and courage. Recommended also for rheumatism, pain in the back, kidney, liver, stomach and bladder disorders. It makes you feel young and keeps you feeling young forever.

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Halifax Exhibition Prize Winners.

(Continued from page 828)

HOLSTEINS.

Bull, 3 years old—1, J. D. Irving; 3, Harding Bros.; 2 and 4, Lea & Clarke.

Bull, 2 years old—1, J. D. Irving.

Bull, junior yearling—1, J. D. Irving; 2, Harding Bros.; 3, Lea & Clarke.

Bull, senior calf—1, Harding Bros.; 2, Lea & Clarke; 3, J. D. Irving.

Bull, junior calf—1, Lea & Clarke; 2, J. D. Irving; 3, Harding Bros.

Cow, 4 years old and upwards— 1 and 4, J. D. Irving; 2, Harding Bros; 3, Lea & Clarke.

Cow, 3 years old—1 and 3, J. D. Irving; 2, Lea & Clarke; 4, Harding Bros.

Heifer, 2 years old—1 and 4, J. D. Irving; 2 and 3, Lea & Clarke.

Heifer, senior yearling—1 and 4, J. D. Irving; 2, Harding Bros.; 3, Lea & Clarke.

Heifer, junior yearling—1 and 2, J. D. Irving; 3, Harding Bros.; 4, Lea & Clarke.

Heifer, senior calf — 1, Harding Bros.; 2, Lea & Clarke; 3 and 4, J. D. Irving.

Heifer, junior calf—1 and 2, J. D. Irving; 3 and 4, Harding Bros.

Champion Bull—1 and Diploma— J. D. Irving.

Champion Female—1 and Diploma— J. D. Irving.

Bull and 3 of his get— 1 and diploma, Lea & Clark.

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Breeders' Aged Herd—1 and 2, J. D. Irving; 3, Lea& Clark; 4, Harding Bros.

Breeders' Young Herd—1, J. D. Irving; 2, Harding Bros.; 3, Lea & Clarke.

GRADE JERSEYS AND GRADE GUERNSEYS.

Cow, 4 years old and upwards— 1 and 4, Hugh A. Dickson; 2, Allison McDonald; 3, Fred H. Deal; 5, Thos. Rose.

Cow, 3 years old—1, Allison McDonald; 2, Thos. Rose.

Heifer, 2 years old—1, H. R. Silver; 2, Allison McDonald; 3, Thos. Rose.

Heifer, 1 year old—2, H. A. Dickson; 3, Allison McDonald.

Heifer calf, under 1 year—1, Allison McDonald; 2, H. A. Dickson.

Herd, four females—1, Allison McDonald; 2, Thos. Rose.

GRADE AYRSHIRES AND GRADE HOLSTEINS.

Cow, 4 years old and upward— 1 and 2, Allison McDonald; 3, Thomas Rose.

Cow, 3 years old—1, Allison McDonald.

Heifer, 2 years old—1, Allison McDonlad; 2, Thos. Rose.

Heifer, 1 year—1, Allison McDonald.

Heifer Calf, under 1 year—1, Allison McDonald; 2, Thos Rose.

Herd, 4 females, under 1 year—1, Allison McDonald.

Champion Cow, sired by Holstein Bull—Holstein Association Silver Cup —Allison McDonald.

SWEEPSTAKES HERD PRIZE

Gold Watch, donated by M. S. Brown & Co., Halifax, N. S., for the best herd of purebred Dairy Cattle—1 bul,, 4 cows, 3 years old and over; 4 heifers, over one year and under 3 years—McIntyre Bros.

Sheep

LEISCESTERS

Ram, 2 shears and over.—1, Albert Boswall Sr.; 2, Retson Bros.; 3, S. L. Boswall.

Ram, shearling.—1, Retson Bros.; 2, S. L. Boswall.

Ram, lamb.—1 and 3, Albert Boswall Sr.; 2, S. L. Boswall.

Ewe, 2 shears and over.—1 and 3, Albert Boswall Sr.; 2, S. L. Boswall.

Ewe, shearling.—1, Albert Boswall Sr.; 2 and 3, S. L. Boswall.

Ewe, lamb.—1, 2 and 3, Albert Boswall Sr.

Aged pen.—1, Albert Boswall Sr.; 2, Retson Bros.

Pen lambs.—1, Albert Boswall Sr. 2, Retson Bros.

COTSWOLDS.

Ewe, shearling.—1, Retson Bros.

LINCOLNS.

Ram, 2 shears and over.—1, Albert Boswall Jr.

Ram, shearling.—1, Albert Boswall Jr.; 2, Chas. Symes.

Ram, lamb.—1, Albert Boswall Jr.

Ewe, 2 shears and over.—1, Albert Boswall Jr.; 2, Chas. Symes.

Ewe, shearling.—1, Albert Boswall Jr.; 2, Chas. Symes.

Ewe, lamb.—1 and 2, Albert Boswall Jr.;3, Almon Boswall.

Aged pen.—1, Albert Boswall Jr.

Pen lambs.—1, Albert Boswall Jr.

SHROPSHIRES.

Ram, 2 shears and over.—1, Geo. L. Boswall; 2, Cephas Nunn.

Ram, shearling.—1, Cephas Nunn; 2, Geo. L. Boswall.

Ram, lamb.—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.

Ewe, 2 shears and over.—1and 2, Geo. L. Boswall; 3, Cephas Nunn.

Ewe, shearling.—1, Cephas Nunn; 2 and 3, Geo. L. Boswall.

Ewe, lamb.—1 and 3, Geo. L. Boswall; 2, Cephas Nunn.

Aged pen.—1, Geo. L. Boswall; 2, Cephas Nunn.

Pen lambs.—1, Geo. L. Boswall; 2, Cephas Nunn.

SOUTH DOWNS.

Ram, 2 shears and over.—1, Cephas Nunn; 2, Jas. E. Baker & Son.

Ram, shearling.—1, Cephas Nunn; 2, Jas. E. Baker & Son.

Ram, lamb.—1, Cephas Nunn; 2, Jas. E. Baker & Son.

Ewe, 2 shears and over.—1, J. E. Baker & Son; 2 and 3, Cephas Nunn.

Ewe, Shearling.—1 and 3, Cephas Nunn; 2, J. E. Baker & Son.

Ewe, lamb.—1 and 3, J. E. Baker & Son; 2, Cephas Nunn.

Aged pen.—1, J. E. Baker & Son; 2, Cephas Nunn.

Pen lambs.—1, J. E. Baker & Son.

OXFORD DOWNS.

Ram, 2 shears and over.—1, Burder Goodwin; 2, J. E. Baker & Son.

Ram, shearling.—1, J. E. Baker & Son.

Ram, lamb.—1 and 2, Burder Goodwin; 3, J. E. Baker & Son.

Ewe, 2 shears and over.—1 and 2, Burder Goodwin; 3, J. E. Baker & Son.

Ewe, shearling.—1 and 3, Burder Goodwin; 2, J. E. Baker & Son.

Aged pen.—1, Burder Goodwin; 2, J. E. Baker & Son.

Pen lambs.—1, Burder Goodwin; 2, J. E. Baker & Son.

OXFORD DOWN ASSOCIATION SPECIAL PRIZES.

Best yearling ram.—1 and 2 J. E. Baker & Son.

Best yearling ewe.—1, Burder Goodwin; 2, J. E. Baker & Son.

Best pen, 4 lambs.—1, Burder Goodwin; 2, J. E. Baker & Son.

HAMPSHIRE DOWNS.

All the first prizes in this class went to Cephas Nunn without competition.

CHEVIOTS.

All first prizes in this class went to Chas. Symes, without competition.

DORSETS.

Ram, 2 shears and over.—1, Geo. L. Boswall.

Ram, shearling.—1, Cephas Nunn.

Ram, lamb.—1, Geo. L. Boswall.

Ewe, 2 shears and over.—1 and 3, Geo. L. Boswall; 2, Cephas Nunn.

Ewe, shearling.—1, Geo. L. Boswall; 2, Cephas Nunn.

Ewe, lamb.—1 and 3, Geo. L. Boswall; 2, Cephas Nunn.

Aged pen.—1, Geo. L. Boswall; 2, Cephas Nunn.

Pen lambs.—1, Geo. L. Boswall.

SUFFOLKS.

Ram, 2 shears and over.—1, Albert Boswall Jr.

Ram, shearling.—1, Albert Boswall Jr.

Ram, lamb.—1, Albert Boswall Jr.; 2, Almon Boswall.

Ewe, 2 shears and over.—1, Albert Boswall Jr.; 2, Almon Boswall.

Ewe, shearling.—1, 2, Albert Boswall Jr.; 3, Almon Boswall.

Ewe, lamb.—1 and 3, Albert Boswall Jr.; 2, Almon Boswall.

Aged pen.—1, Albert Boswall Jr.; 2, Almon Boswall.

Pen lambs.—1, Albert Boswall Jr.

GRADES AND CROSSES. (LONG WOOL).

Ewe, 2 shears and over.—1, Chas. Symes; 2, Retson Bros.

Ewe, shearling.—1, Chas Symes; 2, Retson Bros.

Ewe, lamb.—1, Chas. Symes.

Pen ewes.—1, Chas. Symes.

CROSSES OR GRADES. (MEDIUM WOOL).

Ewe, 2 shears and over.—1 and 2, J. E. Baker & Son; 3, Thos. Rose.

Ewe, shearling.—1 and 2, J. E. Baker & Son; 3, Thos. Rose.

Ewe, lamb.—1 and 2, J. E. Baker & Son; 3, Thos. Rose.

Pen ewes.—1, J. E. Baker & Son; 2, Thos. Rose.

FAT SHEEP. (LONG WOOL).

Wether, shearling.—1, Chas. Symes.

Wether, lamb.—1, S. L. Boswall; 2, Chas. Symes.

Ewes.—1, Chas. Symes; 2, Albert Boswall Sr.

FAT SHEEP. (MEDIUM WOOL).

Wether, shearling.—1, Cephas Nunn; 2, Geo. L. Boswall; 3, J. E. Baker & Son.

Wether, lamb.—1, Geo. L. Boswall; 2, J. E. Baker & Son.

Ewes.—1, Cephas Nunn; 2, Burder Goodwin; 3, J. E. Baker & Son.

Swine

YORKSHIRES.

Boar, over 2 years—1, C. J. Keiler; 2, J. W. Calbeck.

Boar, over 1 year—1 and 3, C. J. Keiler; 2, J. W. Calbeck.

Boar, over 6 months—1, C. J. Keiler; 2, J. W. Calbeck.

Boar, over 3months—1, J. Wm. Calbeck; 2 and 3, C. J. Keiler.

Sow, over 2 years—1 and 3, C. J. Keiler; 2, J. W. Calbeck.

Sow, over 1 year—1, J. W. Calbeck; 2 and 3, C. J. Keiler.

Sow, over 6 months—1, J. W. Calbeck; 2 and 3, C. J. Keiler.

Sow, over 3 months—1 and 2, C. J. Keiler; 3, J. W. Calbeck.

Breeding Sow, with litter—1 and 2, C. J. Keiler; 3, J. W. Calbeck.

Herd—1, J. W. Calbeck; 2, C. J. Keiler.

WHITE CHESTERS.

All first prizes in this section went to H. W. Corning, without competition.

POLAND CHINAS.

Boar, over 2 years—1, Chas, Symes.

Boar, 1 year old—1, Alfred Sarvent.

Boar, 6 mos. old—1, Chas. Symes.

Boar, 3 months old—1, Alfred Sarvent; 2, Chas. Symes.

Herd—1, Alfred Sarvent; 2, Chas. Symes.

DUROC JERSEYS.

All the prizes in this class with the exception of first on sow, 6 mos. old which went to Chas. Symes, were captured by J. E. Baker & Sons.

FAT PIGS.

Fat Hog, largest and fattest—1, S. H. James; 2, Thos. Aylward; 3, C. J. Keiler.

Spring Pig—1 and 2, J. W. Calbeck; 3, C. J. Keiler.

Molassine

Meal

Means

More

Milk

and smaller feed bills

A dollar saved is a dollar gained

Feed the genuine English product like most prosperous farmers and

Make More Money

L. C. Prime Co., Ltd.
DISTRIBUTORS
St. John, New Brunswick

GRADES.

Sow, over 2 years—1 and 3, Stephen H. James; 2, C. J. Keiler.

Sow, over 1 year—1 and 2, C. J. Keiler; 3, Stephen H. James.

Sow, 6 mos. old—1, Stephen H. James; 2 and 3, C. J. Keiler.

Sow, 3 mos. old—1 and 3, Stephen H. James; 2, C. J. Keiler.

BACON HOGS.

Best pen, 2 pure bred hogs, suitable for export—1, S. H. James; 2, J. C. Keiler.

Best pen, 2 hogs, any cross or grade suitable for export—1 and 2— S. H. James.

Poultry

Note—c, cock; h, hen; r, cockerel; p, pullet.

Light Brahmas—Thos. C. Latham, 1and 2 c, 1 and 2 h, 2 p, 2 pen; A. J. Keddy, 3 c, 1 r, 1 pen; Hartland Poultry Yards, 3 h, 2 r, 1 p.

Dark Brahmas—Thos. C. Latham, 1 c, 2 h; Hartland Poultry Yards, 1 h.

Buff cochin—Hartland Poultry Yards, 1 and 2 c, 1 and 2 h, 1 r, 1 p, 2 pen; Chas. Black, 1 pen.

A. O. V. Cochins— Hartland Poultry Yards, 1c, 2h, 1r, 1p; Thos. C. Latham, 2 c, 1 h.

Barred Plymouth Rocks— Hartland Poultry Yards, 1 c, 2 h, 1 r, 2 p, 1 pen; Geo. H. Seamans, 2 c; Gifford & Thompson, 3 c; Wm. Weiss, 1 h.; Thos C. Latham, 3 h; A. J. Keddy, 2 and 3 r, 2 pen; Gordon Carter, 1 p; Geo. McDonald, 1 p.

Buff Plymouth Rocks...A. E. S. Hatfield, 1 c, 1 h; Hartland Poultry Yds., 2 h; Arthur Simmons, 1 r, 1 p, 1 pen; Allan Simmonds, 2 r, 2 p; John Feetham, 2 pen.

White Plymouth Rocks— Geo. Calbeck, 1 c, 1 h, 1 r, 1 and 2 p; John F. Ives, 2 c, 2 h, 2 pen; Gordon Carter, 3 c; Albert Boswall, 3 h, 1 pen; A. J. Keddy, 2 r; A. K. Dwyer, 3 r; Hartland Poultry Yards, 3 p.

Black Langshans—Wm. Mitchell, 1 c, 1 h, 2 r, 1 p, 1 pen; Thos. C. Latham, 2 c; Hartland Poultry Yards, 2 h; Wm. Tucker, 1 r, 2 p, 2 pen.

White Langshans— Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p.

Silver Wyandottes—J. D. Fraser, 1 c, 3 h, 1 r, 2 p; E. S. Brown, 2 c, 1 and 2 h, 2 r, 1 p.

Golden Wyandottes—Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p; Gifford & Thompson, 2 c, 2 h, 2 pen; Thos. Latham, 1 pen, golden or silver.

White Wyandottes—Frank Ward, 1 c, 1 and 2 h; Maritime Poultry Yards, 2 c; R. R. Black, 1 r, 1 p; J. H. Gould, 2 r; John Suckling, 2 p; A. J. Keddy, 1 pen.

Buff Wyandottes—Wm. Beazley, 1 c, 2 h, 1 r, 1 p; Hartland Poultry Yds., 2 c, 1 h, 2 r, 2 p.

Columbian Wyandottes— Orchard Hill Farm, 1 c, 1 h, 1 r, 1 p.

A. O. Variety Wyandottes— Hartland Poultry Yards, 1 c, 2 h, 1 r, 1 p, 1 pen; Wm. Weiss, 2 c, 1 h, 2 r.

Black Javas—Thos. C. Latham, 1 c, 1 h, 1 and 2 r, 1 and 2 p; Hartland Poultry Yards, 2 c, 2 h.

Red Caps—Thos. C. Latham, 1 and 2 c, 2 h; Hartland Poultry Yards, 1h, 1 r, 1 p.

Spangled Hamburgs—Thos. C. Latham, 1 c, 1 h; Hartland Poultry Yds., 2 c, 1 r, 1 p.; Mrs. E. S. Tracey, 1 pen.

Pencilled Hamburgs— Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p.

Black and White Hamburgs— Hartland Poultry Yards—1 c, 1 h, 1 r, 1 p.

Silver Gray Dorkings —Hartland Poultry Yards, 1 c, 2 h; John Feetham, 2 h.

A. O. Variety Dorkings— Hartland Poultry Yards, 1 h.

White Faced Spanish— Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p.

Andalusians— Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p.

White, S. C. Leghorns—Wm. Beazley 1 c, 2 and 5 r, 1 and 2 p; Gordon Carter, 2 c, 1 and 2 h; A. J. Keddy, 1 r, 1 p, 1 pen; Cyril Kirby, 3 and 4 r, 4 and 5 p; Hartland Poultry Yards, 2 pen.

Brown, S. C. Leghorns— Hartland Poultry Yards, 1 c, 1 h, 2 pen, Frank Ward, 2 c; Gordon Carter, 2 h; W. H. Henry, 1 and 2 r, 1, 2 and 3 p, 1 pen; Wm. Mitchell, 3 r.

Buff Leghorns—Wm. Beazley, 1 c, 1 h; W. W. Osborne, 2 c, 2 r, 2 p; Hartland Poultry Yards, 2 h; Maritime Poultry Yards, 1 r, 1 p.

White, R. C. Leghorns— Hartland Poultry Yards, 1 c, 1 h, 1 r.

Brown, R. C. Leghorns— Hartland Poultry Yards, 1 c, 1 h, 1 r, 1 p; John Suckling, 2 c, 2 h.

A. O. Variety Leghorns— Hartland Poultry Yards—1 c, 1 h, 1 r, 1 p.

Anconas—Hartland Poultry Yards 1 c, 2 h, 2 p; Geo. Calbeck, 2 c, 1 h, 1 r, 1 p.

Black, S. C. Minorcas—Nettie Foster, 1 c, 1 p, 2 r; John Feetham, 2 c; Stephen Hubley, 2 h; A. E. S. Hatfield, 1 r; Gordon Carter, 1 and 2 p; Donald Foster, 1 pen; Wm. Mitchell, 2 pen.

Black, R. C. Minorcas—J. D. Fraser, 1 and 2 c, 1 and 2 h, 1 and 2 r.

White Minorcas—Gordon Carter, 1 c, 2 h; Hartland Poultry Yards, 2 c, 1 h, 1 r, 1 p.

Houdans—J. H. Gould, 1 c, 1 r, 1 p; Hartland Poultry Yards, 2 c, 1 h, 2 r, 2 p; 1 pen; Thos. C. Latham, 2 h.

A. O. Variety French Fowl— Hartland Poultry Yards, 1 c, 1 h.

White Crested Polands— Hartland Poultry Yards—1 c, 1 h; Thos. C. Latham, 1 pen.

Bearded Polands—Hartland Poultry Yards, 1 h, 1 p.

Non-Bearded Polands— Thos. C. Latham, 1 c; Hartland Poultry Yds., 2 c, 1 h, 1 r, 1 p; Maritime Poultry Yards, 2 h.

Game, Black Brown Breasted— Edward Gilfoy, 2 r, 2 p; Wm. Tucker, 1 pen.

Game, Red Pile—Stephen Hubley, 1 h; Jas. A. Mallory, 1 r.

Game, Duckwing—Louis Shortell, 2 c, 2 h; Wm. Gilfoy, 1 h.

Game, Indian—Wm. Tucker, 1 c, 2 h, 1 r; Mrs. E. S. Tracey, 2 c, 1 h; Hartland Poultry Yards, 2 r, 1 p.

Game, Pit—Louis Shortell, 1 c, 1 h, 2 r, 1 p; Stephen Hubley, 2 c, 2 h; Wm. Gilfoy, 2 p.

Bantams, R. C. White—Maritime Poultry Yards, 1 c, 1 h.

Bantams, R. C. Black— Maritime Poultry Yards, 1 c, 2 h; E. S. Brown, 2 c, 1 h, 1 r, 1 p.

Bantams, Buff Cochins— Thos. C. Latham, 1 c; Maritime Poultry Yds., 2 c; Fred H. Deal, 3 c; George H. Seamans, 2 and 3 h; A. J. Keddy, 1 r, 1 p.

Bantams, Black—Maritime Poultry Yards, 1 c, 2 and 3 h; Mrs. E. S. Tracey, 2 c.

Bantams, White— Maritime Poultry Yards, 1 c, 1 r, 1 p; A. J. Keddy, 2 c, 1 h; Annie Gilroy, 2 h.

Bantams, Japanese — Maritime Poultry Yards, 1 c; Cyril Kirby, 1 r, 1 p.

Rhode Island Reds, S. C.— Thos. S. Kyle, 1 c, 1 h, 1 r, 1 p, 1 pen; Hartland Poultry Yards, 2 c; W. H. Henry, 2 h, 2 r, 2 p, 2 pen.

Rhode Island Reds, R. C.—Geo. H. Seamans, 1 c, 1 h; Mrs. E. S. Tracey, 2 c, 2 h, 1 r, 1 and 2 p; W. H. Henry, 1 c, 2 h; Willis Manuel, 2 r.

Orpingtons, Buff—E. S. Brown, 1 c, 1 h, 1 pen; Mrs. T. George, 2 c, 2 r, 2 p; Jas. Retson, 3 c; R. R. Black, 2 and 3 h, 2 pen; C. H. Wisener, 1 r, 1 p.

Orpingtons, Black—C. H. Wisener, 1 c, 1 h, 2 r, 1 p, 2 pen; Thos. C. Latham, 2 c; Gordon Carter, 2 h; Hartland Poultry Yards, 1 r, 2 p; Gifford & Thompson, 2 pen.

Orpingtons, White—A. E. S. Hatfield, 1 c, 2 h, 2 r, 1 p; C. H. Wisener, 2 c, 1 h; Jas. Retson, 1 r, Jane F. Wells, 2 p.

Silkies—H. L. Fenerty, 1 r, 1 p.

A. O. Variety—H. L. Fenerty, 1 r, 1 p; Hartland Poultry Yards, 1 h, 1 pen.

EGGS.

Heaviest and best dozen brown eggs —1 and 2, Wm. Mitchell; 3, Thos. C. Latham.

Heaviest and best dozen white eggs —1, Samuel McCully; 2, Wm. Mitchell; 3, Gordon Carter.

TURKEYS, DUCKS AND GEESE.

Turkeys, Bronze—1, Victor W. Aylward.

Turkeys, Bronze Pair, of 1912—1, Thos. Aylward; 2, Victor W. Aylward; 3, Albert Boswall.

Turkeys, White Pair—1, Hartland Poultry Yards.

Turkeys, A. O. V.—2, Hartland Poultry Yards.

Geese, Tou,ouse—1, Sharpe & McNeil; 2, Hartland Poultry Yards; 3, Almon Boswall.

Geese, Toulouse, of 1912—1, Victor W. Aylward; 2, Hartland Poultry Yards; 3, Almon Boswall.

Geese, Bremen or Embden—1, Albert Boswall; 2, Hartland Poultry Yards.

Geese, Bremen or Embden of 1912—1, Albert Boswall; 2, Hartland Poultry Yards.

Geese, A. O. V.—1, Hartland Poultry Yards; 2, Albert Boswall.

Geese, A. O. V. of 1912—1, Albert Boswall.

Ducks, Aylesbury, of 1912—1, Hartland Poultry Yards.

Ducks, Rouen—1, Sharpe & McNeil; 2, Hartland Poultry Yards.

Ducks, Rouen, of 1912—1, Sharpe & McNeil; 2, Hartland Poultry Yards.

Ducks, Pekin—1, 2 and 3, Maritime Poultry Yards.

Ducks, Pekin, of 1912—Albert Boswall; 2, Maritime Poultry Yards.

Ducks, A. O. V.—1, Sharpe & McNeil; 2, C. H. Wisener; 3, Hartland Poultry Yards.

Ducks, A. O. V., of 1912—1, Sharpe & McNeil; 2, Hartland Poultry Yards 3, C. H. Wisener.

Dairy Products

Butter, best tub or firkin, not less than 50 lbs., suitable for export, made at any creamery—1, W. C. Lewis, Little Bass River, N. S., 96¾; 2, Scotsburn Creamery Co., Scotsburn, N. S., 92½; 3, Sussex Cheese & Butter Co., Sussex, N. B., 95¾; 4, Dunk River Dairy Co., Central Bedeque, P. E. I.; 5, Brookfield Creamery Co., Brookfield, N. S.

Butter, best box, not less than 28 lbs., suitable for export, made at any creamery—1, Scotsburn Creamery Co., 96½; 2, Dunk River Creamery Co., 96¼; 3, W. C. Lewis, 96.

Butter, best prints or fancy packages, not less than 20 lbs, made at any creamery—1, Scotsburn Creamery Co., 96½; 2, W. C. Lewis, 96¼; 3, Dunk River Creamery Co., 96; 4, Sussex Cheese & Butter Co.; 5, Brookfield Creamery Co.

Butter, in tins, from 4 to 8 lbs., suitable for export to West Indies, made at any creamery or farm dairy —1, Scotsburn Creamery Co. 96½; 2, Sussex Cheese & Butter Co., 93¾; 3, Brookfield Creamery Co., 93½.

Butter, best package or basket prints, not less than 10 lbs., made at any farm dairy—1, F. W. Foster, Kingston, N. S., 93½; 2, E. A. Wheelock, Torbrook, N. S., 93; 3, Alfred Sarvent, Overton, N. S., 92¾; 4, McFarlane Bros., Fox Harbor, N. S., 92½; 5, Mrs. R. Ward, Lr. Sackville, N. B.

Butter, best crock, box or tub, not less than 20 lbs., made at any farm dairy—1, Mrs. A. H. Boswall, Marshfield, P. E. I., 94; 2, F. W. Foster, 93, McFarlane Bros. 92¾; 3, Alfred Sarvent, 92¼; 4, J. S. H. McDonald,, Vernon River, P. E. C.; 5, H. H. Gillis, Blue Sea Corner, N. S.

The Sussex Manufacturing Company's Threshers Give Entire Satisfaction Wherever Used

Two Horse Thresher can be operated with from two to four horse power engine. Four Horse Thresher can be operated with from four to seven horse power engine. Either two, four or eight horse power machines can be supplied with or without Tailings Elevator Straw Carrier and Bagger and equipped with Trucks. Every machine is given a thorough test before it leaves the factory and is fully guaranteed.

Four Horse Thresher with Tailings Elevator.

If you have not our complete Farm Machinery Catalogue drop us a line, and we will send you one by return mail.

SUSSEX ROOT PULPERS. Main wheel of Solid Cast-Iron, six knives, can be reversed for slicing and pulping. Steel shaft 1 1-4 in. diameter running in roller bearings. Frame made of seasoned hardwood, well bolted.

We also have a supply of Thread Powers, Hay Presses, Wood Cutters, Garden Seeders, Grain Grinders, Feed Boilers, Rubber Belting etc.

Write at once for catalogue and prices.

THE SUSSEX MANUFACTURING COMPANY LIMITED, SUSSEX, N. B.

Ceese, best 2 factory, colored, made in the Maritime Provinces.—1, Leo Hughes, Kensington, P. E. I.; 2, Wm. Clark, Emerald, P. E. I.; 3, H. Mulligan, Kinkora, P. E. I.; 4, J. S. H. McDonald, Vernon, P. E. I.; 5, H. H. Gillis, Blue Sea Corner, N. S.

Cheese, best 2 factory, colored, made in Nova Scotia—1, H. H. Gillis, Blue Sea Corner, N. S.; 2, Geo. Vinten's Glassburn Factory, Lower South River, N. S.; 3, Geo. Vinten's Erinville Factory, Lower South River N. S.; 4, Geo. Vinten's Argyle Factory, Lower South River, N. S.; 5, Geo. Vinten's Marydale Factory, Lower South River, N. S.

Fruits

Collection of fruits and berries grown in the county of:—

Halifax—1, Wm. Murray, Fairview; 2, F. J. Turner, Preston Road; 3, Percy Turner, Preston Road.

Lunenburg—1, J. M. Wentzell; 2, H. T. Hebb, Bridgewater.

Yarmouth—1, J. M. Porter, South Deerfield; 2, Wm. Corning, Yarmouth.

Digby—1, W. D. Ryerson, Bear River; 2, Mrs. Herman Rice, Bear River.

Annapolis—1, B. F. Chesley, Bridgewater; 2, H. E. Bent, Tupperville.

Kings—1, Sea View Farm, Starrs Point, N. S.; 2, Arthur Johnson, Wolfville; 3, H. A. D'Almain, Wolfville.

Hants—1, Thos. Alyward, Falmouth; 2, Mrs. Wm. Sangster, Upper Falmouth; 3, V. W. Alyward, Falmouth.

Cumberland—1, Edgar Harrison; 2, M. B. Harrison, Maccan Station.

Colchester—1, Geo. M. Anderson; 2, Robt. Anderson, New Aman; 3, Geo. A. Frame, Shubenacadie.

Pictou—1, Thos. C. Latham, Sylvester, N. S.

Antigonish—1, Herbert Smith, Antigonish; 2, A. McIsaac, Dunmere; 3, Mrs. J. H. Thompson, Antigonish.

Best County Collection— 1, Sea View Farm, Starr's Point, Kings Co.

Best and most valuable collection of apples, 20 varieties—1, Mrs. Wm. Sangster; 2, H. D. Johnson; 3, Sea View Farm; 4, B. F. Chesley.

Best collection 10 commercial or export varieties—1, Mrs. Wm. Sangster; 2, H. D. Johnson; 3, Sea View Farm; 4, H. E. Bent.

Best collection 5 commercial or export varieties—1, Sea View Farm; 2, H. D. Johnson; 3, Mrs. Wm. Sangster.

Best collection of new varieties—1, H. A. D'Almaine;2, Thos. Aylward; 3, W. S. R. Gow, Grand Pre.

Apiary

Display of Liquid Extract Honey—1, Chas. Piers.

Display of Liquid Clover Honey—1, S. W. Wheelock; 2, Chas. Piers.

Display of Comb Honey—1, Mrs. J. B. Brown.

Five Pounds Beeswax—1, Charles Piers.

—Some time ago we intimated that Col. R. McEwen, Byron, Ontario; C. M. McRae, Live Stock Branch, Department of Agriculture, Ottawa, and Col. H. Montgomery-Campbell, of Sussex, were touring the province in the interest of more and better sheep. The Dominion Sheep Breeders' Association with the co-operation of the Dominion Live Stock Branch, will hold auction sales of pure bred rams and grade ewes at various places in New Brunswicv. The sheep have been carefully selected with a view to stimulating and improving the sheep industry.

The sales will take place at the following points; Moncton, October 7th, 11 a. m.; Sussex, October 8th, 10 a. m.; St. Stephen, October 9th, 2 p. m.; Fredericton, October 10th, 2 p. m.; Bathurst, October 11th, 10 a. m.

FLORICULTURE.

Palms, St. John N. B., writes;—I have a fine palm of the Kentia variety which is growing nicely and is sending forth a new leaf. It is, however, growing up out of the pot so that you can see through the roots under the stems of the palms. We have had to tie it up to a stick. I am advised to repot it. Do you think it should be repotted and what soil should I use?

If the palm is doing well as you state do not repot it until spring, as it is not a good time to do so now All palms of this family grow up rapidly, pushing the plant out of the pot and the appearance of your plant does not at all indicate neglect. Keep it firmly staked so that it cannot break off and it will be all right. When you do repot it use light rich soil and you can cover the roots to the bottom of the stems mentioned.

Rothsay, N. B., Correspondent writes;—Would you kindly tell me how to grow an Aralia Sieboldii whether from seed or not and where they can be obtained? Is there a varigated leaved variety? Are they difficult to grow?

The Aralia Sieboldii is easily grown from seed, which is for sale by leading salesmen. Of course it takes some time to make a plant—possibly two years. The Sieboldii is as easy to grow as a rubber plant and requires much the same treatment. There is a colored variety that grows from cuttings only. I do not know anything about its treatment and do not know the name at present.

H. A. G., of St. John, writes;—Please tell me what to plant and when to plant something that will give me bloom for spring, summer and fall without any care and be a permanent fixture on my grounds?

I would advise Paeonies, Larkspur, Campanulas, Rudbeckias, Acpulegias, Pinks, For-get-me-nots, Iceland Poppies and a dozen of other things named and priced in our catalogue that will be a source of delight for years and practically no trouble as they come season after season, wintering well with a little protection in the fall.

Westfield, writes;—I have a young plant of Spirea Van Houtte. Will it be difficult to keep during the winter?

The Spirea Van Houtte killed somewhat badly last winter, were not well protected, but as last winter was so extraordinarily severe that could hardly be taken as a cirterion, however, it would be wise to protect with some mulch about the roots and brush around the top. It is one of the prettiest hardy shrubs.

Tulip, St. John, writes;—Would you kindly tell me how to plant tulip bulbs so as to give a good effect in the spring, also what protection do they require? I wish to make an oval, bed of four colors in a very conspicuous place.

To make a bed as above mark the shape on the sod and dig out to a depth of six inches. Have the bottom of this excavation smooth and level, then put in an inch of sand, covering the bottom smoothly and evenly, then place the tulips in any pattern desired, pressing them firmly into the sand so that they will not move when putting in the covering soil. Then fill in with good, light, thoroughly rotted soil that does not contain any decaying vegetable matter, which is very injurious to bulbs, and that is free of stones and rubbish of any sort. Firm the soil thoroughly and round up the surface of the bed a little. As soon as the ground freezes, cover the bed with strong manure and put on an outside coating of brush to hold the snow and make the bed more sightly during the winter. There is nothing much prettier than a bed of tulips in spring, blooming when there are no other flowers and lasting so long. Goold, of Sussex, has lots of them ordered for October planting and quantities of other bulbs for ground and house planting.

H. H. D., of St. John, writes;—My palm that was brought from the West Indies is beginning to turn brown at the ends of the leaves. It is in a small tub which stands in a saucer of water. What shall I do for it?

Your palm should not be in a saucer of water, but should be so situated that it would have perfect drainage. Apply the water freely to the foliage at any time but be sparing of moisture on the soil, just keeping it moist but not soaking as you have done, also keep the plant in the shade and in a warm corner if it has not been in this country any length of time.

All tender plants should be potted up now, before any damage of frost, and kept out of doors for some weeks, with a light covering if very cold, until established in their pots; of course the more air and light they get the better they will hold their foliage. Spray them frequently.

Fall is the time to plant Paeonies, hardy plants and vines, in fact all hardy outdoor stock, except Roses. Bulb beds should also be looked after and drainage arranged. About the only thing that will hurt a bulb bed is defective drainage and that is easily arranged if thought of in time. Any questions regarding the culture of flowers addressed to H. E. Goold, Florist, Sussex, N. B., will receive due attention in this column.

An Experimental Farm for New Brunswick.

The Dominion Department for Agriculture has at last seen fit to establish an experimental farm in New Brunswick. A suitable section of farm lands has been purchased in the vicinity of Fredericton and the work of getting it in working order will be started at once. The farm is located on the St. John River, a mile or two below the city of Fredericton, and extends back to the C. P. R. track. There is deep water at the front so that the river boats can make it a landing point. With a C. P. R. station on the rear and prospects of a station on the proposed Valley Railway the farm is favorably located so far as transportation facilities are concerned. The soil conditions are also quite favorable for the research work which will be there conducted. Mr. W. W. Hubbard, Secretary for Agriculture, has resigned his position with the New Brunswick Department and has been appointed Superintendent of the new Experimental Farm. Mr. Hubbard is thoroughly conversant with New Brunswick conditions and will undoubtedly prove an efficient officer in his new capacity.

Pending the appointment of his successor Mr. Hubbard will continue to act as Secretary for Agriculture, a position which he has very satisfactorily filled since he took charge about four years ago.

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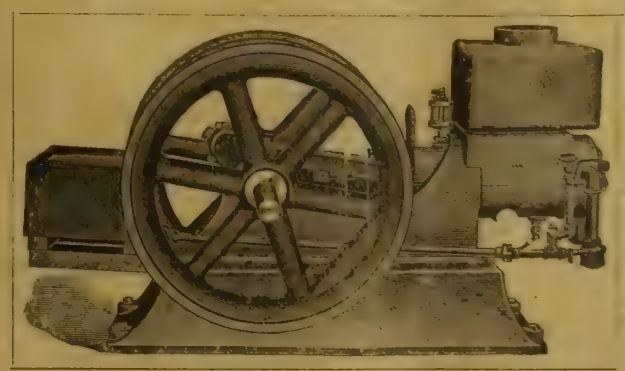

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SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

Registered Cotswold Ram lambs, out of 250 lb. prize winning ewes. WALTER S. COGSWELL, Centreville, N. B.

BUYERS of dressed pork, meats, poultry, eggs and butter. JOHN HOPKINS, St. John, N. B. Ship us your output.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

FOR SALE—Two registered Holstein Bull calves. Also one 4 year old Bull for sale or exchange. GARFIELD CAMPBELL, Salisbury, N. B.

FOR SALE OR EXCHANGE—Pure Bred Registered Yorkshire Boar, Baron Lomond, for cash, or in exchange for Sow of same quality and breeding. R. G. MURRAY, St. John, N. B.

JERSEY BULL FOR SALE—Three years old. Register No. 1254, Dam, Pedro's Sweet Alice; Sire Pogis 40th of Hood Farm. Write EDGAR SHAMPER, Kingston, N. B.

FOR SALE—One thoroughbred registered Ayrshire bull 20 months old. Also one Ayrshire bull calf, 4 months old—Gilt-edge stock. D. A. McDonald, Port Hood, N. S.

FOR SALE—Two Jersey Bulls 10 and 8 1-2 mos. old; sire, Brampton Financier, Also grade Heifers of best breeding dams, great producers. G. B. CLARK. Tatamagouche, N. S.

WHITE ORPINGTON COCKERELS—"Philo" strain. A few choice birds, only $3 worth $10. Speak Quick. J. B. MERRILL, Supt. Nova Scotia Freemasons' Home, Windsor, N. S.

FOR SALE—One Pure Bred Hereford Bull, one year old; also one four year old bull. LYMAN A. WHITMAN, Maple Grove Stock Farm, New Albany. Annap. Co., N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shddiac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

YOUNG BERKSHIRE PIGS OF BOTH SEXES FOR SALE—These pigs are from large two and three year old sows—the best that can be obtained. As usual my customers will get only good ones. I have shipped pigs all over these Provinces and they have always given satisfaction. Send a trial order. Barred Plymouth Rocks, Cockerels and Pullets of the best breeding, fine laying strain. Write for low prices. W. S. POOLE. Box 414, St. Stephen, N. B.

FOR SALE

20 head of Registered Southdown Ewes and ewe lambs, also 3 extra good rams, these sheep are all bred from imported stock and are a first class lot.

D. R. McKAY. *Hopewell, N. S.*

FOR SALE

Six June bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Foehallk, St. John O'Dreamwild.

JOSSELYN & YOUNG.

Fish Fertilizers.

Nova Scotia's plants at Canso and Clark's Harbor for the utilization of dogfish are described at length in recent consular report issued by the United States government. The plants were inspected by U. S. Consul-General James N. Ragsdale, stationed at Halifax. Three plants in all, Mr. Ragsdale writes, were established in 1910 by the fisheries department for testing the feasibility of combating the dogfish nuisance by converting them into commercial products. One of these is located at Shippegan, N. B., the other two at Canso and Clark's Harbor. The one at Shippegan began operation on July 3rd and ceased on November 3rd. During that time 341 tons and 380 pounds of dogfish, as well as 785 tons and 882 pounds of dogfish offel, were treated, and produced 144 tons of fish scrap and 2,000 gallons of oil. The Canso plant began operations on September 14th and continued until the first week in December, during which time 1,000 tons of raw dogfish were treated, yielding 131 tons of fish scrap and 10,560 gallons of oil.

The Kind of a Farm Story Which is all to Common.

Some few weeks ago a certain farmer invited us to visit his place solely to see his garden. We were so impressed with the unusual invitation that we had a curiosity to see what sort ol a farmer he was to be so much concerned over a garden. We were so in the habit of passing farm after farm that hardly had enough of a garden to supply a good-sized family with a week's supply of fresh vegetables, that we thought our invitation would find us being entertained by a host who had everything to show in the way of a garden and nothing in the way of a farm. Our surprise was great, indeed, when we found as well-kept and productive a farm as any in that section. But the garden—it was a dream, a consummation of the spirit of domestic comforts. He was a man who plowed, planted and harvested the crops on a 50-acre farm, and his success was equal to the success of any of his neighbors; but withal he had time or rather found time to take care of as fine a garden as one would care to see anywhere. Our surprise to find such a beautiful garden prompted us to ask many questions. The summary of the answers we received may be stated as follows:

As a boy upon his father's farm, he had been fond of vegetables, but his father was the kind of farmer who thought more of growing hay and corn for the horses and cattle than he did of growing peas and tomatoes for his family. The boy got so tired of pork, potatoes and store beans that he made a firm resolve if he ever owned a farm of his own no amount of work with field crops would deter him from devoting a portion of his time to growing vege tables for the family table. What we saw was the fulfillment of a promise the boy had made to himself over fifty years ago. One sentence he used we shall never forget: "Aside from being a great money-saver life is too short and we over-worked farmers have few enough comforts, to ever think of going through life without all the peas, beans, tomatoes and melons we want; besides, I think one reason why my children have not manifested a desire to run off to the cities is because they have been well fed at home." That sentence is a sermon in itself.—Connecticut Farmer.

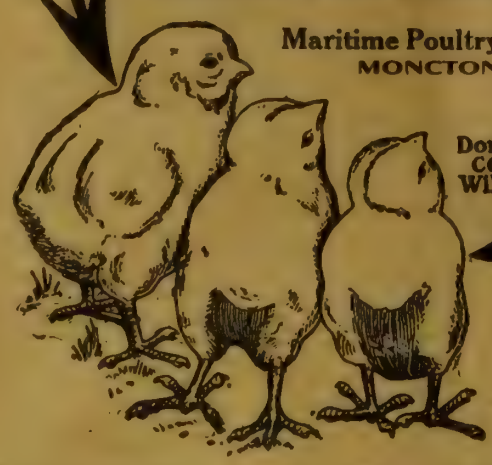
CONKEY'S POULTRY REMEDIES

EVERYTHING YOU WANT IN THE LINE OF

Poultry Feed, Remedies or Supplies

Send for Catalogue

Maritime Poultry Supply Co.,
MONCTON, N. B.



Sandy Soils Need Humus.

The addition of vegetable matter to sandy soils is very important as it is needed to increase their water holding capacity as well as to add fertility. Water is often the limiting factor in the production of sandy soils, due to their coarse texture and lack of vegetable matter. To prevent winds blowing sand the land may be laid out in long, narrow fields with alternate grass and cultivated crops. Protection windbreaks of pines or other trees are effective for short distances.

The fertility needs of sandy soil are nitrogen, phosphorus and potash. Phosphorus and potassium must be supplied either directly in commercial fertilizer or indirectly through the buying of feed which is fed to the animals. The average sandy soil contains only one-third to one-half as much fertility as clay loams.

Legumes are beneficial to sandy soils, because they supply the much-needed nitrogen as well as humus. Peat can be used to advantage as a nitrogen fertilizer where a supply is readily available. The use of lime on sandy soils, which are very commonly acid, will aid in securing a stand of alfalfa and clovers. Inoculation is also usually necessary to grow good crops of legumes.

Rotations for sandy soils must be chosen, so as to increase the amount of vegetable matter and provide a legume crop to cover the soil at least once in every three years.

Few, if any, medicines, have met with the uniform success that has attended the use of Chamberlain's Colic, Cholera and Diarrhoea Remedy. The remarkable cures of colic and diarrhoea which it has effected in almost every neighborhood has given it a wide reputation. For sale by all dealers.

We do not need more acres in fruit, but we do need more acres cultivated and managed better. There is too large a per cent of our fruits worthless. Better fruits would mean better prices and less expense in marketing.

BOOK FREE!

A friend sold 15 turkeys last season for $30.50. My own retailed for 30cts lb. Turkeys are easily raised as chickens, ducks, etc. Get my little book it will tell you how I rear my birds with no more losses than among other young poultry. Much less work than the usual cooking corn bread and special mixtures.

Book 25c. but sent free this month. Fine turkey stock for sale. Grey African Geese, Indian Runner Ducks, some nice Sicillian Buttercup Cockerels from the best stock in this country.

Sarah E. Moses Smith,
Woodward's Cove, Grand Manan.

Annapolis Valley Fruit Farm

228 acres; the most valuable bargain in Nova Scotia; in a section becoming world famous for its wealth of apples produced; good 8-room house; 60-ft. barn, room for 70 tons hay. cellar under all; 40 acres rich loam machine-worked fields; young orchard 200 trees, conditions right for setting thousands of trees; wood and timber will make a man independent; pasture for 25 head, spring-watered and wire-fenced; near neighbors and advantages; low price for immediate sale is only $1900, part cash; for all details and traveling instructions to see this and another with 15 acres in orchard, see page 62, our New Mammoth Farm Catalogue No. 35, copy free; profusely illustrated and filled with a wonderful assortment of money-making farms throughout many rich farming sections; stock, machinery and crop included with many at big sacrifices to settle affairs quickly. Box D., Sussex, N. B.

Meadowbrook Farm
Shropshires and Ayrshires

A few young things of both breeds for sale. Bull and heifer calves, ram and ewe lambs, also one 2 year old ram all registered and at reasonable prices.

ANDREW McPHERSON, Prop.,
Rocklin, Pictou Co., N. S.

RASPBERRIES

We can supply plants of the best hardy varieties Red Raspberries for fall setting, including "Herbert" the great yielder which at Experimental Farm, Ottawa, produced at the rate of 220 bushels per acre, also King (the best early) Hiram, Cuthbert, Eaton, etc. Guaranteed to live or replaced free.

ORCHARD HILL FARM, Brown's Flats, N. B.

Running up and down stairs, sweeping and bending over making beds will not make a woman healthy or beautiful. She must get out of doors, walk a mile or two every day and take Chamberlain's Tablets to improve her digestion and regulate her bowels. For sale by all dealers.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N. B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

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Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

W. A. ERB.
Sussex, N. B.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No. 1, N. S.

Raspberry Plants

Set them, and other Bush Fruits this fall. We have the leading varieties of Yellow, Red, Brown and Black Raspberries, Blackberries, Currants and Gooseberries.

Special prices for Fall delivery

Orders booked now for Strawberry Plants Fruit trees and other Nursery stock, for Spring Delivery. Let us quote you on Home Grown Plants.

E. L. COLPITTS,
Petitcodiac, N. B.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

FOR SALE

A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, including the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

$10 takes them. Money refunded if not as represented. Address

P. WELLER,
11 Oakland Road,
Halifax, N. S.

1870 1912

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains.—Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

RIVERSIDE HOLSTEINS

We have for sale a splendid lot of young stuff both males and females that we are showing this Fall. We can fit you out with an ideal foundation herd or individuals of great merit at a very reasonable figure.

LEA & CLARKE, - Victoria, P. E. I.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

FOR SALE

AYRSHIRE HEIFERS

2 Dropped Nov. 1911
1 " May 1912

Write for prices or come and see them.

ALLANDALE FARM, Hampton, N. B.

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H EATON,
Canard, N. S.

FOR SALE

Choice Cocks, Hens, Cockerels and Pullets in the following varieties; Rose and Single Comb, R. I. Red and Single Comb Brown Leghorns.

WRITE FOR PRICES.

W. H. HENRY, Shubenacadie, N. S.

Big Money in Raspberries

$180.00 from 1-4 acre in 1911 is record of a grower here. Fall planting is perfectly satisfactory.

We have for sale plants of the celebrated "Herbert" (harvest yielder and frost-proof also King (a new early) Hiram, Eaton and others. Write for prices.

ORCHARD HILL FARM, Brown's Flats, N. B.

FRIESIAN HOLSTEINS

male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
Buctouche, N. B.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

Live Stock Diseases in Canada.

(Continued from page 831)

preventing or very materially limiting losses from the disease.

Rabies has still caused some anxiety in Ontario, where some 436 animals were quarantined as suspects or contacts. No other province has infected during the year, and stringent quarantine and close attention to all cases is bringing about the desired result. It has not, however, been found necessary to put into effect a general muzzling order, as with few exceptions the quarantine restrictions have been properly observed, and in many cases the owners have preferred to destroy their digs to keeping them under restrictions for lengthy periods.

Dr. Seymour Hadwen has been engaged in the work of investigating the nature and cause of Redwater among the cattle in British Columbia, and full details of the result will be found in the Report of the Veterinary Director General. It is gratifying to learn from the results so far obtained that they do not point to piroplasma infection as the causative agent, but that it is more probable the ingestion of some species of plant life growing on uncultivated lands produce the symptoms and lesions found in this disease. Special efforts are also made to collect and identify ticks found in British Columbia, with a view to isolating and obtaining special knowledge regarding those which may play an active part as carriers of infection of disease.—Vet. Dir. Gen. Report.

Unsoundness and Heredity.

(Continued from page 838)

ger signals that show where the breeder has failed.

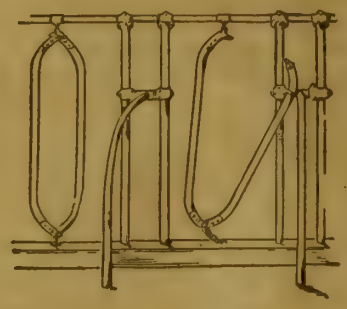
The problem then is not one of breeding this class of unsoundness out of the horses constitution. It is to breed a horse with better mechanical strength due to more perfectly formed joints and heavier bone. It is not that we must select against unsoundness, but that we must select for mechanical efficiency. It is doubtful whether we want to get an animal free from the possibilities of developing spavin, curb and ringbone, because this method of adaptation may permit service from a horse that would be ruined forever when overstrained. What we do want is an animal that has the mechanical strength from an ideal body. The stock judge and breeder is not, as many would have us think, a man expert in finding little blemishes and faults. He is the man who, looking past these, can see the mechanical perfection of everything good.—E. N. Wentworth in Breeders' Gazette.

Hogs in Winter.

During the winter months, when the field work is not pressing, porkmaking furnishes an opportunity to utilize the farm labor to advantage. Where winter dairying is carried on laborers must be constantly maintained to do chores and care for the milk. There are always several hours between milkings when the laborer needs to be otherwise employed. Most large dairymen keep one or two barn hands to do the chores and care for the dairy herd, exclusive of the milking. As the hogs can be fed between the hours in which the herd demands attention, we find that it is very profitable to follow winter porkmaking as an adjunct to the dairy because we can furnish steady employment to the necessary farm labor. It requires only a few minutes for one or two hands to feed 50 or 75 hogs, and this in no way need interfere with their regular work.—Coburn's "Swine in America."

Making Farming Easier

EVERY farmer agrees that it is a fine thing to apply scientific methods to farming, and to run a farm on a business basis. The Louden way is the truly scientific and businesslike way to save labor and to ease the day's work.

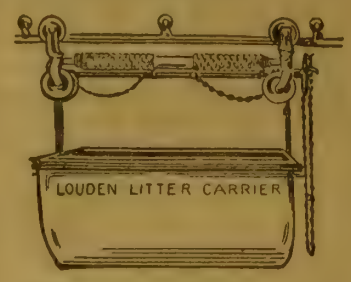


LOUDEN'S COW STALLS AND STANCHIONS keep your cows cleaner and healthier. Therefore the cows give more milk, and this means bigger profits.

Stanchion construction is simple and perfect. Easily opened and closed, but absolutely secure when locked. They allow freedom of movement, and provide a maximum of comfort.

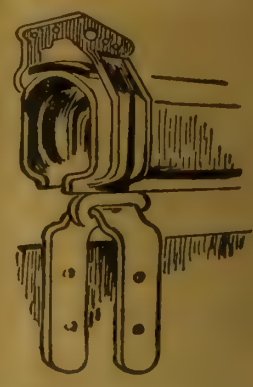
LOUDEN'S FEED AND LITTER CARRIER. The only practical way to handle feed and litter, etc., is by overhead carrier—and the Louden equipment is recognised as being the last word in perfection.

Louden's carriers are of galvanized sheet steel on elevated steel tracks—run anywhere—round corners, in and out of doors—from one building to another.



We have different styles of carriers and we will advise you as to the tracking suitable for your requirements.

Write for information.



LOUDEN'S BARN DOOR HANGERS. We manufacture five styles of hangers to suit different purposes. We recommend Louden's Bird Proof Door Hanger—as illustrated. It is the strongest and most durable, and consequently the cheapest hanger in the long run.

The construction protects these hangers from ice in winter and nesting birds in summer. Can't rust, can't balk. Thoroughly reliable.

THIS BOOK SENT FREE

Our Book, "Perfect Barn Equipments," will be useful to you, as it illustrates and tells about many modern inexpensive articles that turn chores into play and cut down expense of farm labor—write for it to-day, it's free.

LOUDEN MACHINERY CO., Dept. 28 , GUELPH, Ont.

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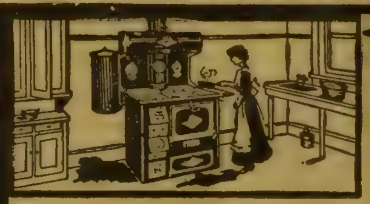

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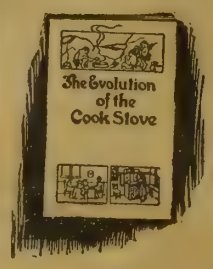
$41.00 TO $49.00 AND WE PAY THE FREIGHT

You Can Buy "DOMINION PRIDE" RANGE At Factory Price

Direct From The Largest Malleable Range Works in Canada

IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



"The Evolution of the Cook Stove"

TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of **tough, strong, malleable iron** and the **best blue polished steel**—materials which will not warp, crack or break.

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it **saves over 30% of fuel**, burning either wood or coal.

WE PAY THE FREIGHT

A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. **If not convenient to pay cash we will arrange to accept your note.**

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

When writing it will be a distinct favor to us if you will mention this paper. 7

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SATISFACTION **OR YOUR MONEY REFUNDED**

"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man

See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good $100,000 of produce in your barn in 100 years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods.

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not."

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"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."

G. A. Pedlar

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